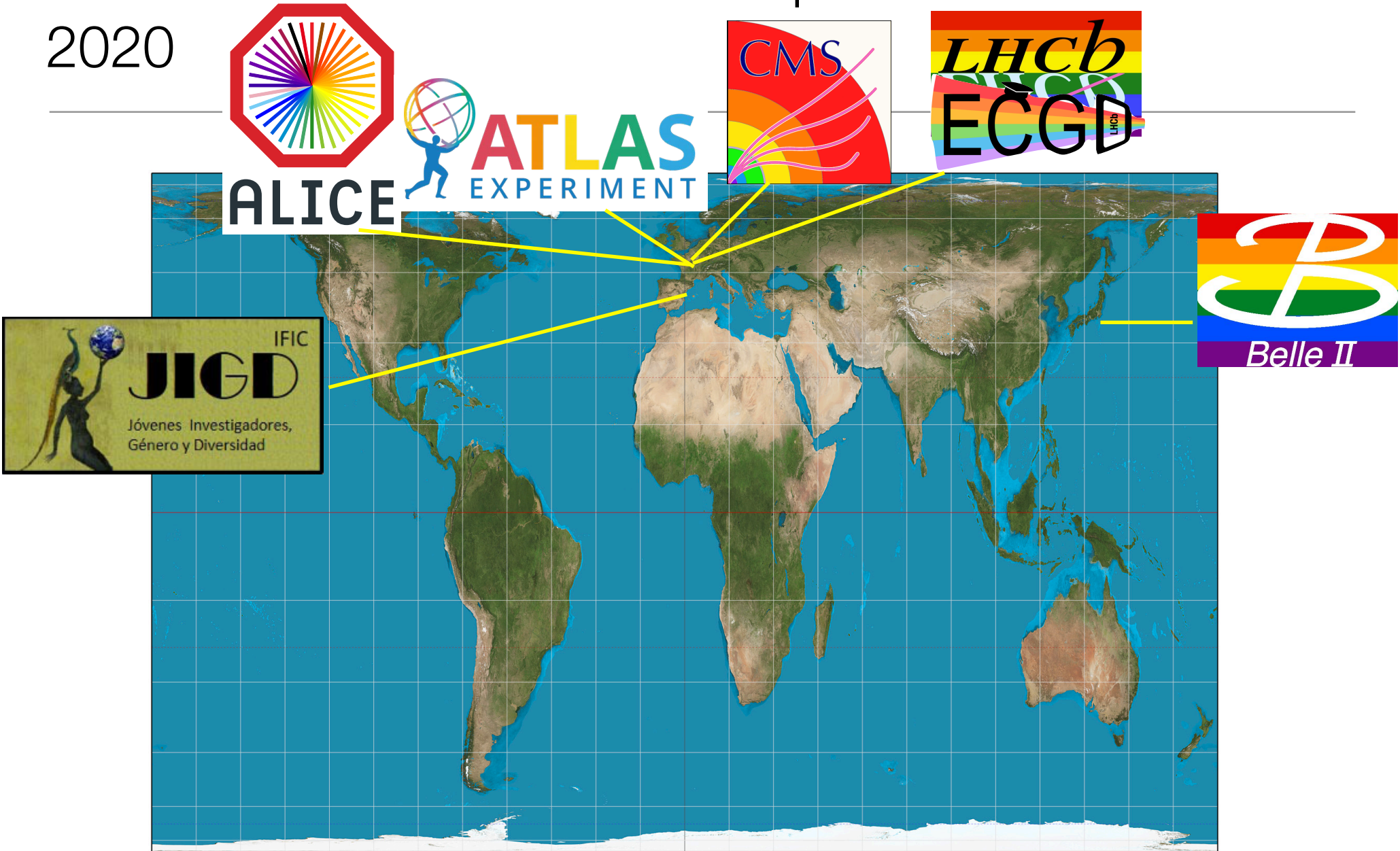




Diversity & Inclusion

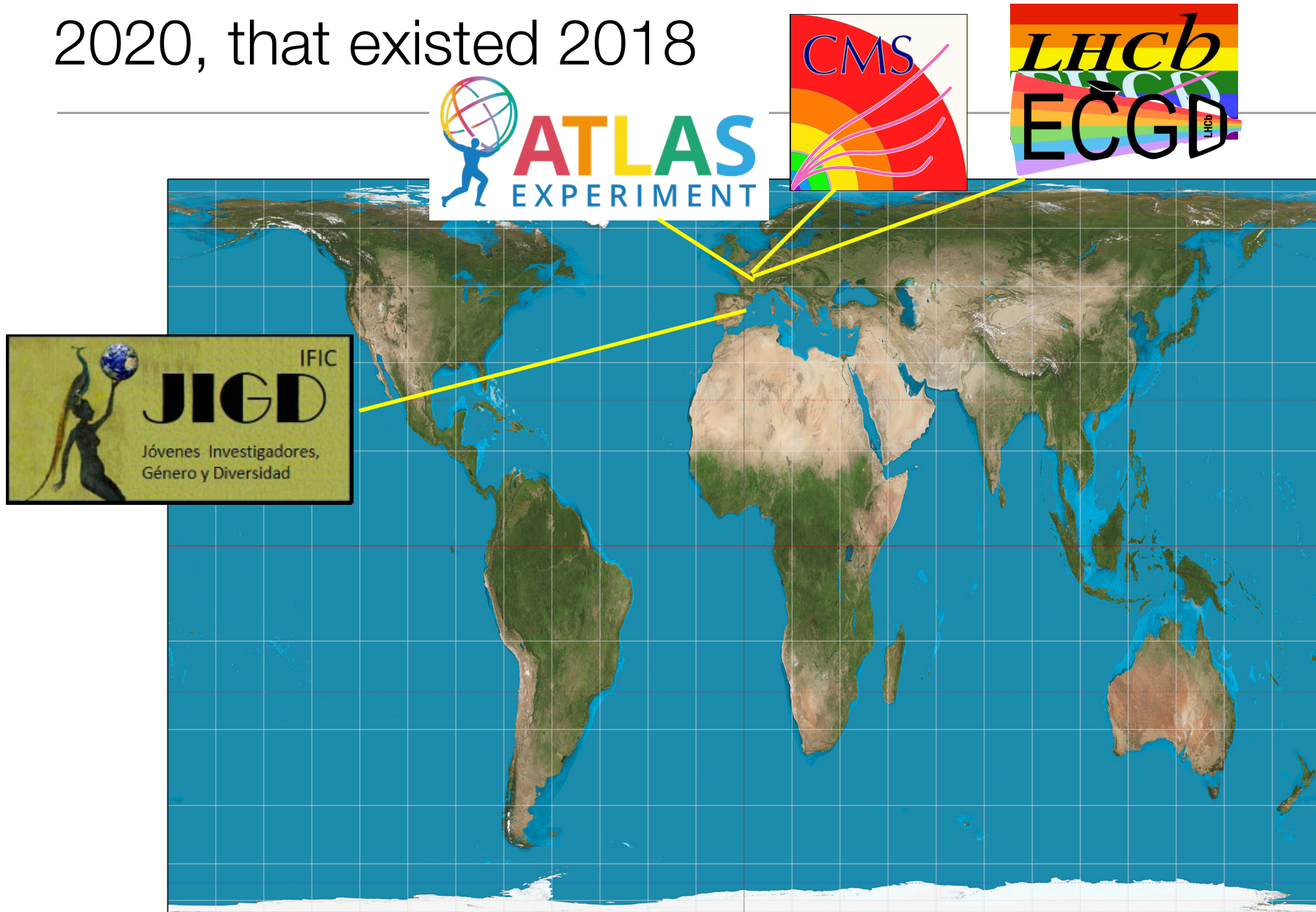
Jonas Rademacker, University of Bristol

Diversity & Inclusion Offices represented at ICHEP 2020



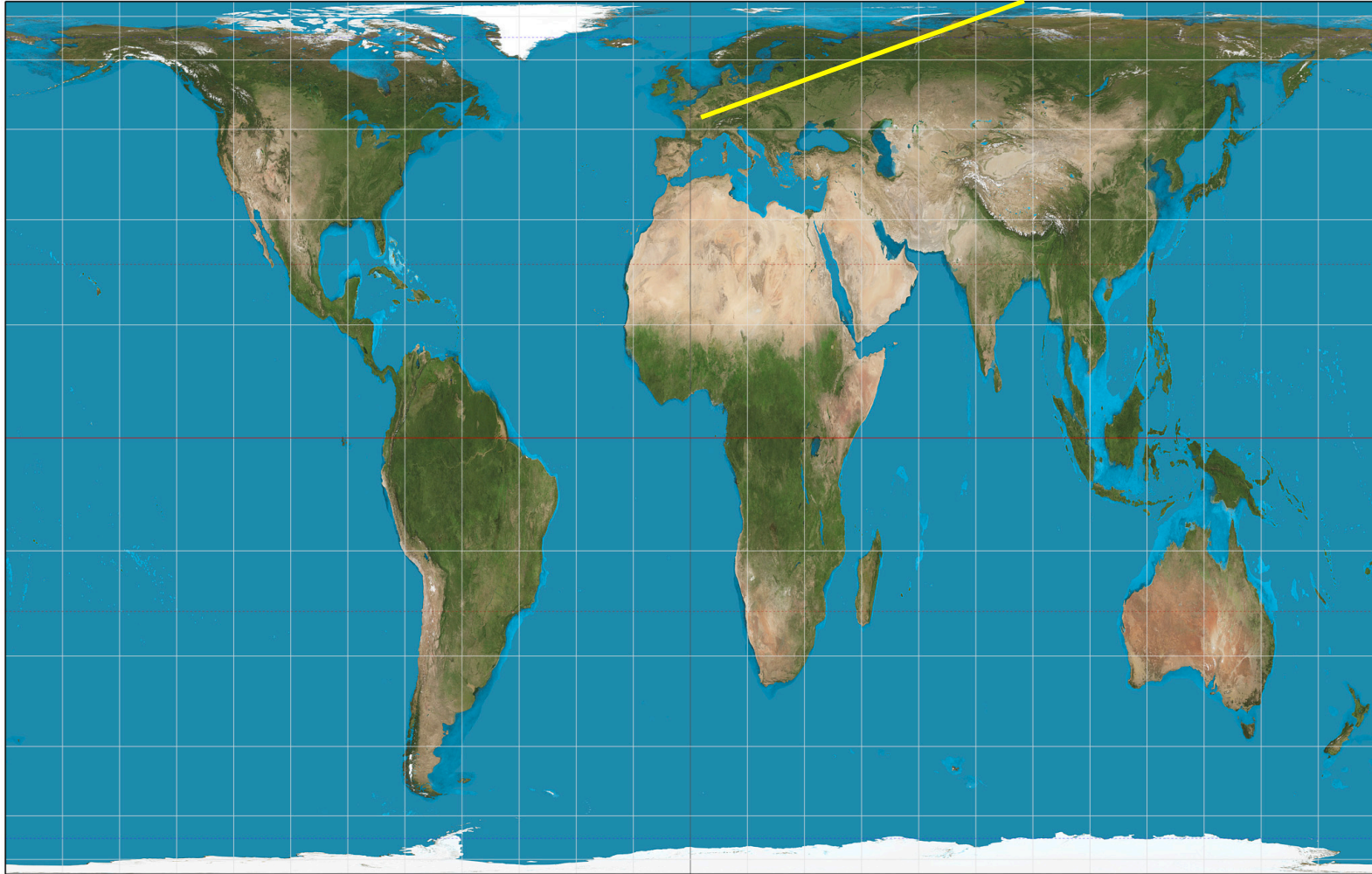
By Strebe - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=16115242>

Diversity & Inclusion Offices represented at ICHEP 2020, that existed 2018



By Strebe - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=16115242>

Diversity & Inclusion Offices represented at ICHEP 2020, that existed 2016

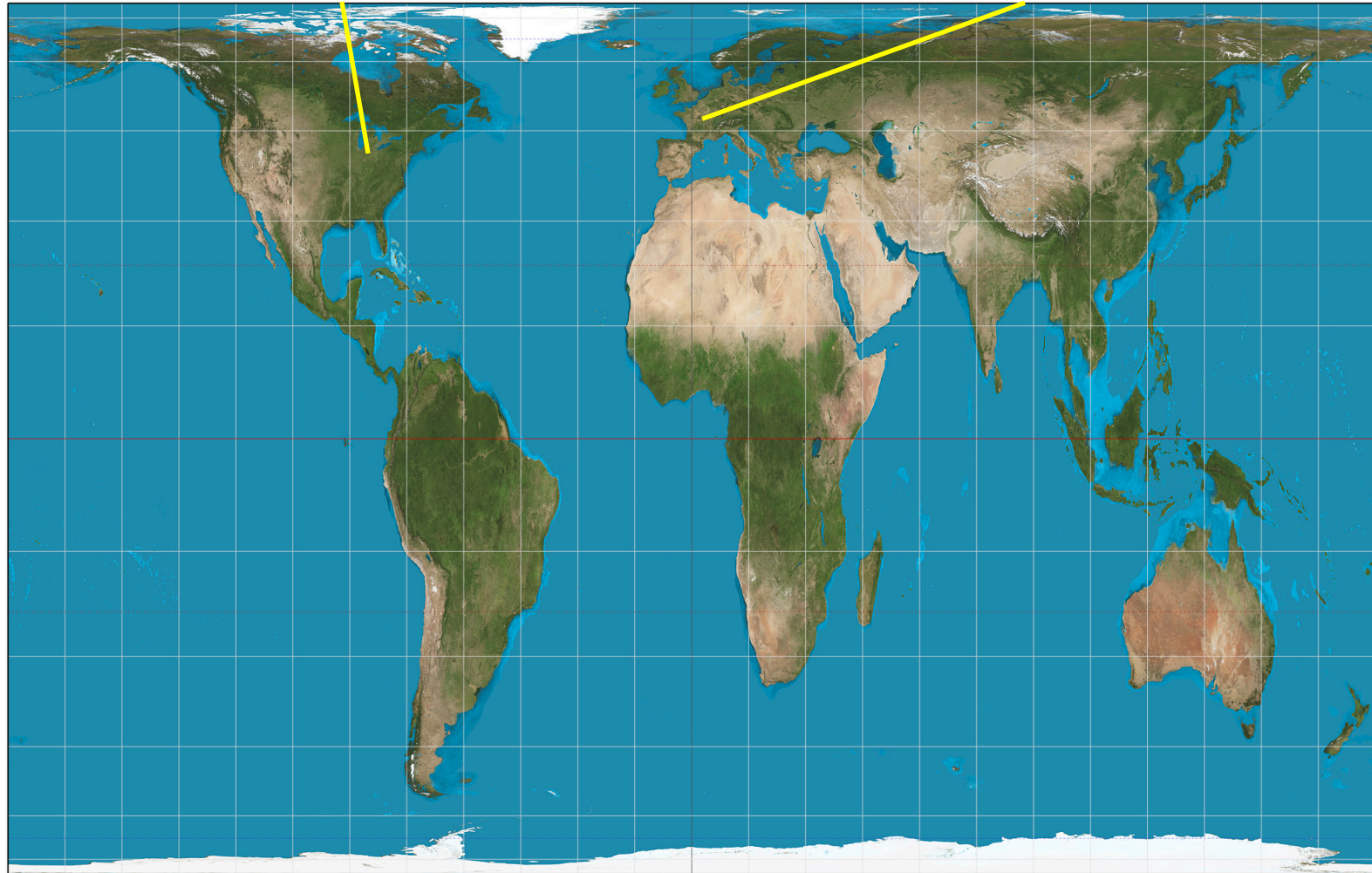


By Strebe - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=16115242>

Diversity & Inclusion Offices represented at ICHEP 2020, that existed 2016

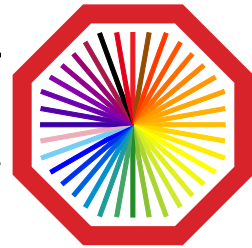


Also, first D&I session at ICHEP



By Strebe - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=16115242>

Groups/Organisations that presented an the D&I session



ALICE



ATLAS
EXPERIMENT



**LGBTQ
CERN**

*Without colors,
there's no
strong interaction.*



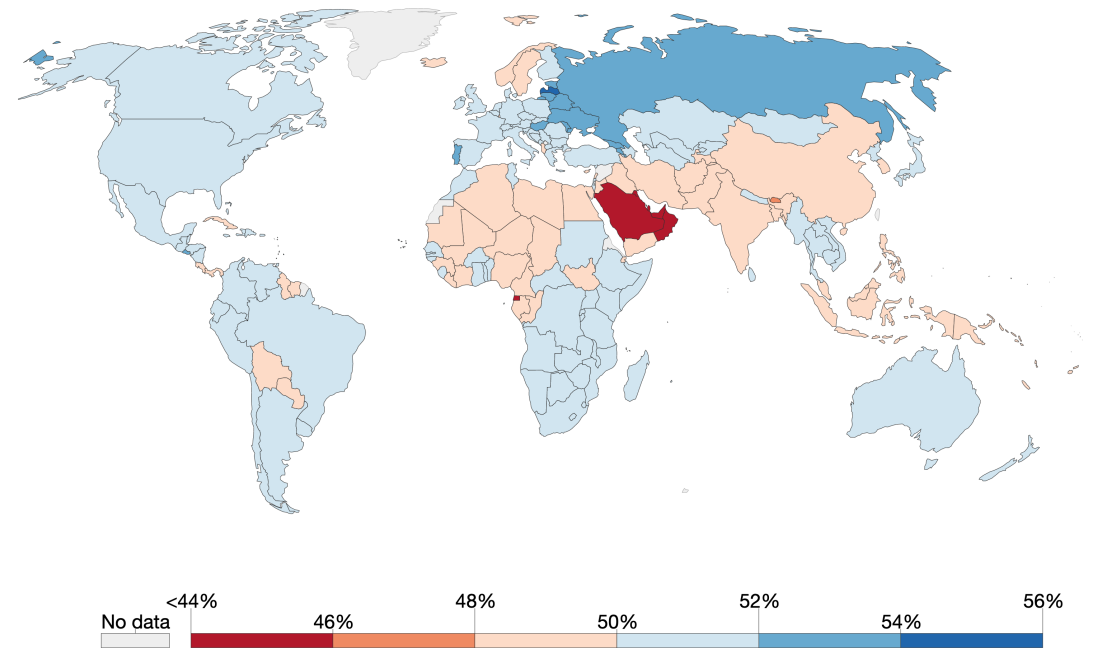
By Strebe - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=16115242>

By gender

World

Share of the population that is female, 2017

Our World
in Data



Source: World Bank

OurWorldInData.org/gender-ratio • CC BY

Note: Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.

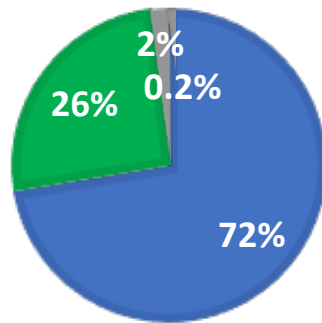
A large male immigrant population seems to be the main reason behind “red” countries in middle east. E.g. 2017, 45% of the Oman and 88% of the UAE population were from immigration. The UN reports that only 16 and 25% of international migrants to Oman and UAE, respectively, were female. [United Nations, Department of Economic and Social Affairs, Population Division (2017). [International Migration Report 2017](#) (ST/ESA/SER.A/403).]

By gender

ICHEP
2020

PARTICIPANTS

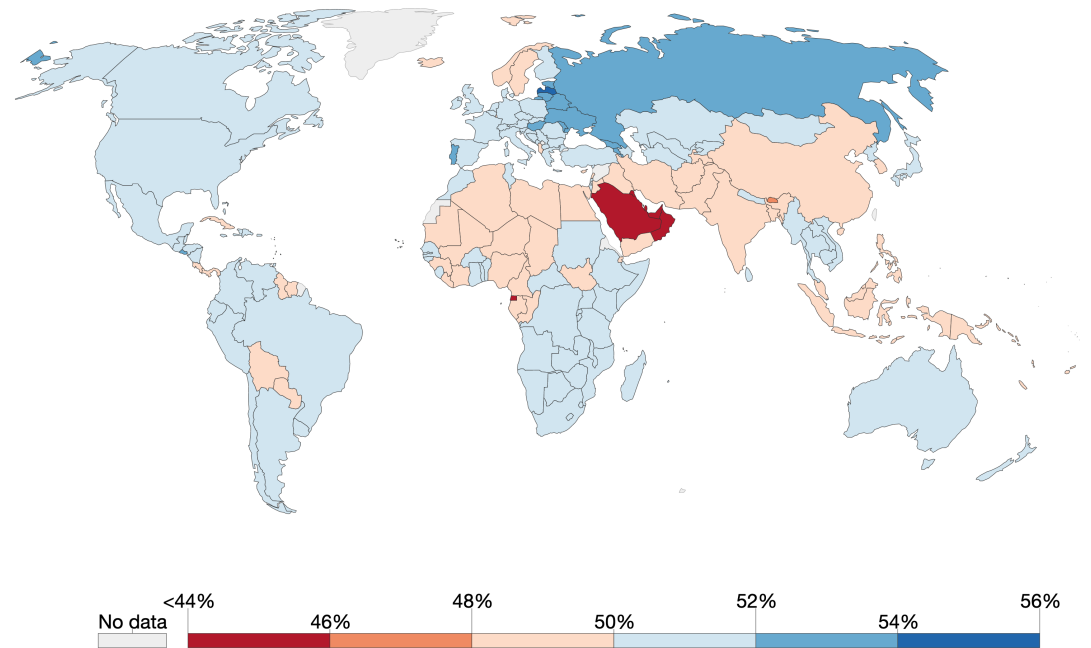
■ male ■ female ■ rather not say ■ not identify as male or female



World

Share of the population that is female, 2017

Our World
in Data



Source: World Bank

OurWorldInData.org/gender-ratio • CC BY

Note: Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.

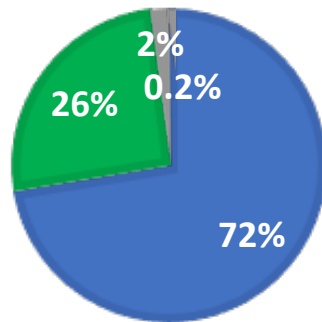
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By gender

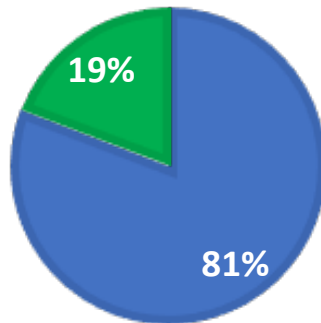
ICHEP
2020

PARTICIPANTS

■ male ■ female ■ rather not say ■ not identify as male or female



CERN
users
2019



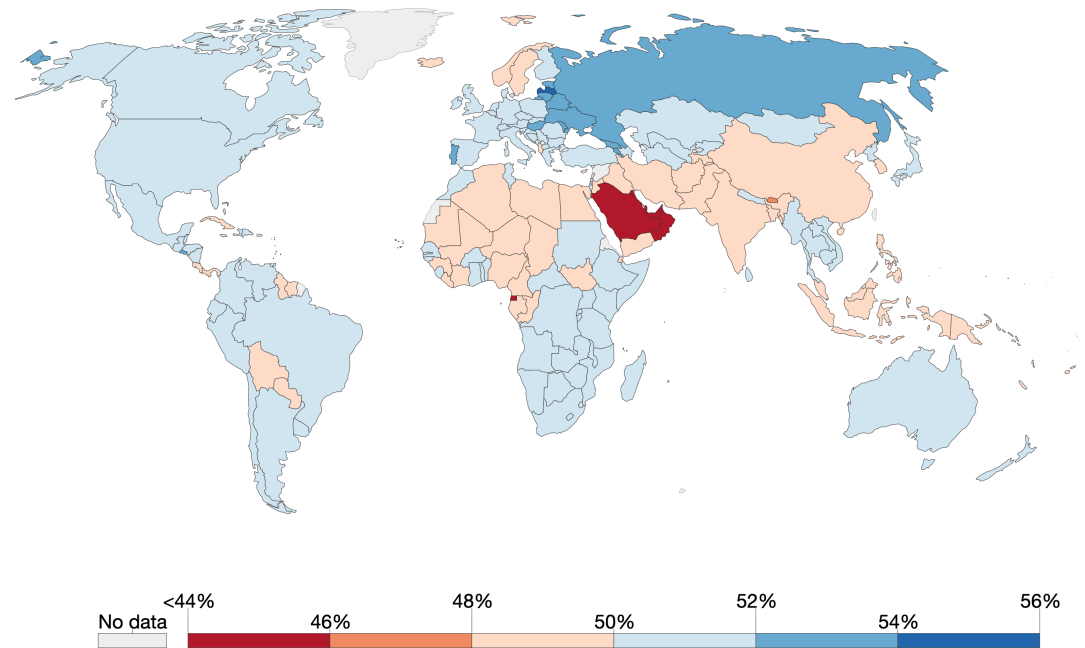
CERN-HR-STAFF-STAT-2019

(only records m/f, no other gender identities)

World

Share of the population that is female, 2017

Our World
in Data



Source: World Bank

OurWorldInData.org/gender-ratio • CC BY

Note: Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.

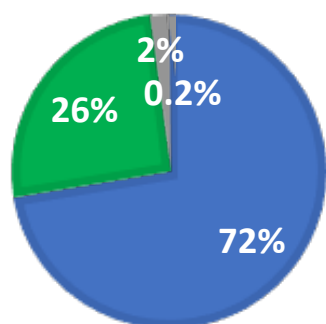
A large male immigrant population seems to be the main reason behind “red” countries in middle east. E.g. 2017, 45% of the Oman and 88% of the UAE population were from immigration. The UN reports that only 16 and 25% of international migrants to Oman and UAE, respectively, were female. [United Nations, Department of Economic and Social Affairs, Population Division (2017). [International Migration Report 2017](#) (ST/ESA/SER.A/403).]

By gender

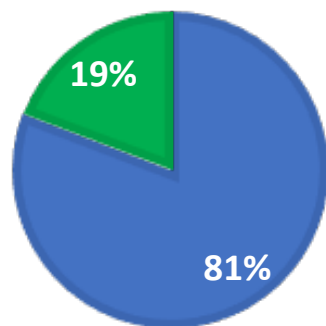
ICHEP
2020

PARTICIPANTS

■ male ■ female ■ rather not say ■ not identify as male

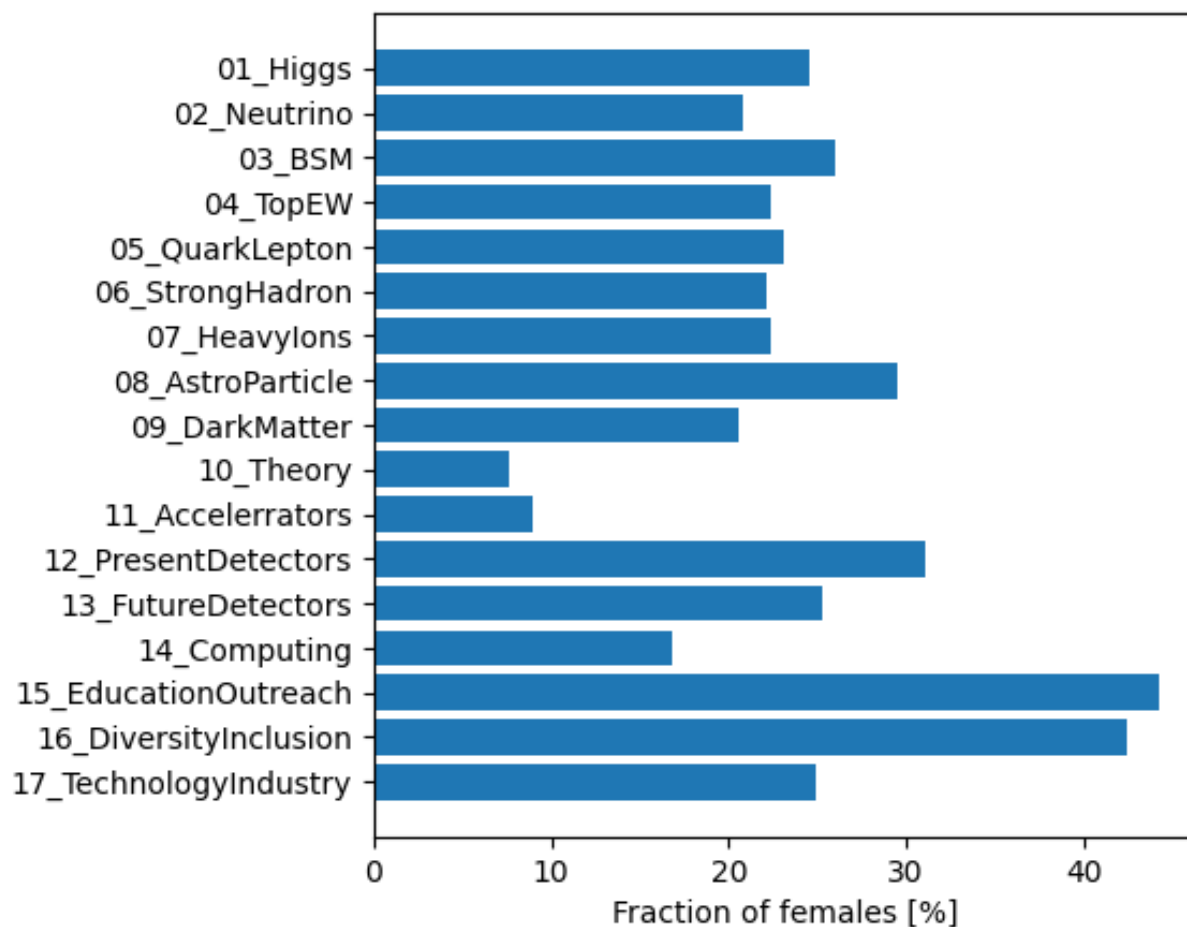


CERN
users
2019



CERN-HR-STAFF-STAT-2019

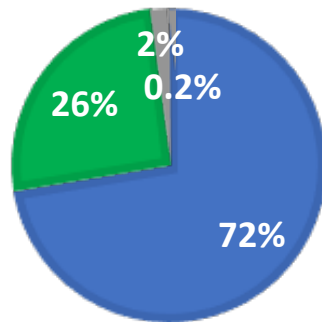
(only records m/f, no other gender identities)



By gender

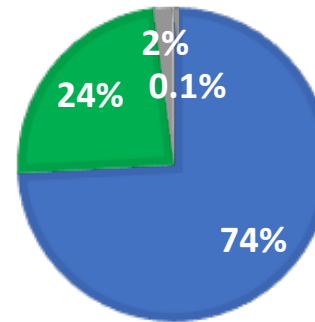
PARTICIPANTS

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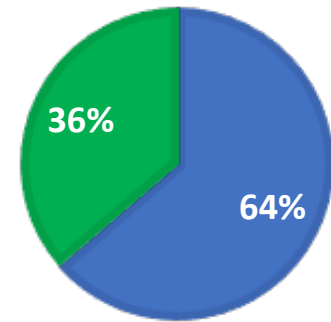
SPEAKERS (PARALLEL/POSTER)

■ male ■ female ■ rather not say ■ not identify as male or female



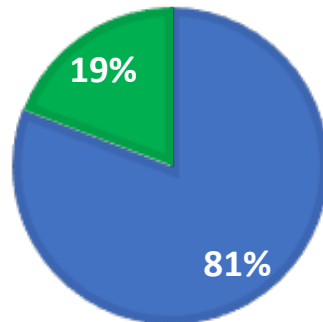
PLENARY

■ male ■ female



ICHEP
2020

CERN
users
2019

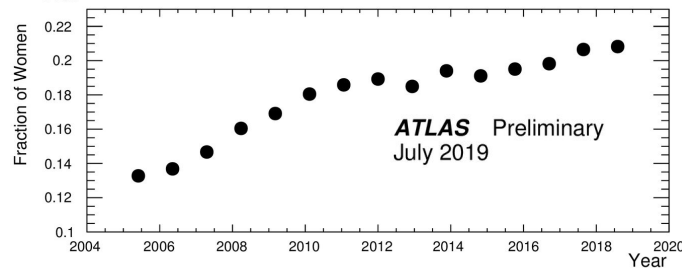


CERN-HR-STAFF-STAT-2019

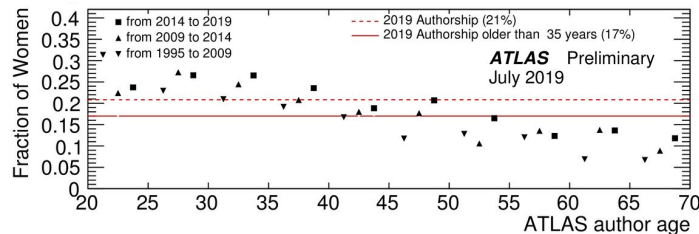
(only records m/f, no other gender identities)

Experiments' gender data

fraction of women over time



by age



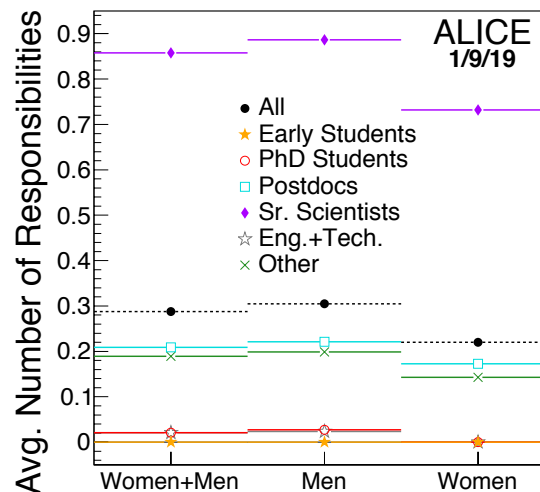
Evolution of Regional, Age and Gender Demographics in the ATLAS Collaboration, **Clara Nellist** (ATLAS)



Similar observations for CMS (see **Christine McLean's** talk)

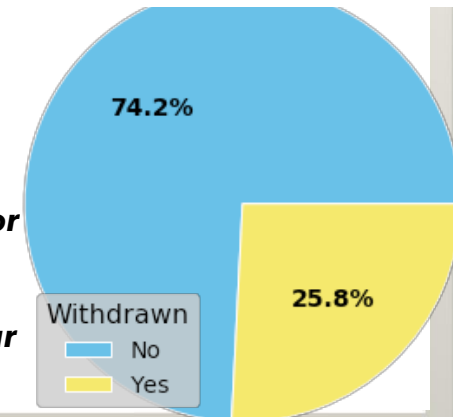
Jonas Rademacker (University of Bristol)

by positions/
responsibilities



probing deeper, with
surveys

Collab. Poll -
"Have you ever
withdrawn from
consideration for a
leadership role at
Belle II (implicitly or
explicitly) because
of the impact it
would have on your
family life?"



ALICE
Demographics of the
ALICE Collaboration,
Anders Knospe (ALICE)



Diversity and Inclusion Activities in the
Belle II Collaboration
Hannah Wakeling (talk) and **Shannette**
De La Motte (poster) (BELLE II)

Diversity & Inclusion

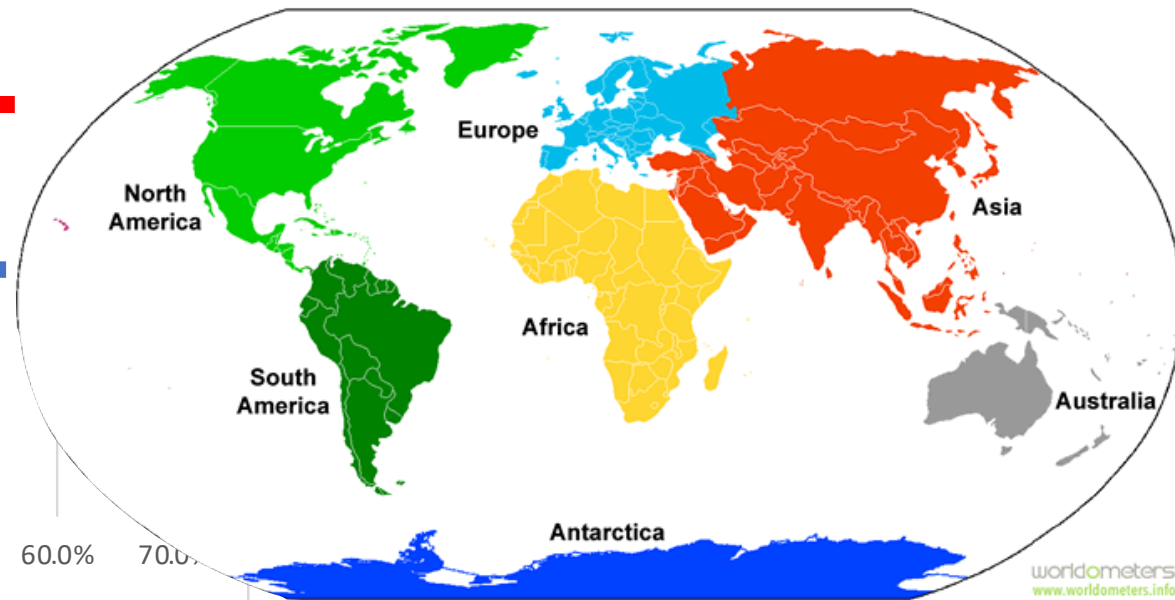
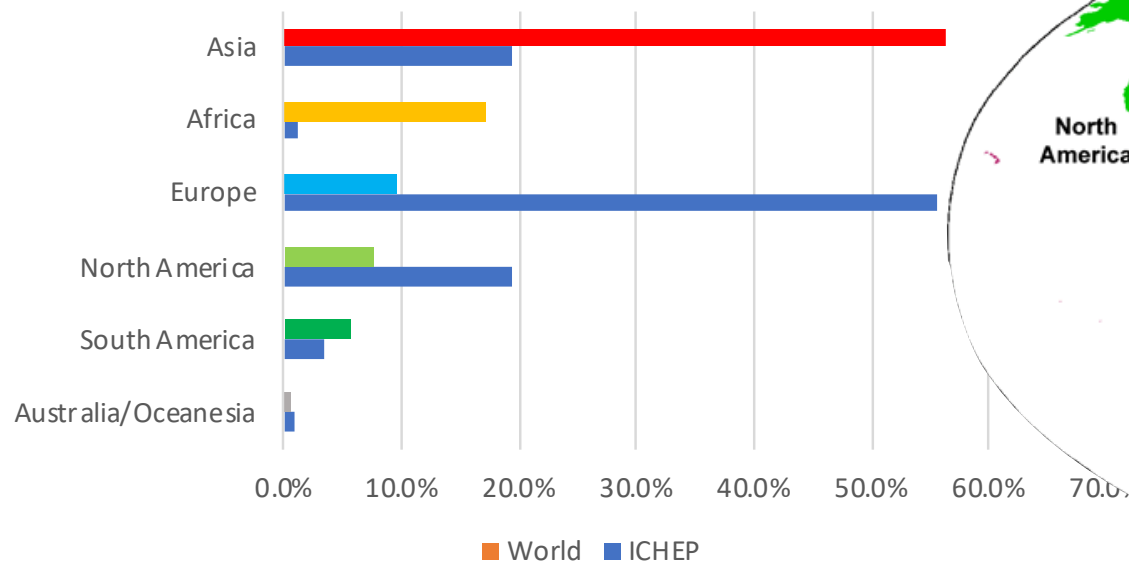
ICHEP, all over the world, including in Prague, 6 Aug 2020 8

By continent

ICHEP

World

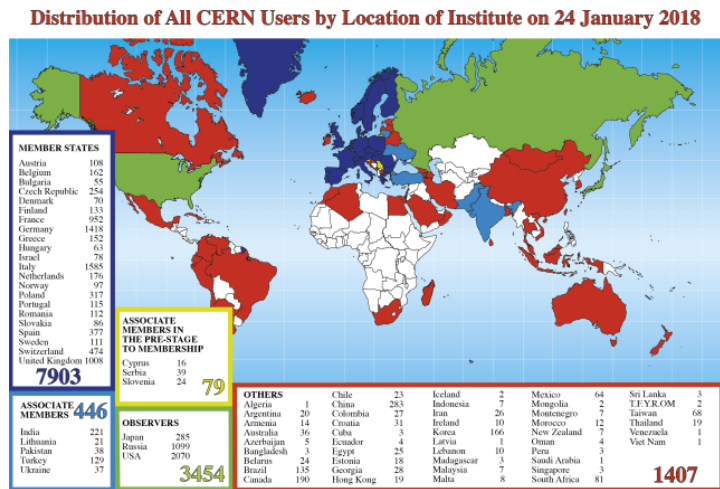
Chart Title



<https://www.worldometers.info/geography/7-continents/>

Particle Physics, Geographically

CERN



Dolphins



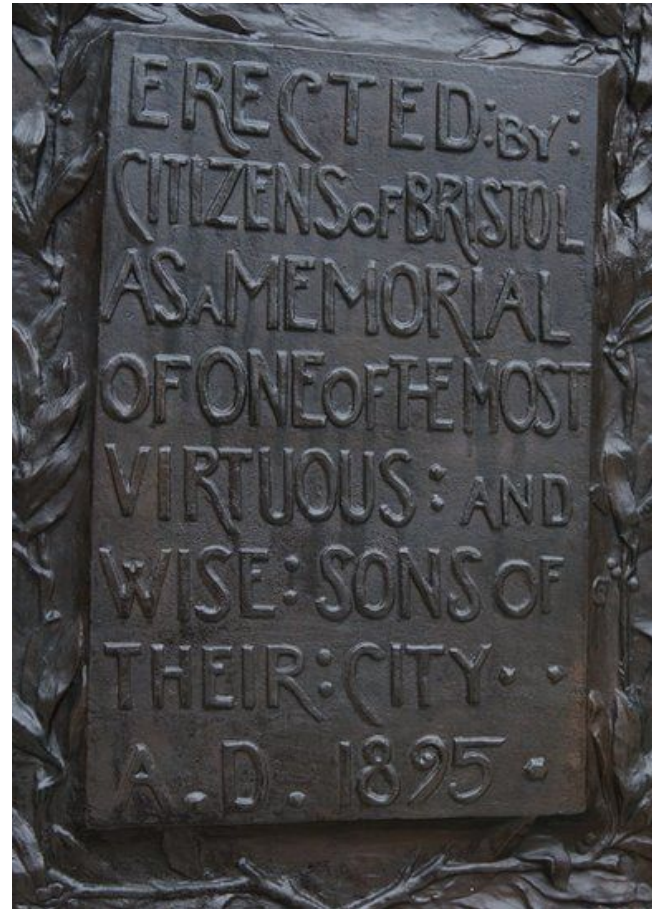
Dolphins



Edward Colston (Slave Trader)



Edward Colston (Slave Trader)



Edward Colston (Slave Trader)



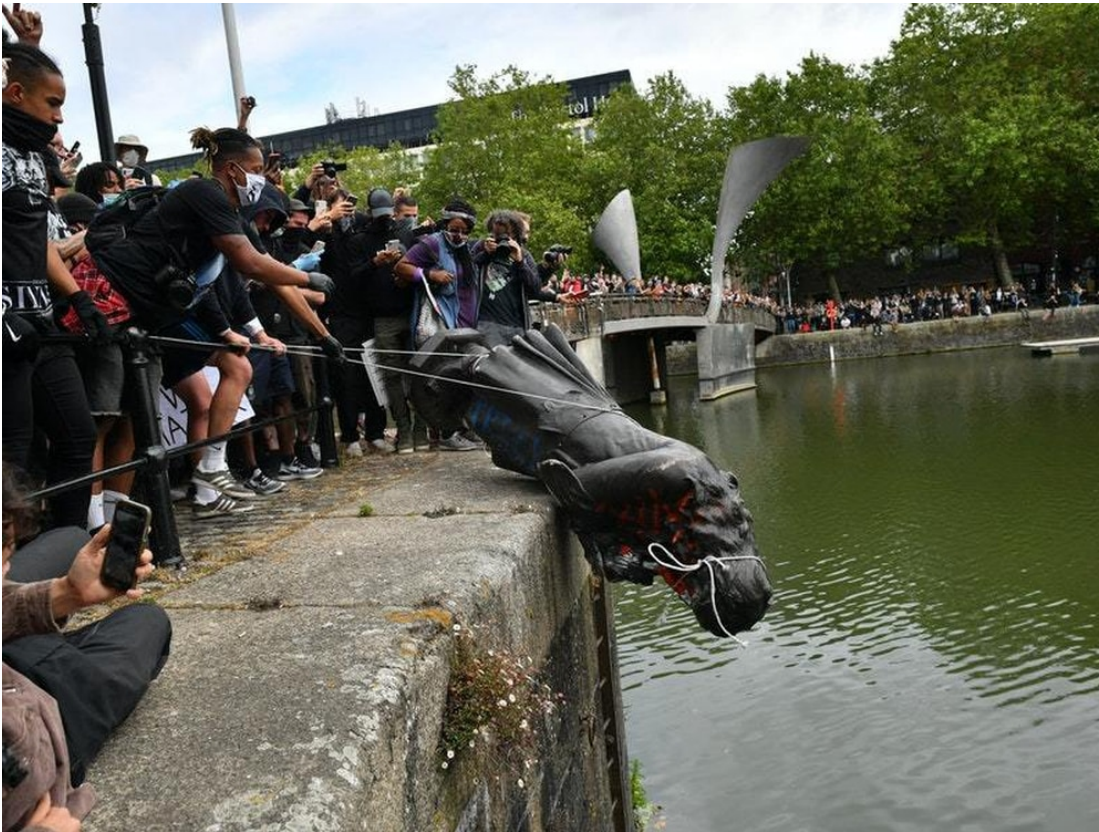
Edward Colston (Slave Trader)



Edward Colston (Slave Trader)



Edward Colston in Bristol Harbour



George Floyd's murder triggered world-wide protests, including this one. Regarding the dolphin: Bristol University, like many, are re-evaluating symbols, building names... but of course we need to go beyond symbols.

<https://research-information.bris.ac.uk/en/publications/is-it-wrong-to-topple-statues-and-rename-schools>



(this is Jen Reid, her statue stood for 24h before being removed by the City Council)

Beyond symbols:

Promoting diversity: Awareness of racism



- USCMS led “**A day of reflection**” event on 10-June 2020 focused on structural racism
 - In support of #strike4blacklives (<https://www.particlesforjustice.org/>)
 - Open to US-LHC experiment communities and also colleagues from around the world
 - **Over 500 participants**
 - Latter half of the event focused on how to address structural racism in academia and HEP in particular
 - Follow-up activities and actions are being planned

→ 10:35 History of Racism in America

25m

Bradley Graupner (Linguistic Anthropologist) will discuss how we can understand the contemporary context from a brief overview of the history relevant to this moment. That will include early colonialism, the emergence of whiteness as a concept and for what reasons, the colonial era developments and rebellions in how they shaped institutionalization of racial supremacy, the American colonies, the formation of the United States, and Slavery through Jim Crow. This will touch on the intersection of race and racism with class and inequality, ethnicity and nationalism, all vis-à-vis power and politics as the latter is generally considered. He will emphasize how historical structures and resistance adapts and changes vis-à-vis institutionalization to maintain power dynamics.

Graupner's training is in anti-colonial struggles via racism, land rights, civil rights, gender rights, sexual orientation rights, axiological and epistemological rights vis-à-vis history of the Black Liberation Movement, and Native American Religious Traditions. He has been engaged in anti-racism and anti-colonial struggles since 2003. Graupner is on the board of directors for the Chicago SNCC History Project which established the first Civil Rights archive in the world that is open to the public at the Carter G. Woodson regional library in the Vivian G. Harsh Collection of African American History. He assists with creating and curating an ongoing collection of oral histories from Civil Rights organizers for the archive. In 2016, he also created the decolonizing library at the Oetzi Sakowin camp for the Standing Rock Sioux Tribe when participating in their uprising against the violation of their treaty rights related to the Dakota Access Pipeline.

Speaker: Bradley Graupner

CERN Fermilab #Shu...

→ 11:05 Addressing Structural Racism Underlying Protests

25m

Laura Pitter is deputy director of Human Rights Watch's US Program. Her bio is available at: <https://www.hrw.org/about/people/laura-pitter>

Links to some of her prior work on the topic of her presentation are listed below:

US: Address Structural Racism Underlying Protests

Prosecute Officers in Floyd Death; End Police Violence Against Protesters: <https://www.hrw.org/news/2020/06/02/us-address-structural-racism-underlying-protests>

The Case for Reparations in Tulsa, Oklahoma

A Human Rights Argument: Report: https://www.hrw.org/news/2020/05/29/case-reparations-tulsa-oklahoma#_Toc41573959; Shorter press release which provides a summary: <https://www.hrw.org/news/2020/05/29/us-provide-reparations-1921-tulsa-race-massacre>

The above report on reparations stemmed from an in depth, two year investigation we did into policing, poverty and racial inequality in Tulsa that is somewhat of a microcosm for these issues in the US. Here is a link to the 216 page report, "Get on the Ground": Policing, Poverty, and Racial Inequality in Tulsa, Oklahoma," <https://www.hrw.org/report/2019/09/12/get-on-the-ground-policing-poverty-and-racial-inequality-tulsa-oklahoma/case-study-us>; Shorter press release which provides a summary: <https://www.hrw.org/news/2019/09/12/us-how-abusive-biased-policing-destroys-lives>

Speaker: Laura Pitter

US CMS participates in day of reflection

June 29, 2020 | Anadi Canepa and Meenakshi Narain

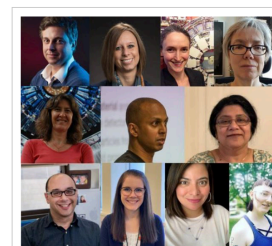
Share Tweet Email

On June 10, the US CMS collaboration participated in a day of reflection and conversation in support of the Strike For Black Lives, which was led by a group of physicists. About 525 members of the US ATLAS and the US CMS collaborations, including a few external guests, gathered together virtually.

As scholars, educators and researchers, the collaboration gathered to learn, reflect, acknowledge and confront the systemic bias that exists for Black colleagues within our own academic community and also as part of the broader community.

As part of the day, the collaboration heard from two excellent speakers: Bradley Graupner, linguistic anthropologist from the University of Texas at Austin, and Laura Pitter, deputy director of Human Rights Watch's U.S. program. Their historical insights and analysis on systematic racism included many pointers on how members of the collaboration could recognize and act to dismantle the inequality in our society and correct biases in our community.

In addition, members of the collaboration engaged in a facilitated conversation on "Awareness and Change – How We Can Do Better." Each panelist read an experience shared by Black scientists on the Twitter feed #BlackInTheVory. Following this, the panelists and participants engaged in a discussion about racism and systemic barriers in academia, with a focus on the LHC community. The group brainstormed concrete actions to implement antiracist practices, attract and retain Black physicists, support them, and create an inclusive environment that enables their success.



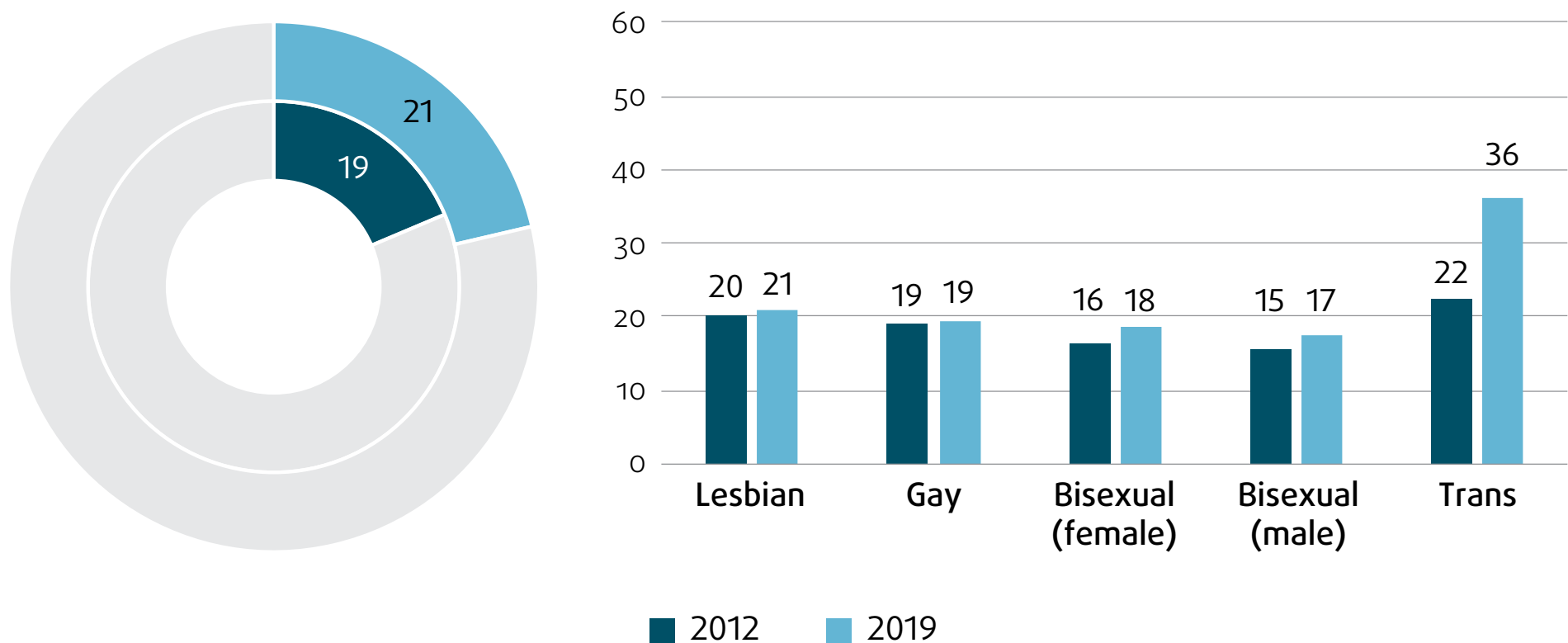
Some of the members of the US CMS and US ATLAS collaborations who served as panel moderators and panel members are: Top row, from left: Kevin Black, Anadi Canepa, Sarah Demers, Sarah Eno. Middle row: Cecilia Gerber, Bo Jayatilaka, Meenakshi Narain (US CMS Collaboration Board chair and event organizer). Bottom row: Sai Rappoccio, Savanna Starko, Indara Suarez, Wren Veters.

Diversity and Inclusion in the CMS Collaboration
Bo Jayatilaka (CMS)

LGBTI Discrimination at work

( **FRA** EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS 2020)

Figure 2: Respondents who felt discriminated against at work due to being LGBT in the last 12 months before the survey (2012 and 2019), EU-28 and by group (%)^{a,b}



LGBTQ CERN



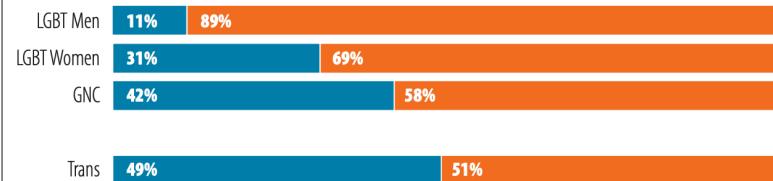
LGBTQ+ Inclusivity in High Energy Physics
Flavia de Almeida Dias (LGBTQ+ group CERN)

More than 1 in 3 LGBT physicists considered leaving their campus or workplace in the last year.



EXPERIENCE OF HARASSMENT

■ Yes ■ No

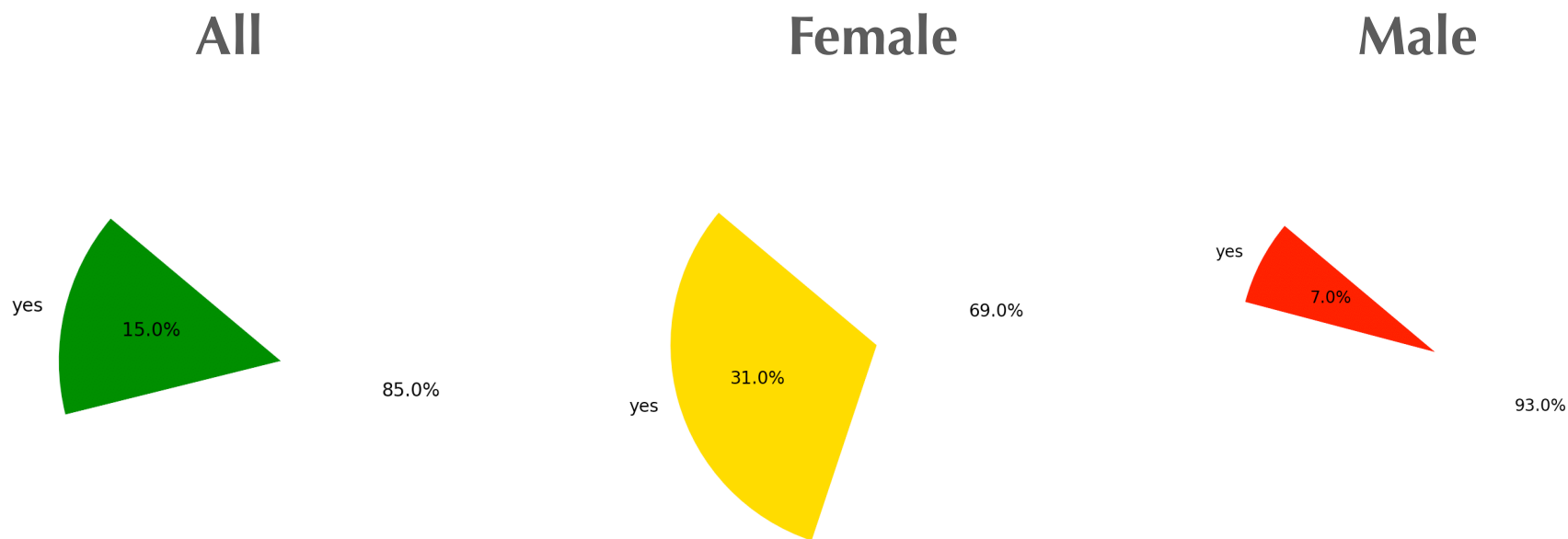


LGBT = lesbian, gay, bisexual, transgender as well as other sexual and gender minorities
GNC = gender-nonconforming



Harassment and discrimination

- Have you ever experienced any kind of **discrimination** in your work environment, based on your **gender, ethnic origin, sexual identity, sexual orientation, disability, body shape, health (including mental health), age, or any other reason?**



Generally the level of harassment has remained the same over the last 3 years

The Early Career Gender and Diversity Office at the LHCb experiment
Eluned Smith (LHCb)

Socio-economic background

Socio-economically disadvantaged students across OECD countries are almost three times more likely than more advantaged students not to attain the baseline level of proficiency in science.

OECD (2016), “Socio-economic status, student performance and students' attitudes towards science”, in PISA 2015 Results (Volume I): Excellence and Equity in Education, OECD Publishing, Paris. DOI: <https://doi.org/10.1787/9789264266490-10-en>.

“You don’t sound like a professor”

Peter Larcombe, professor of mathematics, University of Derby. Prof Larcombe proudly has a working class accent. <https://www.timeshighereducation.com/blog/im-professor-working-class-accent-get-over-it>

Those from low SES backgrounds are less likely to attend a high status institution, less likely to complete their degree and less likely to get a first or 2:1, even conditional on prior attainment

Claire Crawford University of Warwick and Institute for Fiscal Studies

<https://www.ifs.org.uk/uploads/Claire%20Crawford%20-%20SES%20differences%20in%20HE%20participation%20and%20outcomes.pdf>

Chowdry, H., C. Crawford, L. Dearden, A. Goodman and A. Vignoles(2013), Widening participation in higher education: analysis using linked administrative data, Journal of the Royal Statistical Society: Series A, Vol. 176, pp. 431-457. •Crawford, C. (2012), Socio-economic gaps in HE participation: how have they changed over time?, IFS Briefing Note BN133. •Crawford, C. (2014a), The link between secondary school characteristics and HE participation and outcomes, CAYT Research Report (<https://www.gov.uk/government/publications/secondary-school-characteristics-and-university-participation>). •Crawford, C. (2014b), Socio-economic differences in university outcomes in the UK: drop-out, degree completion and degree class, IFS Working Paper No. 14/31. •Crawford, C. and A. Vignoles(2014), Heterogeneity in graduate earnings by socio-economic background, IFS Working Paper No. 14/30. •Crawford, C., L. Macmillan and A. Vignoles(2014), Progress made by high-attaining children from disadvantaged backgrounds, CAYT Research Report (<https://www.gov.uk/government/publications/high-attaining-children-from-disadvantaged-backgrounds>).

Unconscious bias, stereotypes and prejudice



Even if you have no racist or sexist opinions or beliefs, learned racist and sexist stereotypes are embedded in your sub-conscious decision making.

This can have unintended, negative consequences, e.g. in hiring.

Counteracting these is difficult.

<https://cds.cern.ch/record/2670668>

Juliane Degner is professor of social psychology
From Bo Jayatilaka's talk (CMS)

Challenging Stereotypes

International Particle Physics Outreach Group

Particle Physics Masterclasses for Girls



- Decision at IPPOG meeting in Nov 2016: launch MCs for girls in 2017
- Target especially girls (but not exclusively)
- Female lecturers and tutors, as much as possible
- All Videoconferences with female moderators
- Offer to all IMC institutes (> 200 worldwide)



Nurturing Girls' Interest in Science with Particle Physics Masterclasses
U. Bilow (IPOGG)



One CMS tweet on IWD reached 88,000 people

[@CMSexperiment](#) on instagram, facebook, and twitter

CMS Outreach: Promoting Women in STEM

Christine McLean (CMS)



Laura Bassi initiative (EDI grassroots by LHCb Early Career members)

LHCb Early Career Initiatives

Martha Hilton (LHCb)

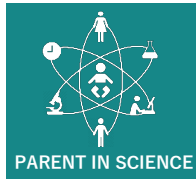
HEP working conditions and diversity

- Long hours (difficult especially for those with caring responsibilities)
- No job security (except for the tiny minority of us who land a faculty job)
Beware the survivor bias - the people around you are the exception, the majority left the field! Remember, professor, that each of us will vacate one job - unless the field expands, on average one of all PhD students you train in your entire career will get a faculty position.
- International mobility - great as option, problematic as requirement. Who will sacrifice her career to follow her partner? (LHCb survey: women more often than men).
- Diversity & Inclusion is closely related to working conditions.

Science during lockdown

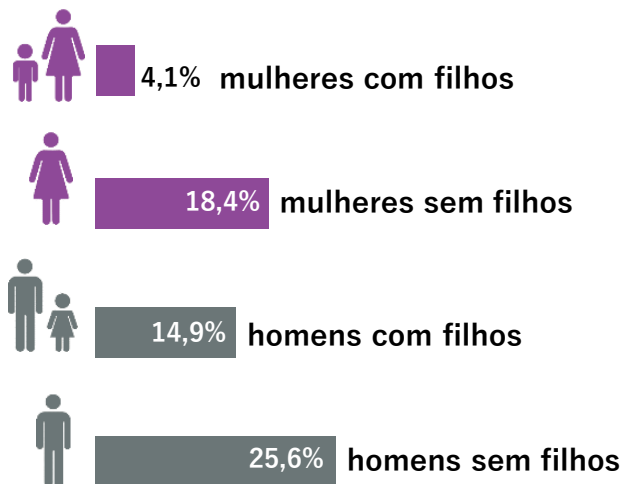
Clemencia Mora Herrera (Universidade do Estado do Rio de Janeiro (BR))
Meenakshi Narain (Brown University (US))

Study by



Of 3,345 Brazilian scientists from various research areas

Able to work remotely?



Preprint: <https://www.biorxiv.org/content/10.1101/2020.07.04.187583v1>
Info-graphics <https://bit.ly/3eQXIDb>

Also finds that black scientists are more affected than white ones.



See also: Myers, K.R., Tham, W.Y., Yin, Y. *et al.*
Unequal effects of the COVID-19 pandemic on scientists.

Nat Hum Behav (2020).

<https://doi.org/10.1038/s41562-020-0921-y>

Lockdown Impact

- Surveys show that productivity suffered during lockdown.
- Impact not equal, especially between those with and w/o caring responsibilities, and women compared to men.
- Those whose studentship / funding / contract ends now, find a difficult job market.
- Lost research time and productivity will hit women and carers, hardest, if not taken into account when judging CV's ("COVID impact statement"?)
- If you are a PI: Can you extend contracts? Do staff/students the right equipment to work from home (not just computers)? Sometimes, creative solutions have been found (i.e. diverting saved travel money to buy home-working equipment).

COVID-19 in HEP - How did it affect you?

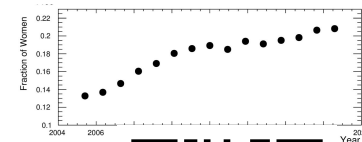
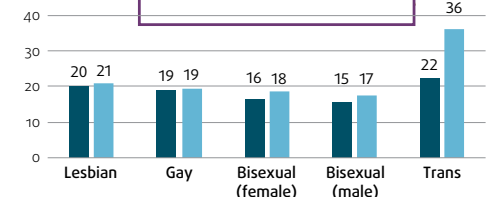
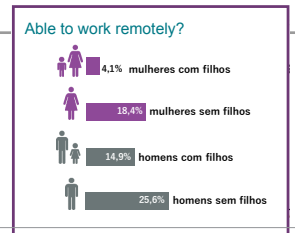
<https://www.surveymonkey.com/r/ICHEP2020-COVIDSurvey>



Organised by: A. Garrit Knospe (U. Huston), C. Mora (U. Rio de Janeiro), M. Narain (U. Brown), A. Oyanguren (IFIC - Valencia), R. Zlebcik (Charles Uni. - Prague)

Summary/Conclusions

- All things are not equal for women, LGBT+ people, BAME people, disabled people, and those from low socio-economic backgrounds. HEP is no exception.
- Note to my fellow white straight men: Discrimination and harassment happen, but we often don't see it.
- A lot of encouraging initiatives - new diversity offices, outreach programmes, taking data, unconscious bias training.
- There tend to be more women in junior positions. Will this trickle through to senior positions? When? Or will working conditions and other factors drive women out of HEP more than men?
- Covid highlighted and accentuated inequities that were there before.



<https://www.surveymonkey.com/r/ICHEP2020-COVIDSurvey>

HEP experiments against Homophobia, Transphobia, Biphobia

UNIVERSITY OF AMSTERDAM

INSTITUTE OF PHYSICS

HEP and Beyond for IDAHOT and LGBTSTEM Day



F. A. Dias - ICHEP2020 - July 29th 2020

12

UvA

<https://www.surveymonkey.com/r/ICHEP2020-COVIDSurvey>

LGBTQ+ Inclusivity in High Energy Physics **Flavia de Almeida Dias** (LGBTQ+ group, CERN)

IDAHOT = International Day Against Homophobia, Transphobia and Biphobia, 17 May

Jonas Rademacker (University of Bristol)

Diversity & Inclusion

ICHEP, all over the world, including in Prague, 6 Aug 2020 27