

A young woman with long brown hair, wearing a red long-sleeved shirt, is looking intently at a large, complex industrial machine. She is reaching out with her right hand towards a horizontal metal bar. The machine is made of various metal components, including pipes, flanges, and a large circular opening. Some parts are wrapped in silver insulation. The background shows a laboratory or industrial facility with metal beams and overhead lighting. The overall lighting is a mix of blue and white, creating a professional and technical atmosphere.

# OUTREACH

JENAS 2022

Rebeca Gonzalez Suarez - Uppsala University (May 2022)

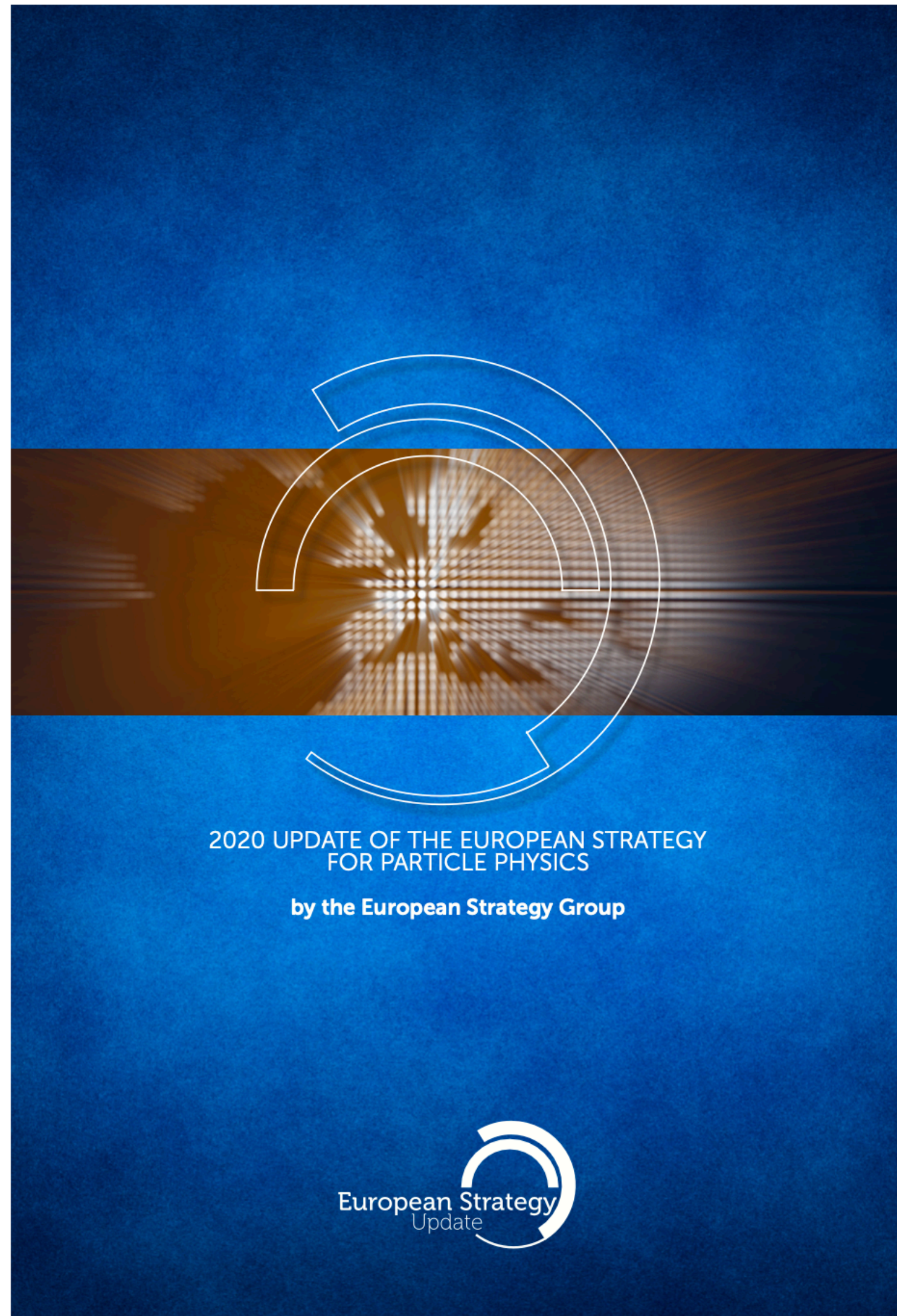
# 2020 Update of the European Strategy for Particle Physics



Environmental and societal impact

D. Exploring the fundamental properties of nature inspires and excites. It is part of the duty of researchers to share the excitement of scientific achievements with all stakeholders and the public. The concepts of the Standard Model, a well-established theory for elementary particles, are an integral part of culture. **Public engagement, education and communication in particle physics should continue to be recognised as important**

***components of the scientific activity and receive adequate support. Particle physicists should work with the broad community of scientists to intensify engagement between scientific disciplines. The particle physics community should work with educators and relevant authorities to explore the adoption of basic knowledge of elementary particles and their interactions in the regular school curriculum***



# Public engagement, education and communication

## As important components of the scientific activity



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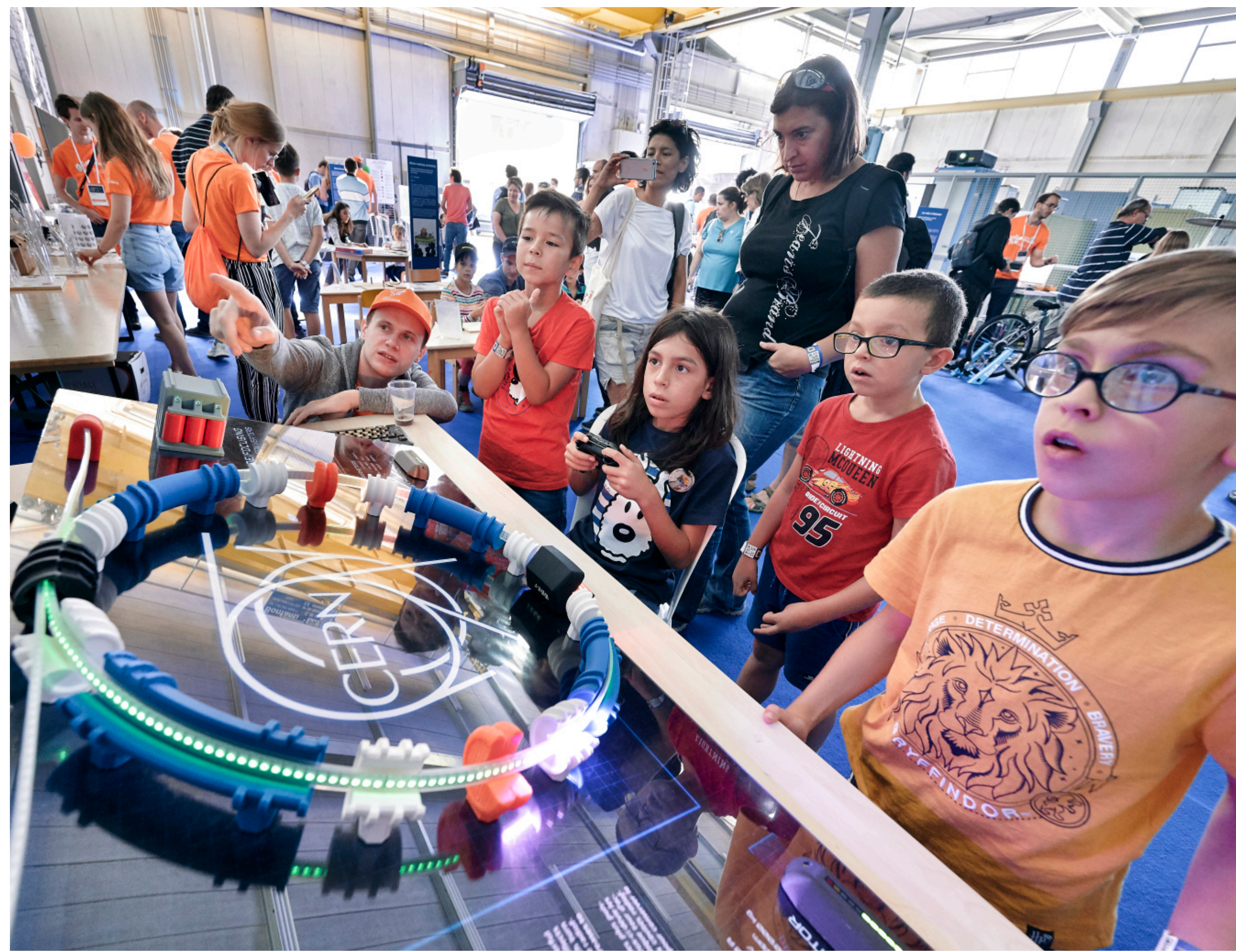


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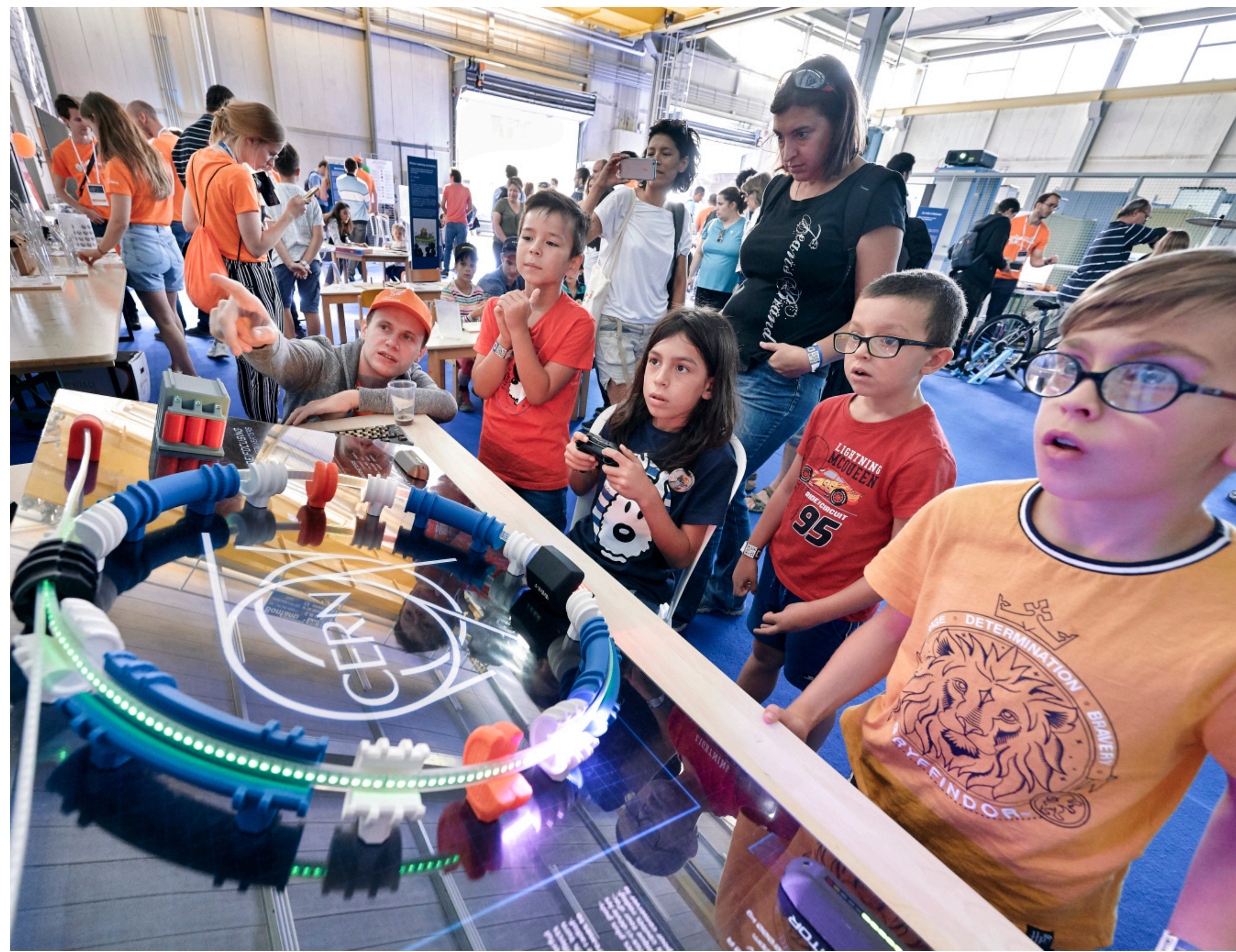
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    - They public pays for it → the public should take “ownership” of it
    - This also applies to “stakeholders”

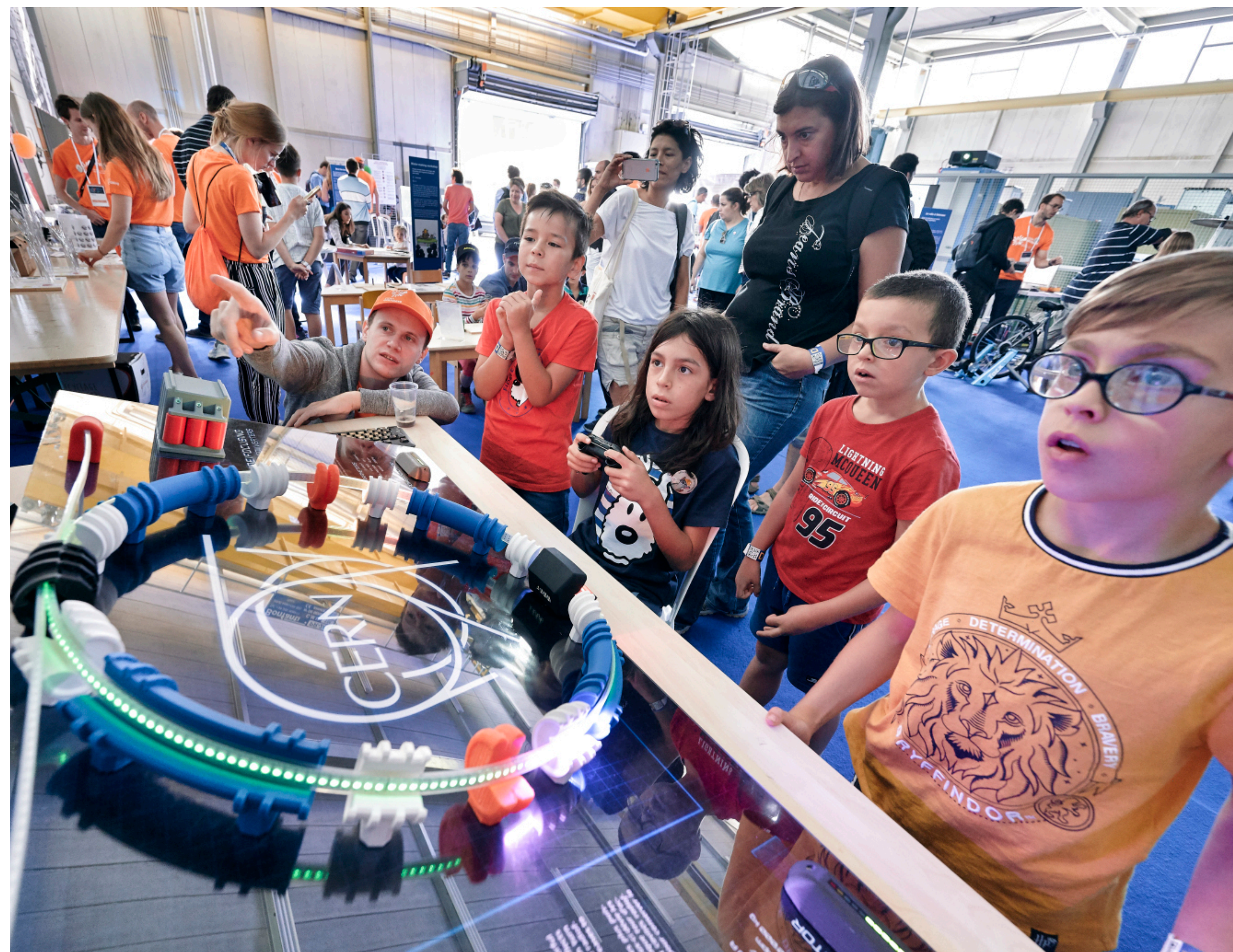




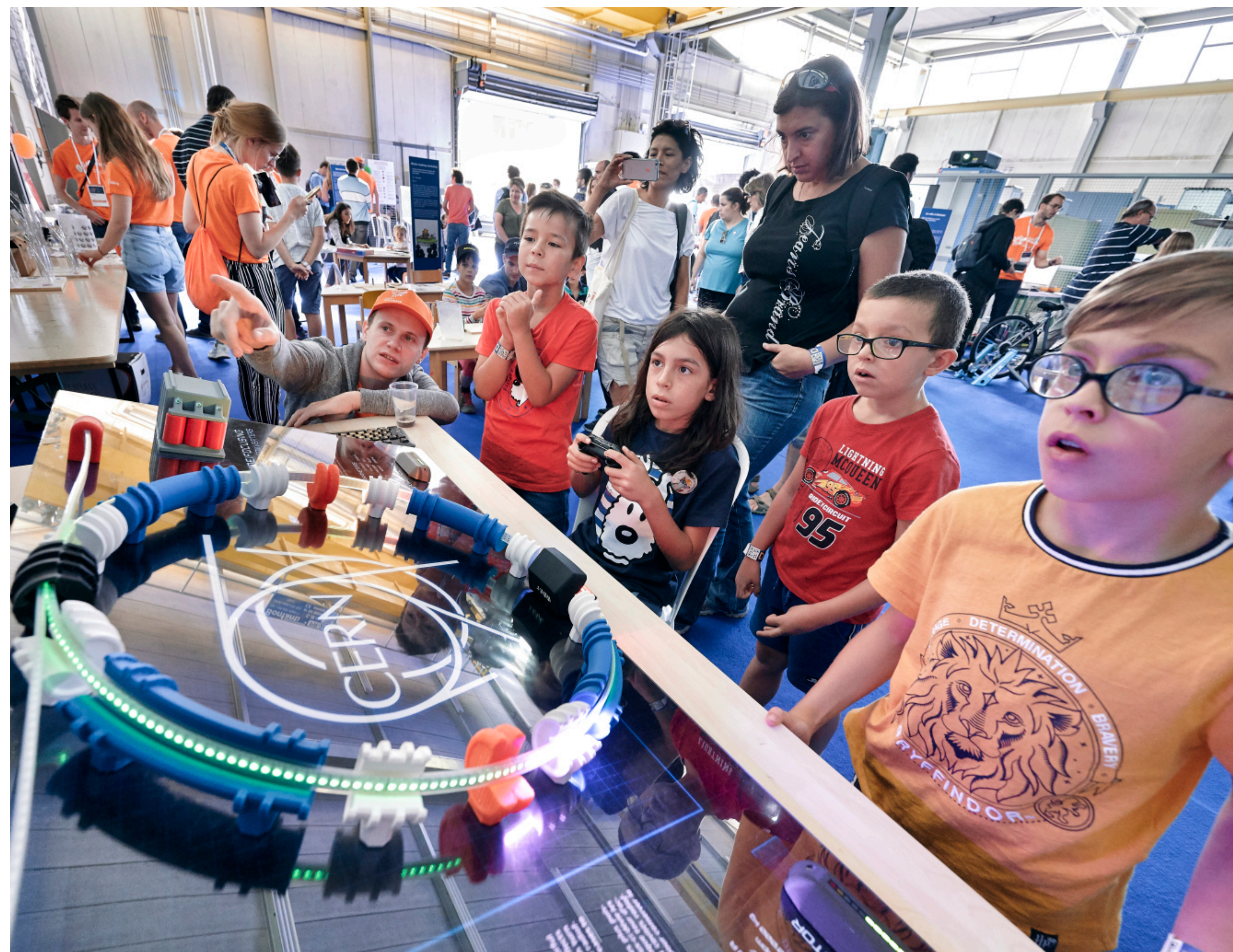
Rebeca Gonzalez Suarez (Uppsala University) - JENAS 2022



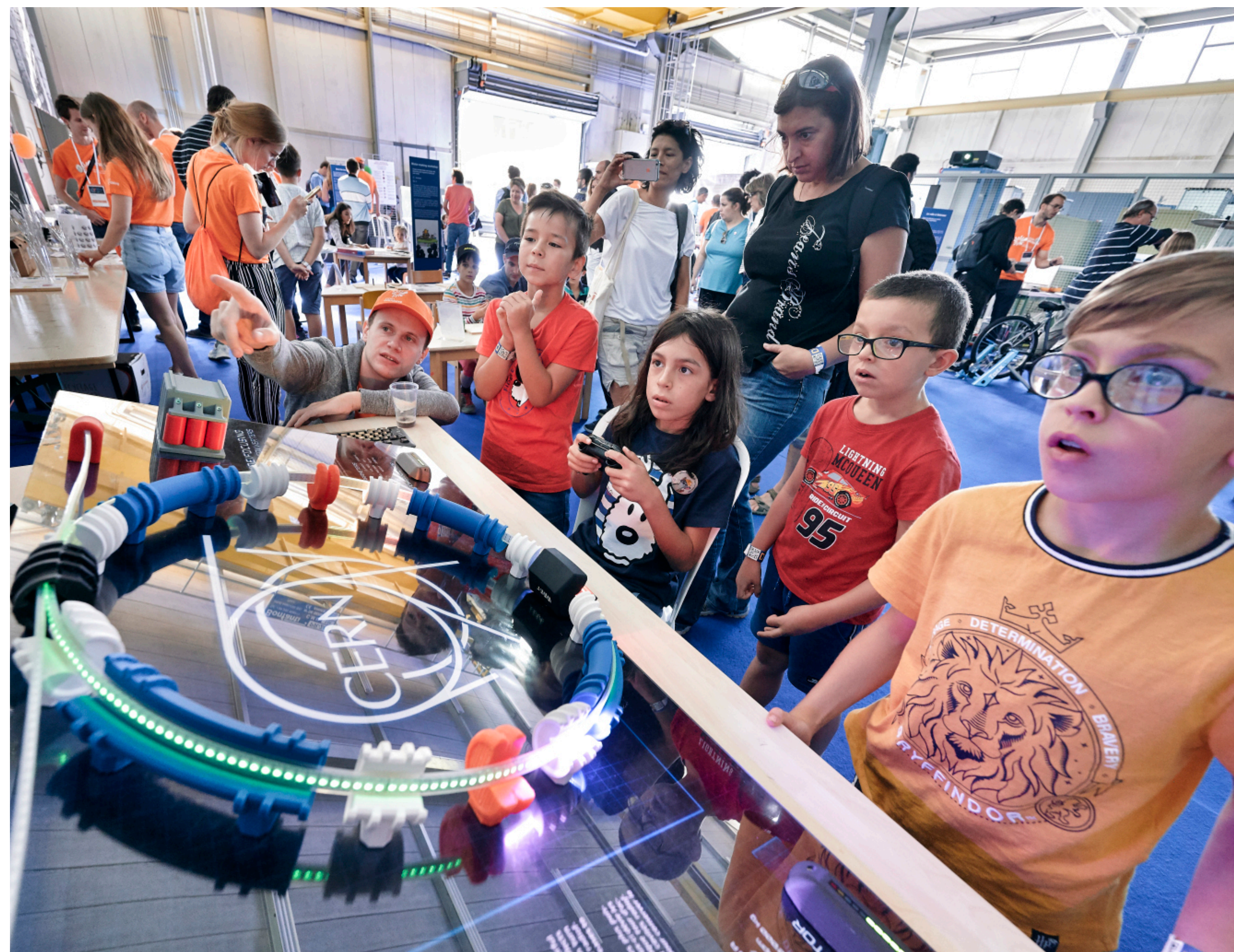
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- This enables the production of more fundamental research
- And guarantees the continuity of the field into future generations

**More important now**  
**Than ever**

# More important now Than ever

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By [Stephanie Pappas](#) published December 16, 2021

Here's a look at what flat-earthers believe and why they think our planet is a disc surrounded by an icy wall.



(Image credit: Shutterstock)



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Jan 22, 2020

Contributor: Alisa Nicksch, MD, and Matthew Loxton, MKM, CKM

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Revenge of the experts: Will COVID-19 renew or diminish public trust in science? ☆ 

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BEHAVIOR | OPINION

# The Antiscience Movement Is Escalating, Going Global and Killing Thousands

Rejection of mainstream science and medicine has become a key feature of the political right in the U.S. and increasingly around the world

By Peter J. Hotez on March 29, 2021

# In collider physics

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Outreach can equip the public against this

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- It takes time that could be used for research
  - YES (though the same can be said about paper-writing and we assume that is part of the job)



# Adequate support





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  - Importance of establishing “best practices”

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  - Scrutiny and scepticism are healthy → the general public doesn't always know how to gauge this
  - ➔ *This is not a zero-sum game, support for science is support for all, when branches of valid science struggle due to lack of support, it is to the detriment of all of us*

# Work with educators and authorities



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- Basic knowledge of fundamental particles in the regular school curriculum
  - Public awareness and understanding of particle physics
- The pandemic has revealed the importance of preparing students to critically evaluate the conceptual foundations and real-world impact of science



# Outreach formats



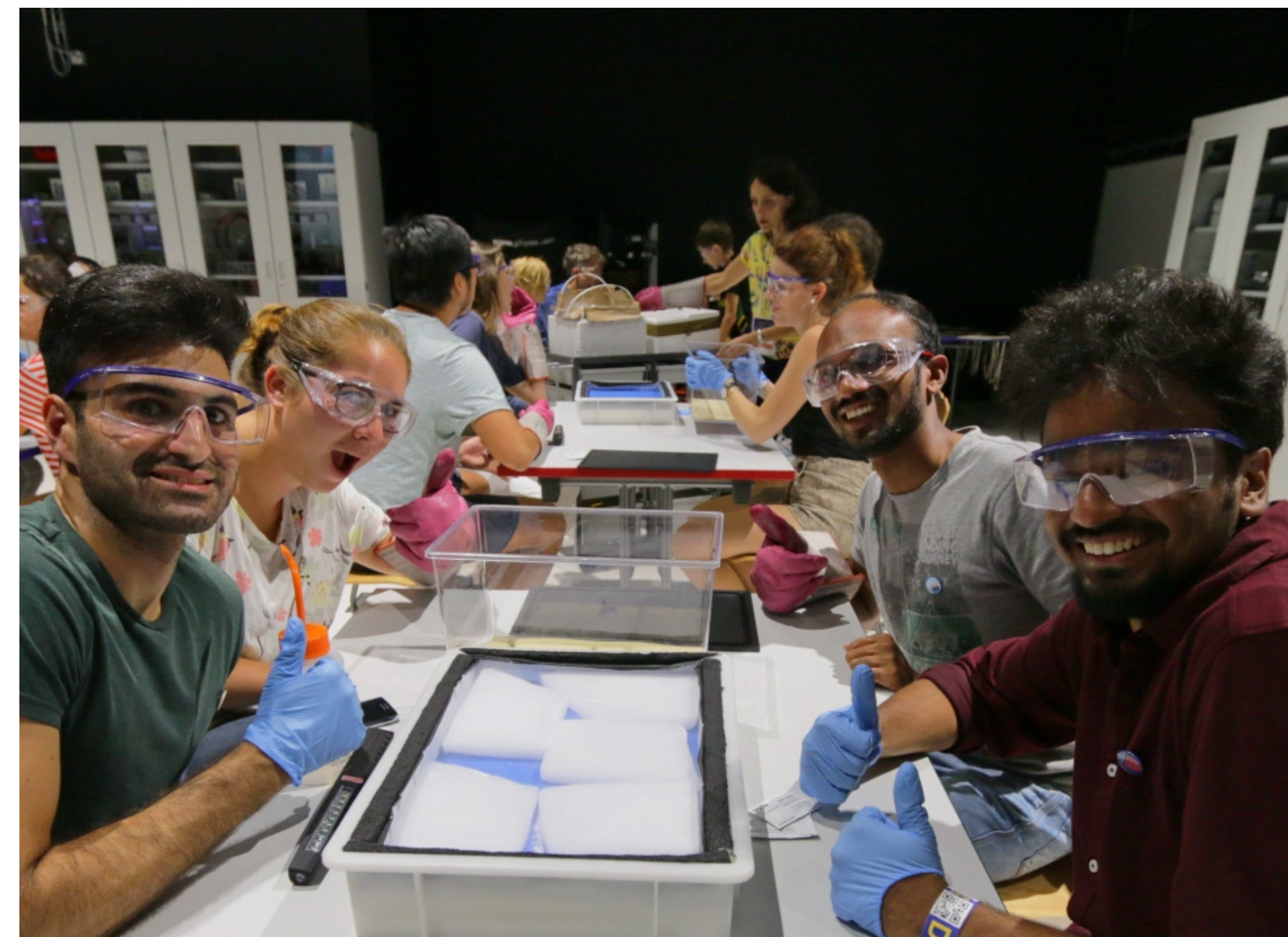
# Outreach formats

- Public lectures



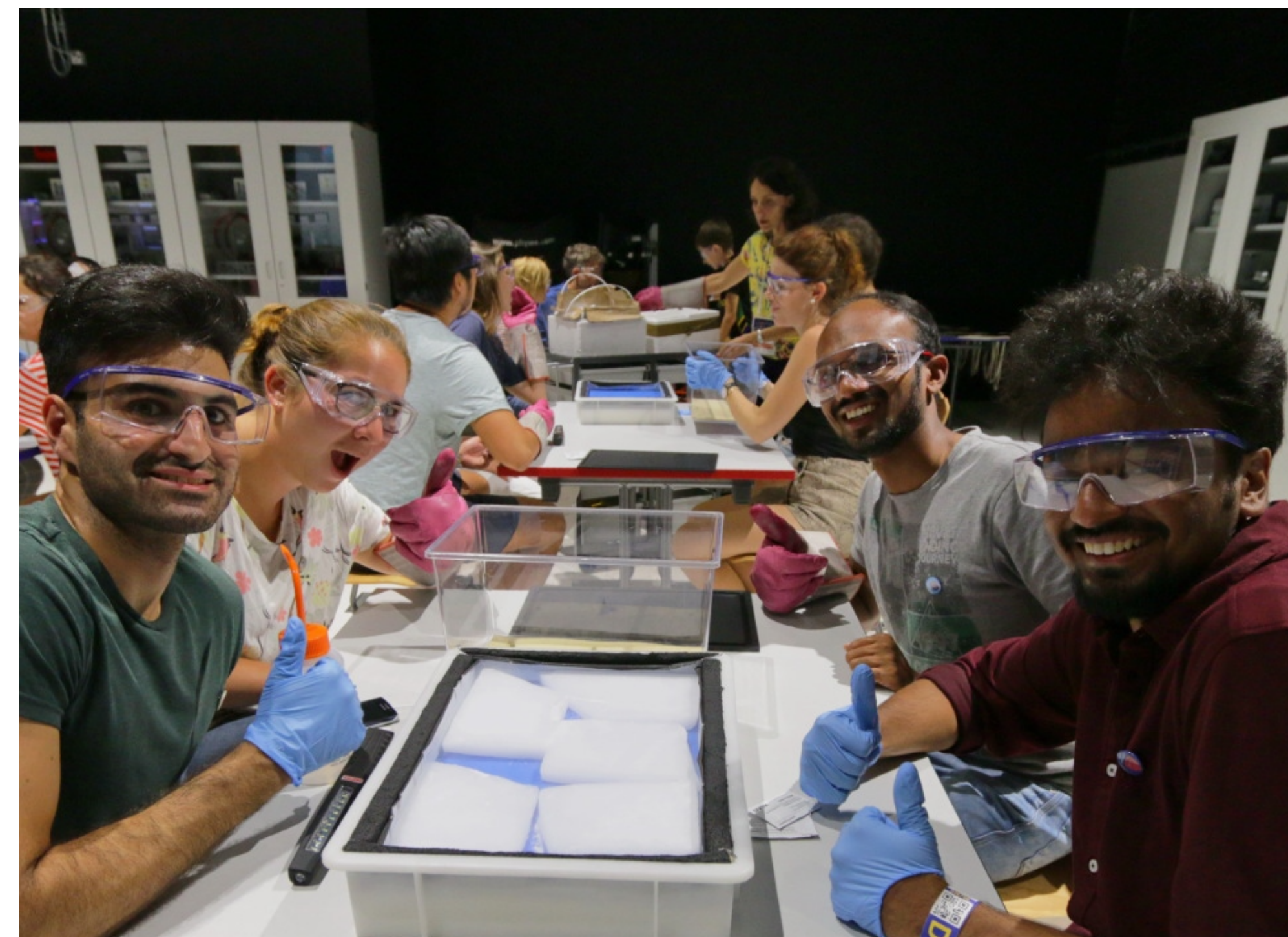
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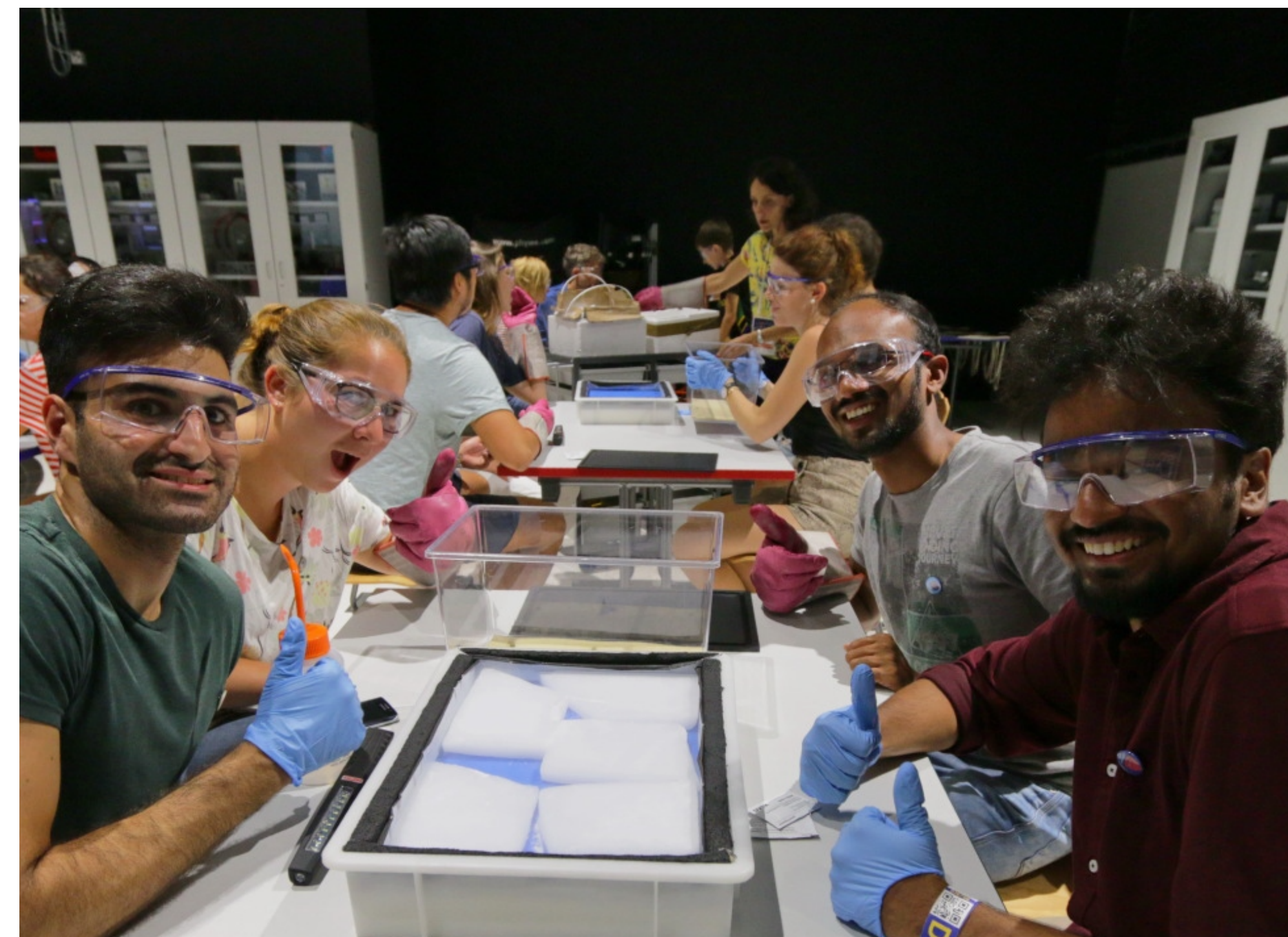
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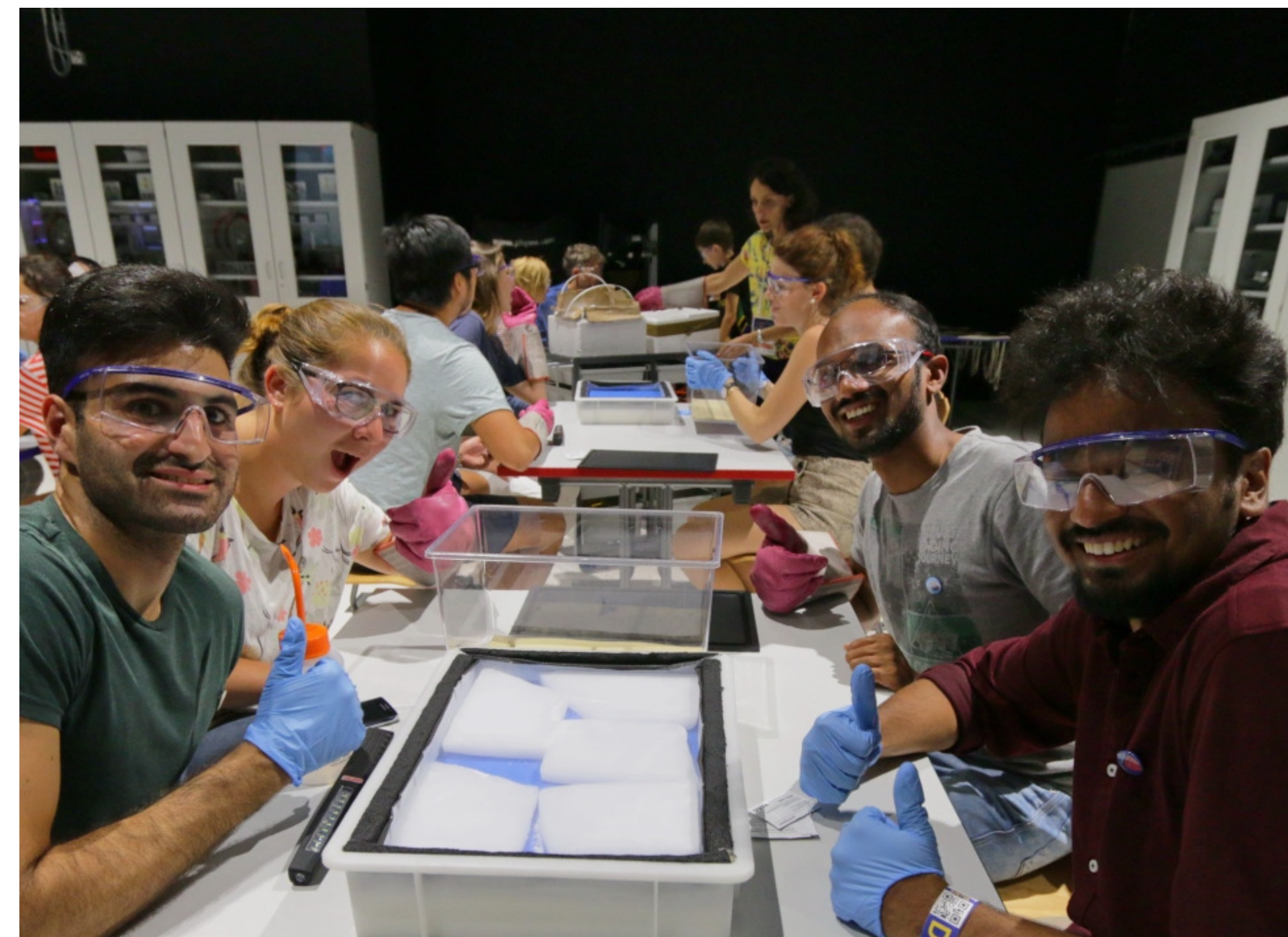
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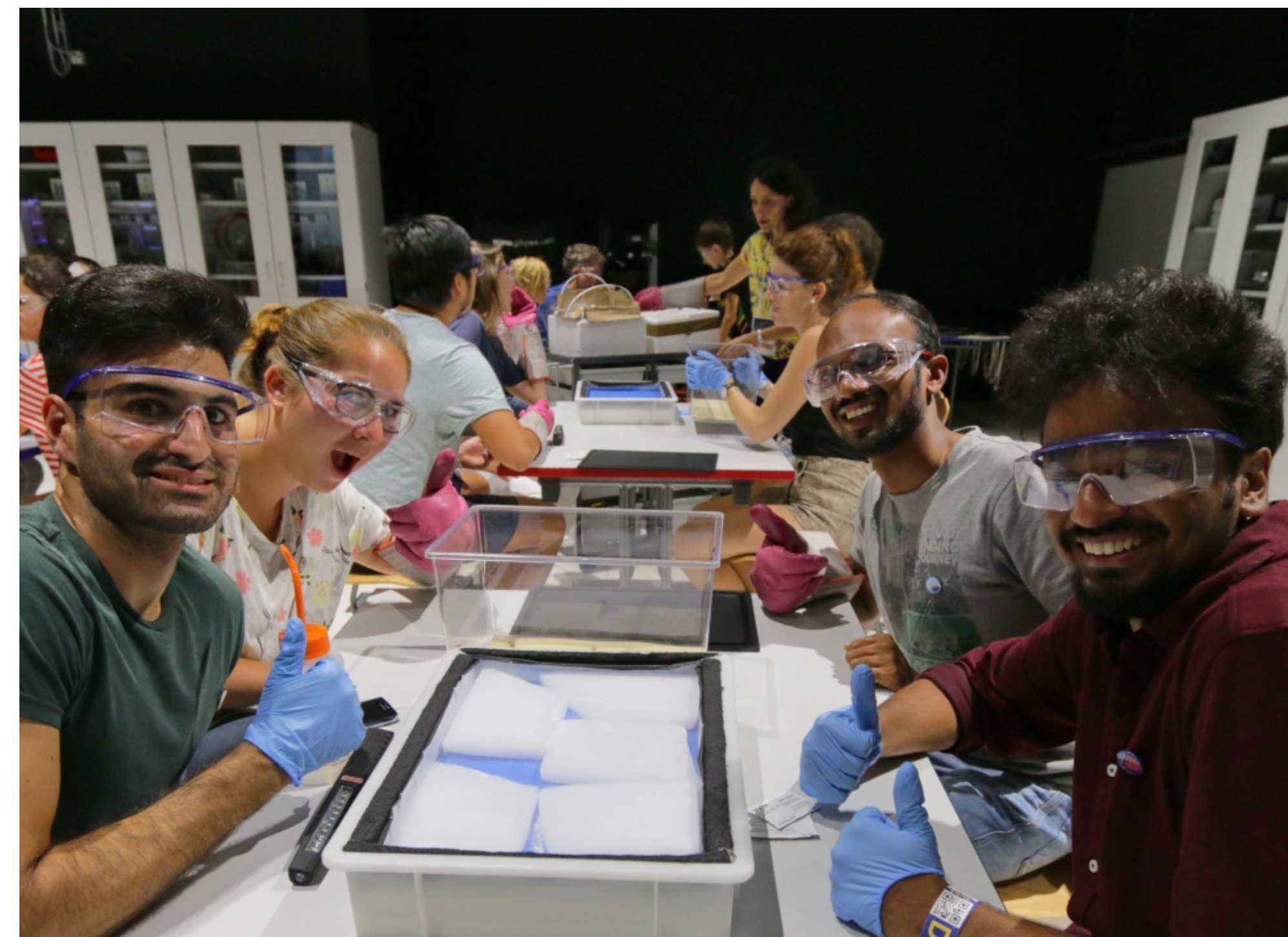
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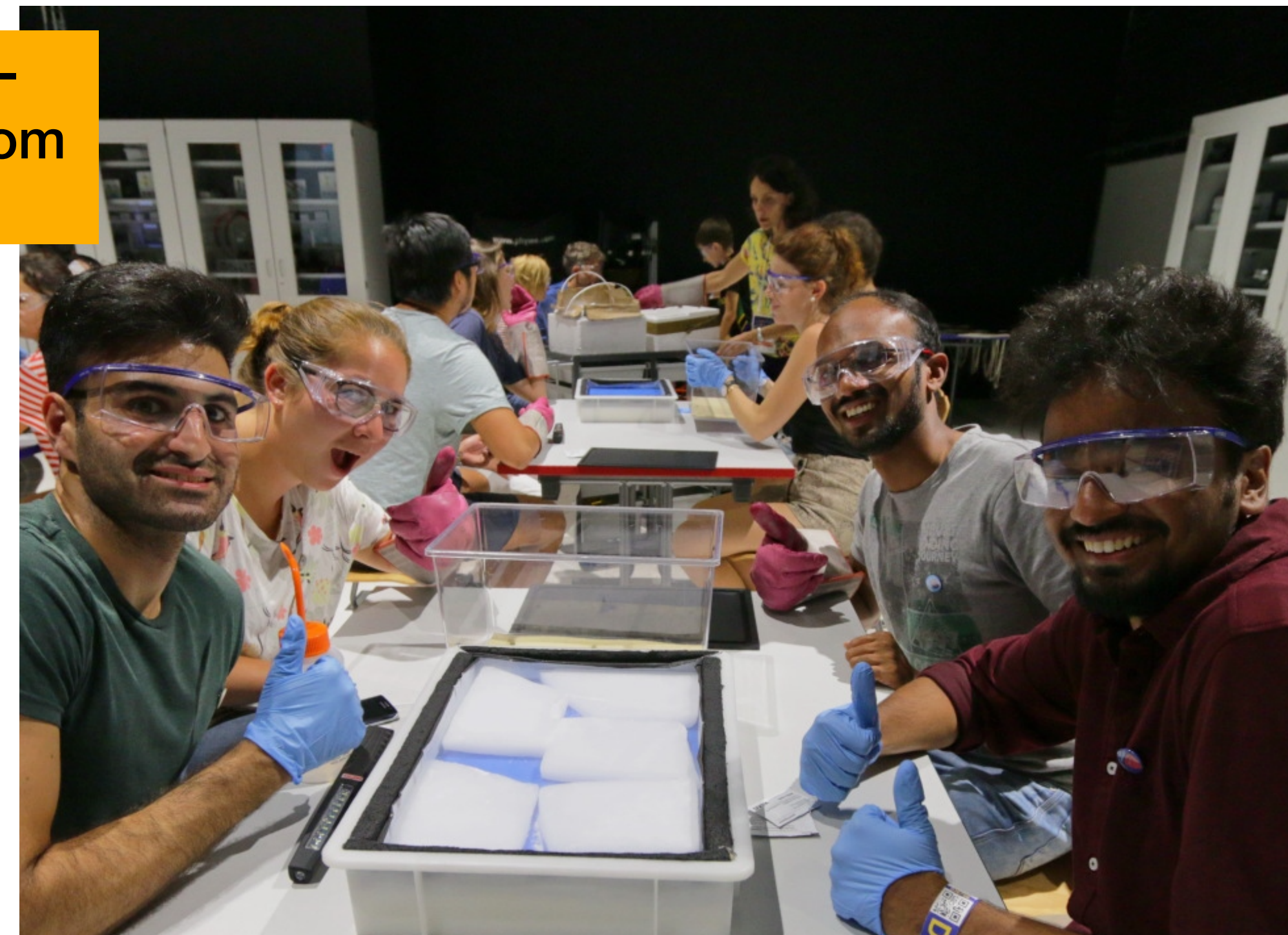
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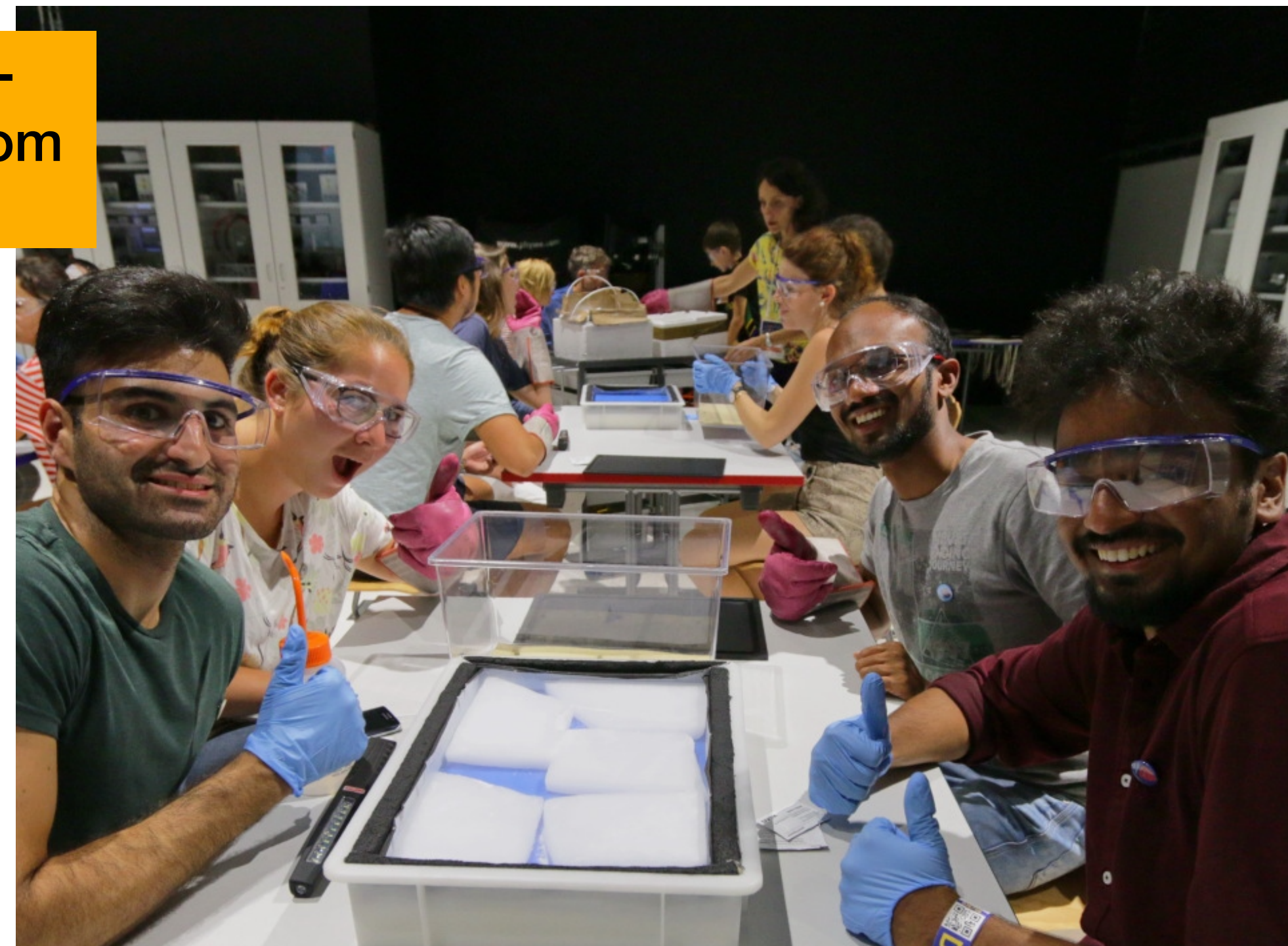
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## Printed/printable materials

Posters, brochures

Science magazines

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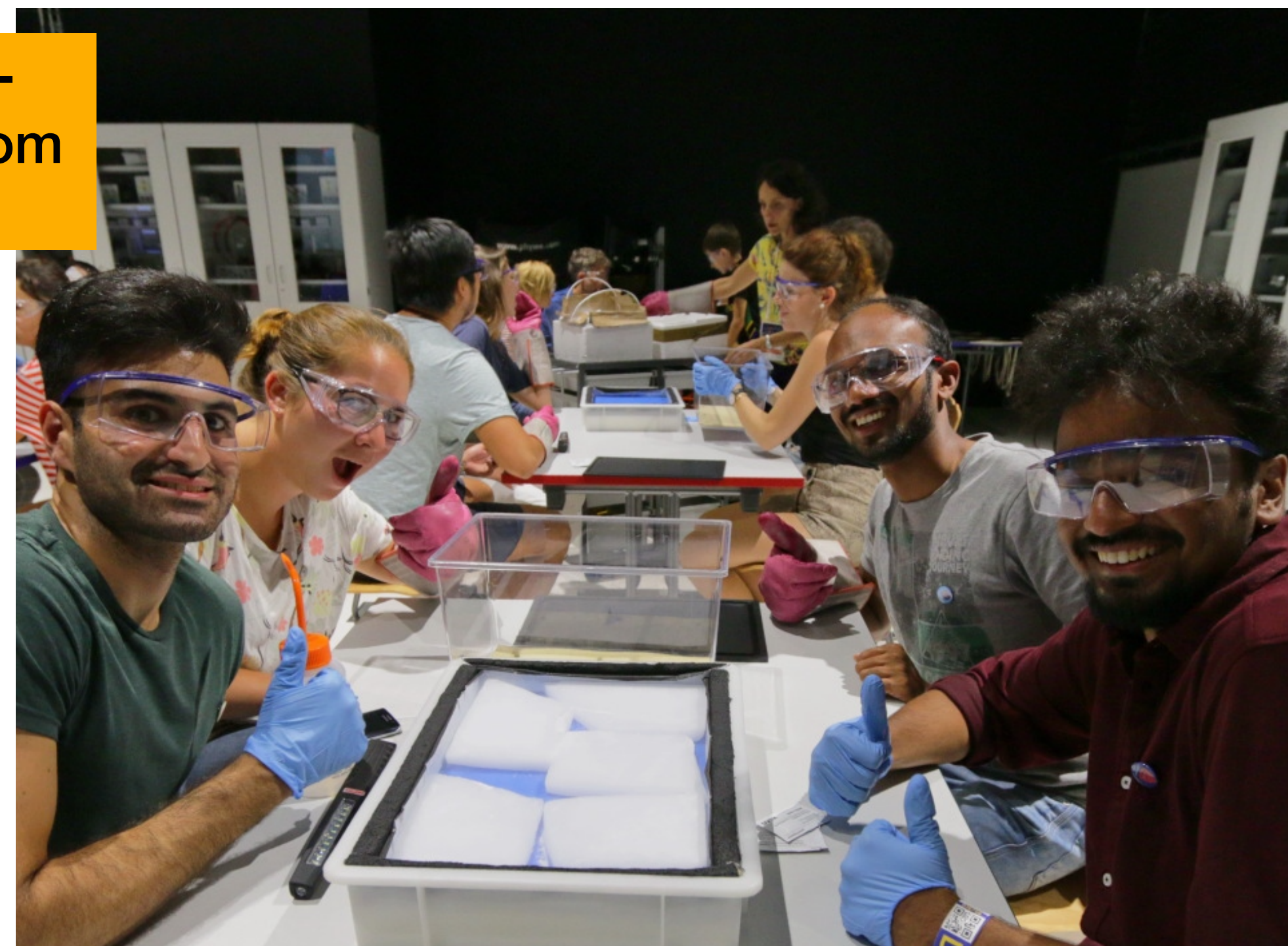
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**Press!**

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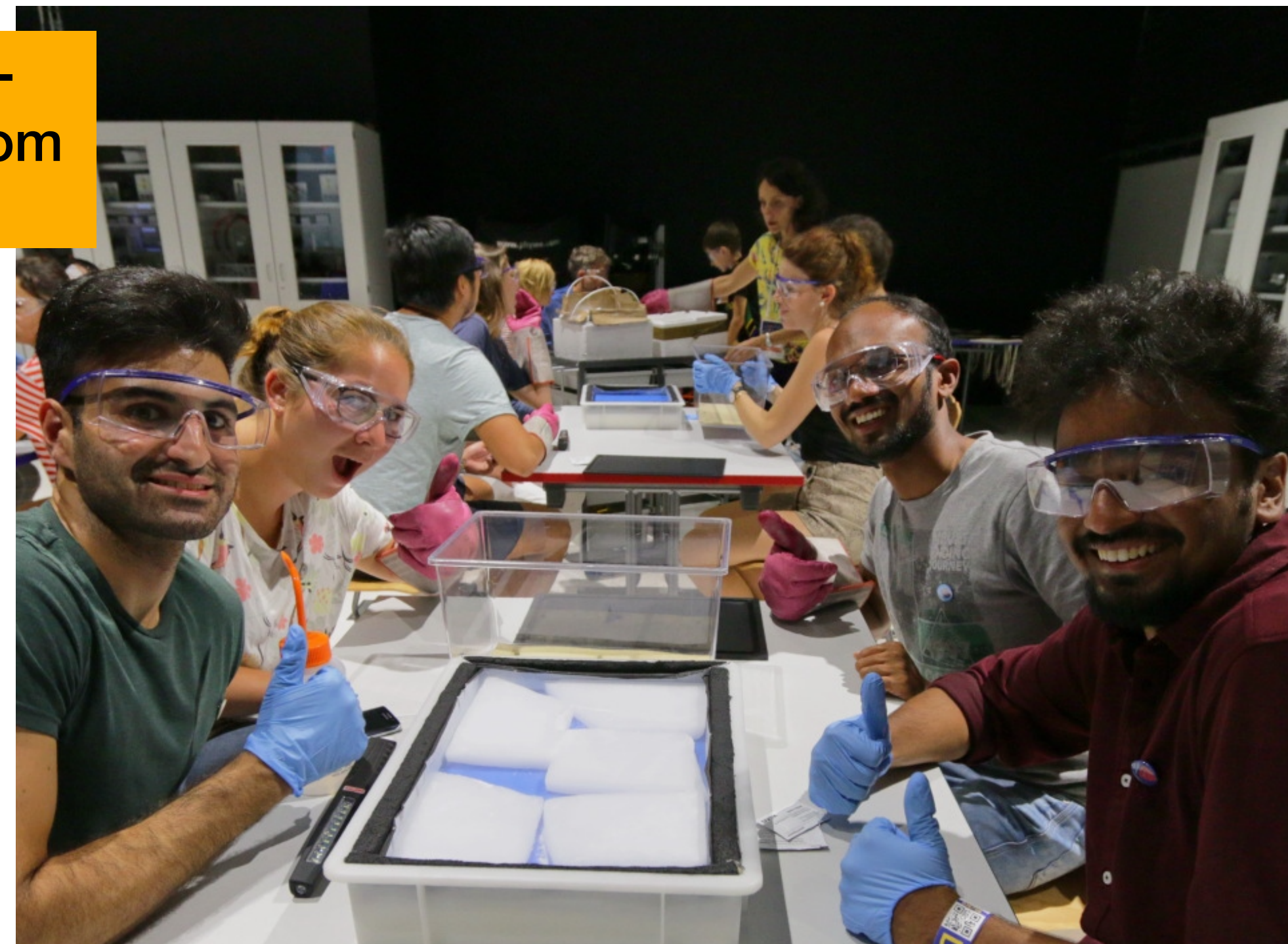
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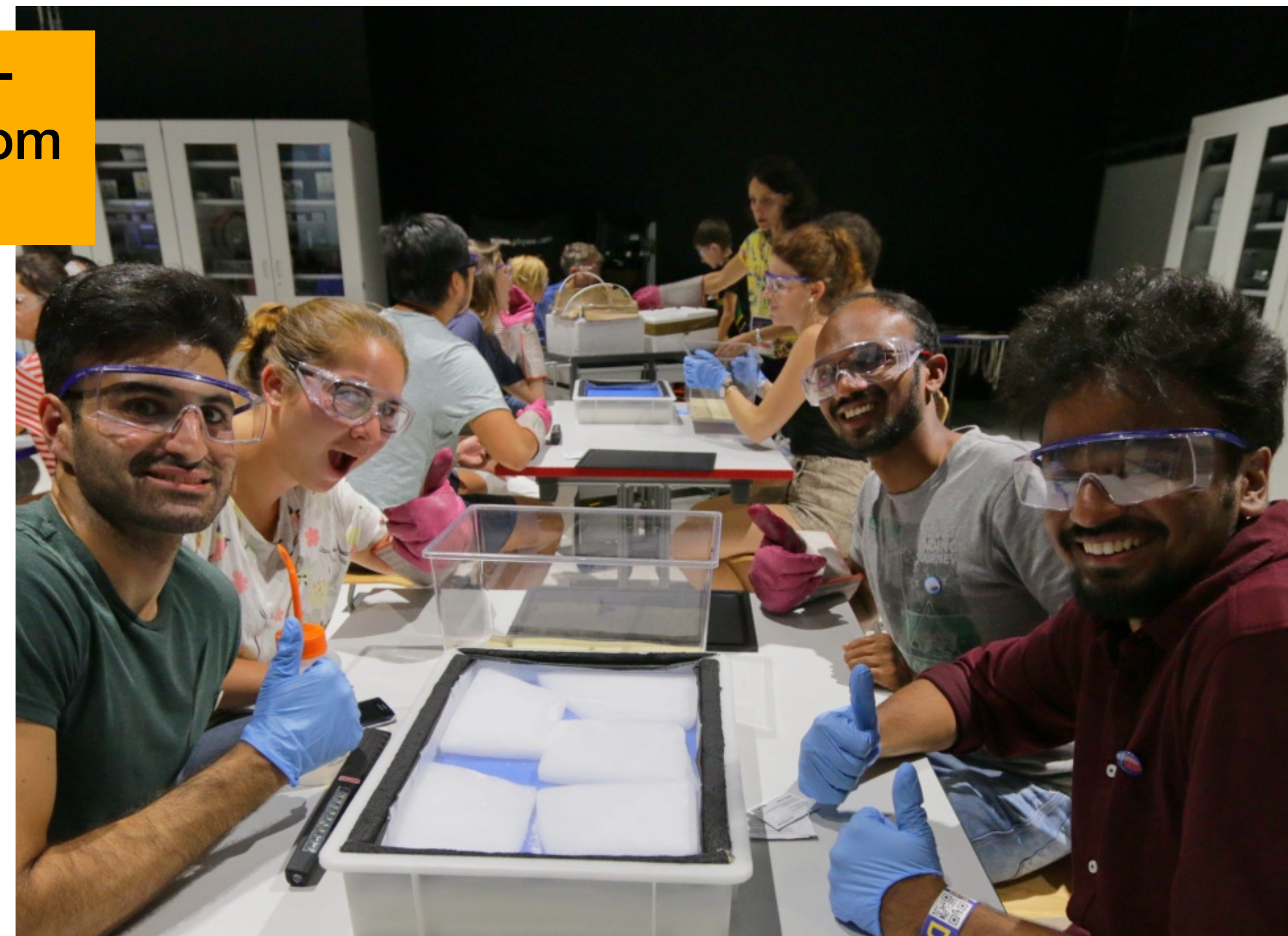
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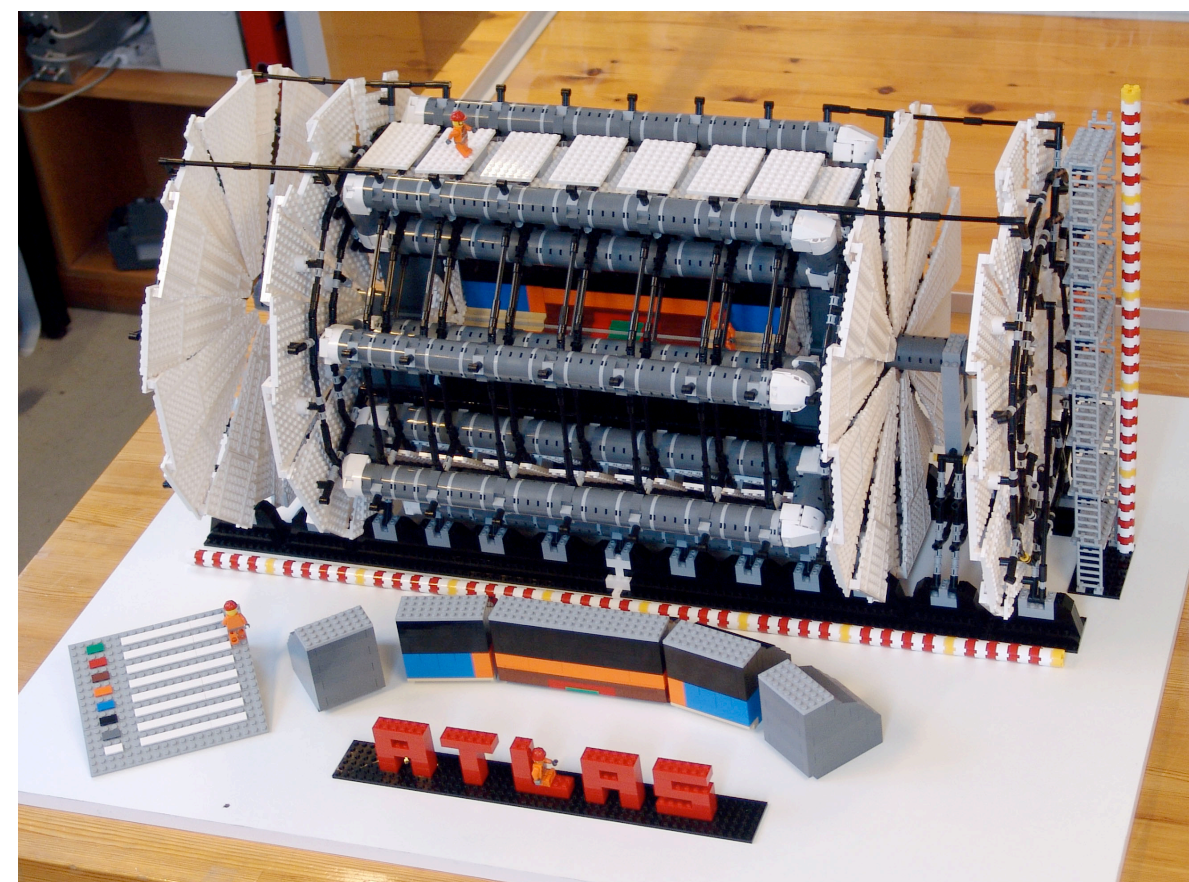
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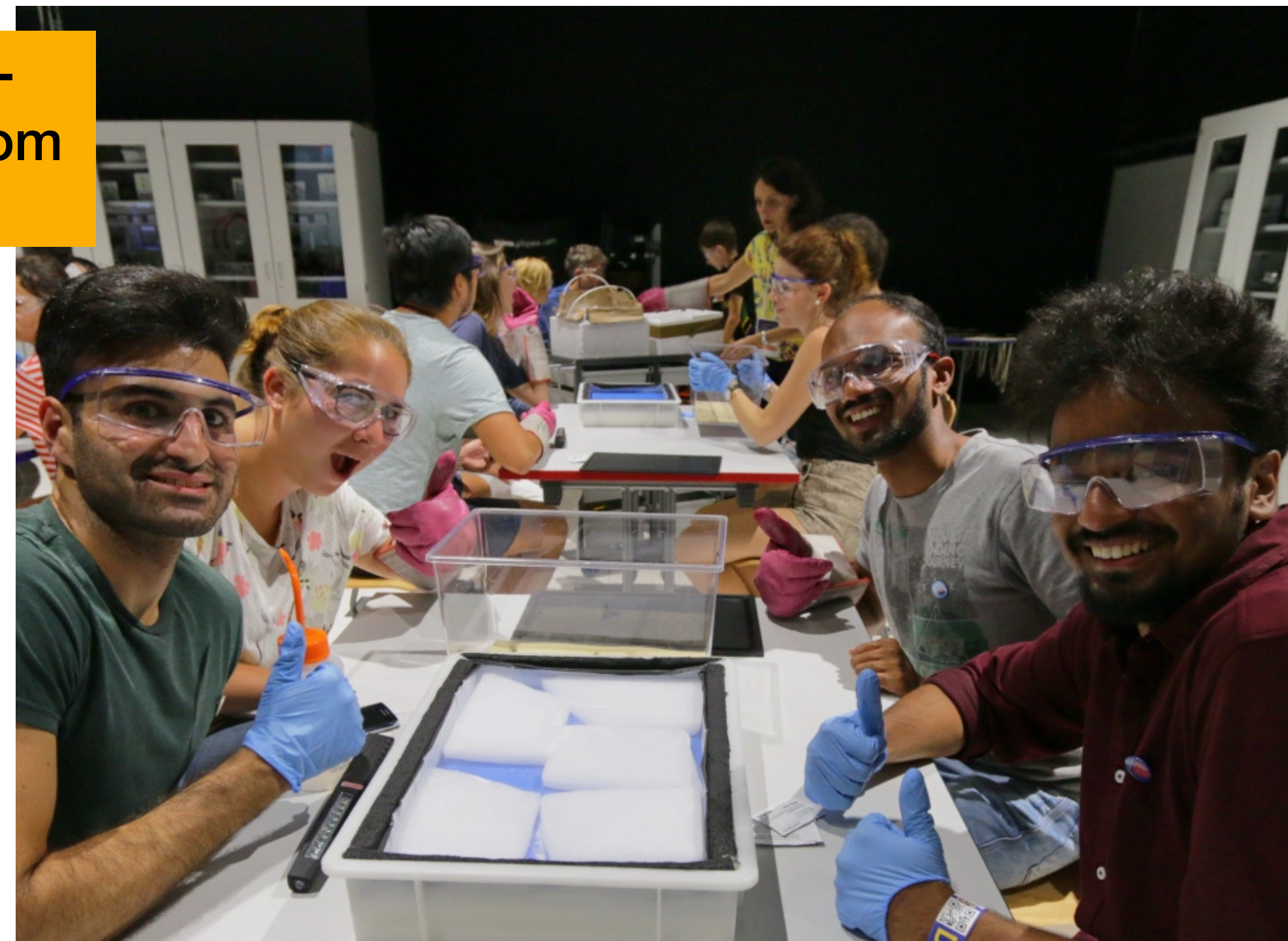
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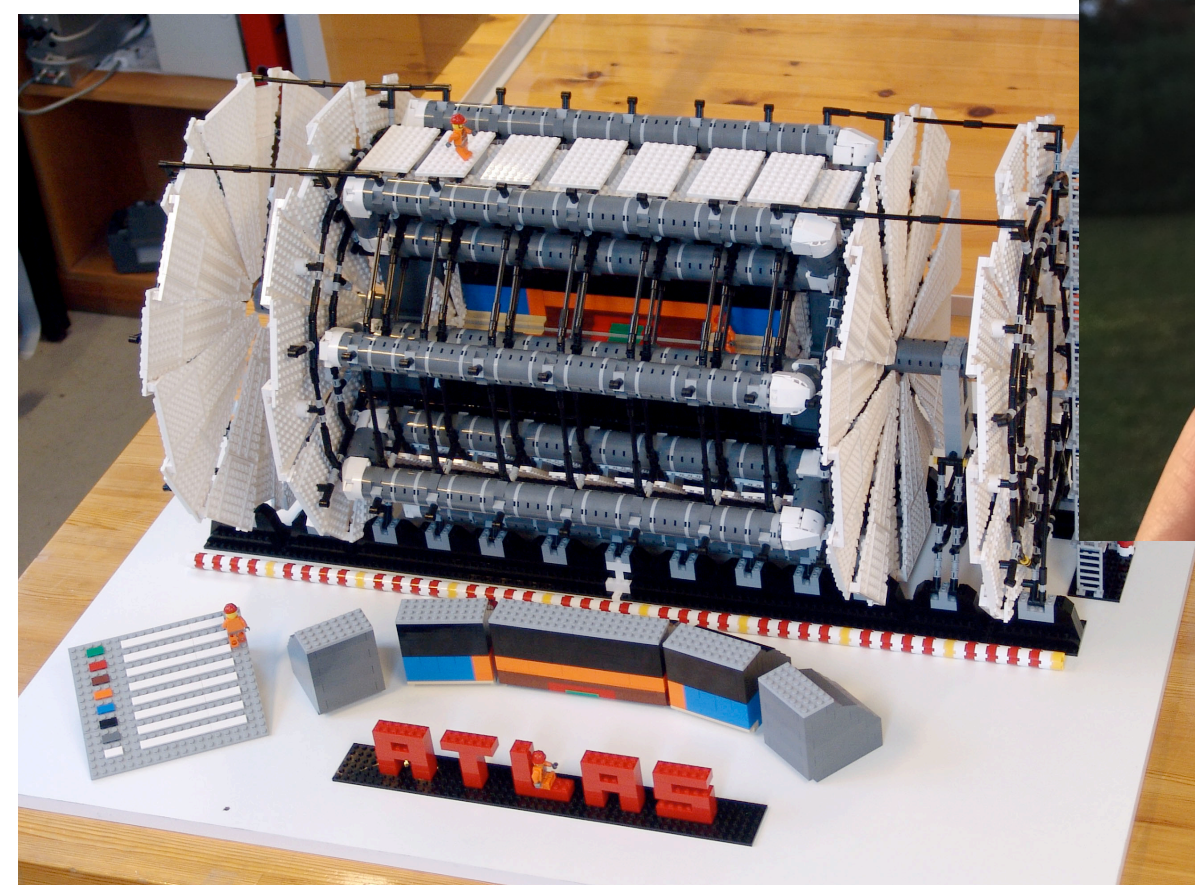
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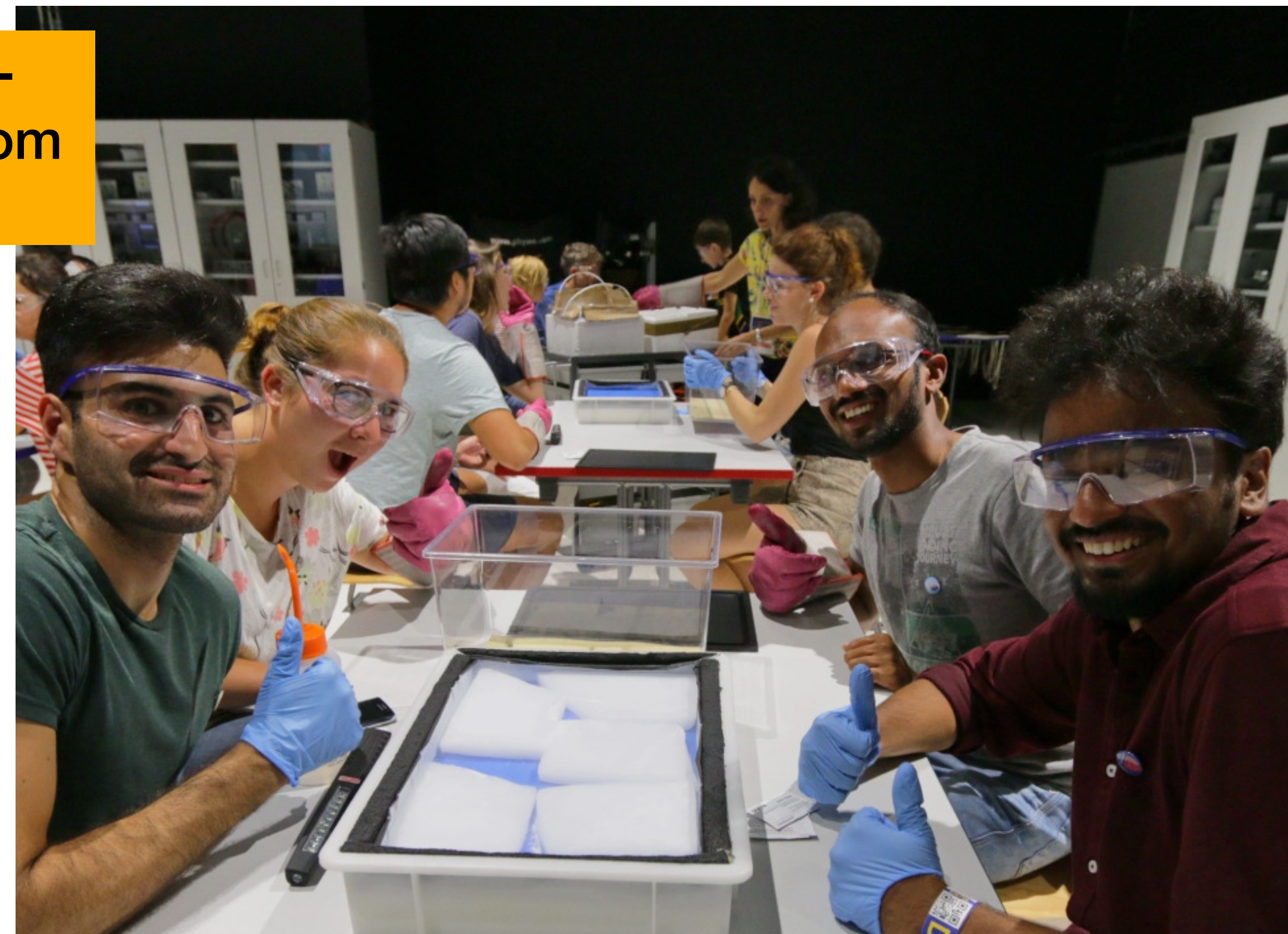
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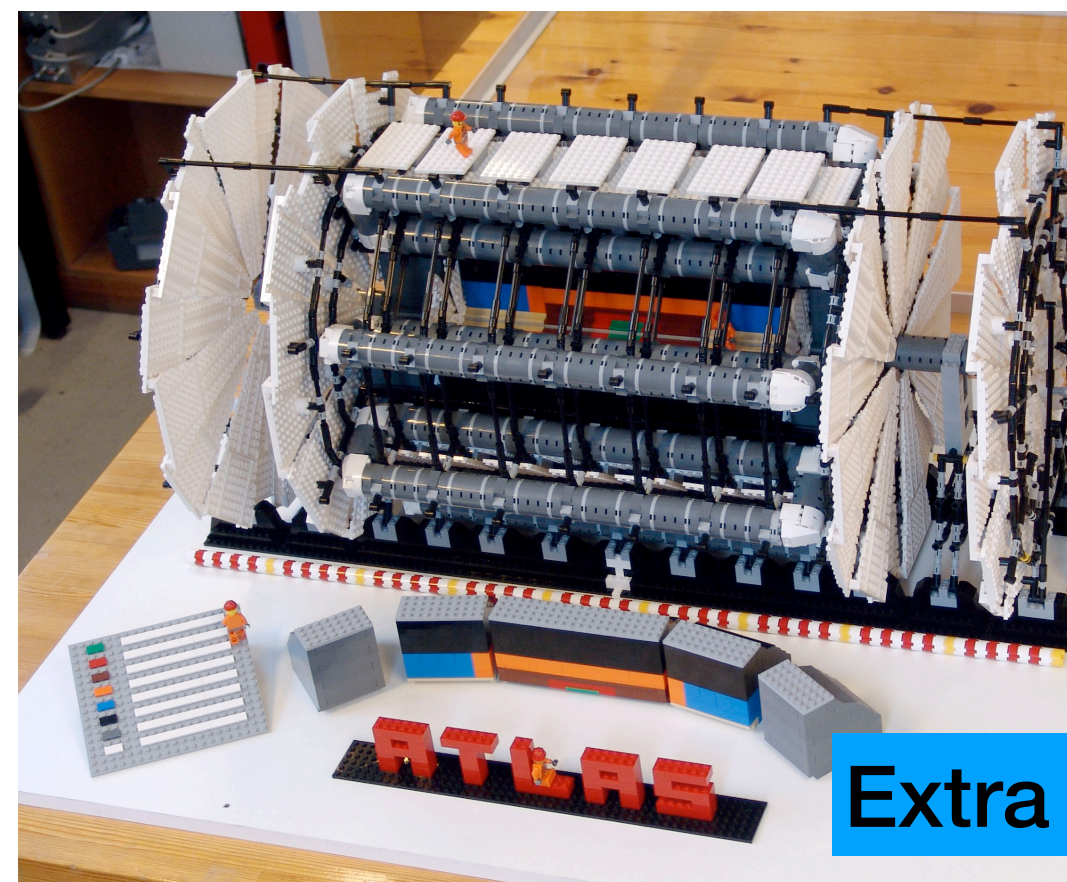
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**Extra ways to approach outreach**



# Meeting the public

**Where they are**

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- Online → **Websites**

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**March 2022:**  
number of visits to atlas.cern: 71.6 K  
@ATLASexperiment twitter: 242 K impressions  
@ATLASexperiment instagram: 49.4 K accounts reached

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# Tailoring content

**Not all platforms are the same, not everybody is the same**

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← Thread

 CERN   
@CERN

With [#restartingLHC](#) closer and closer, this [#PhotoOfTheWeek](#) shows some of the tasks that the [@ATLASexperiment](#) has checked from its to-do list in the past three years during [#LongShutdown2](#). 🙌



0:25 | 7,007 views

**Upgrades to ATLAS**  
With the restarting of the LHC closer and closer, this slideshow features some of the tasks that the ATLAS experiment has checked from its to-do list in the past three years during the shutdown.

5:35 PM · Apr 20, 2022 · Twitter Media Studio

48 Retweets 8 Quote Tweets 169 Likes



# Tailoring content

Not all platforms are the same, not everybody is the same



Twitter: threads

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← Thread

 CERN   
@CERN

With [#restartingLHC](#) closer and closer, this [#PhotoOfTheWeek](#) shows some of the tasks that the [@ATLASexperiment](#) has checked from its to-do list in the past three years during [#LongShutdown2](#). 🙌

Installation of the New Small Wheels



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👍 178 🗨️ DISLIKE ➦ SHARE ✂️ CLIP ⌵ SAVE ...

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YouTube: streams, long format  
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ATLAS Briefings 41w

New physics briefing time!!

Can you guess the topic from this collision event display?

SEEMS LIKE...

- (A) Heavy ion physics
- (B) Higgs boson physics
- (C) Some New Physics search

Reply to atlasexperiment...

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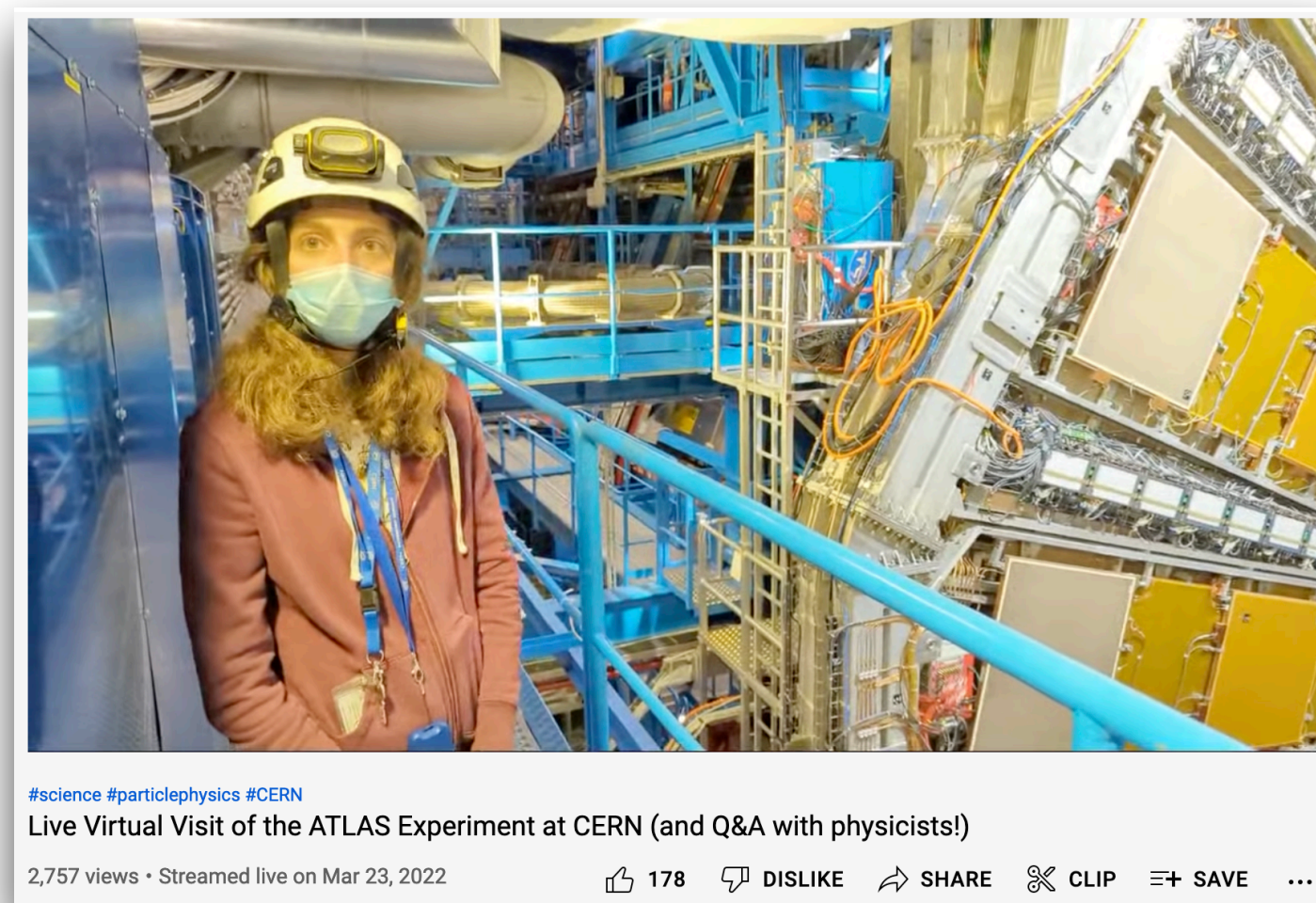


TikTok: short videos, streaming

# Tailoring content

## Not all platforms are the same, not everybody is the same

All social media platforms offer different options to engage with the public, each social media platform caters to different demographics



YouTube: streams, long format (lectures)



Instagram: stories



TikTok: short videos, streaming



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Age: 25-34

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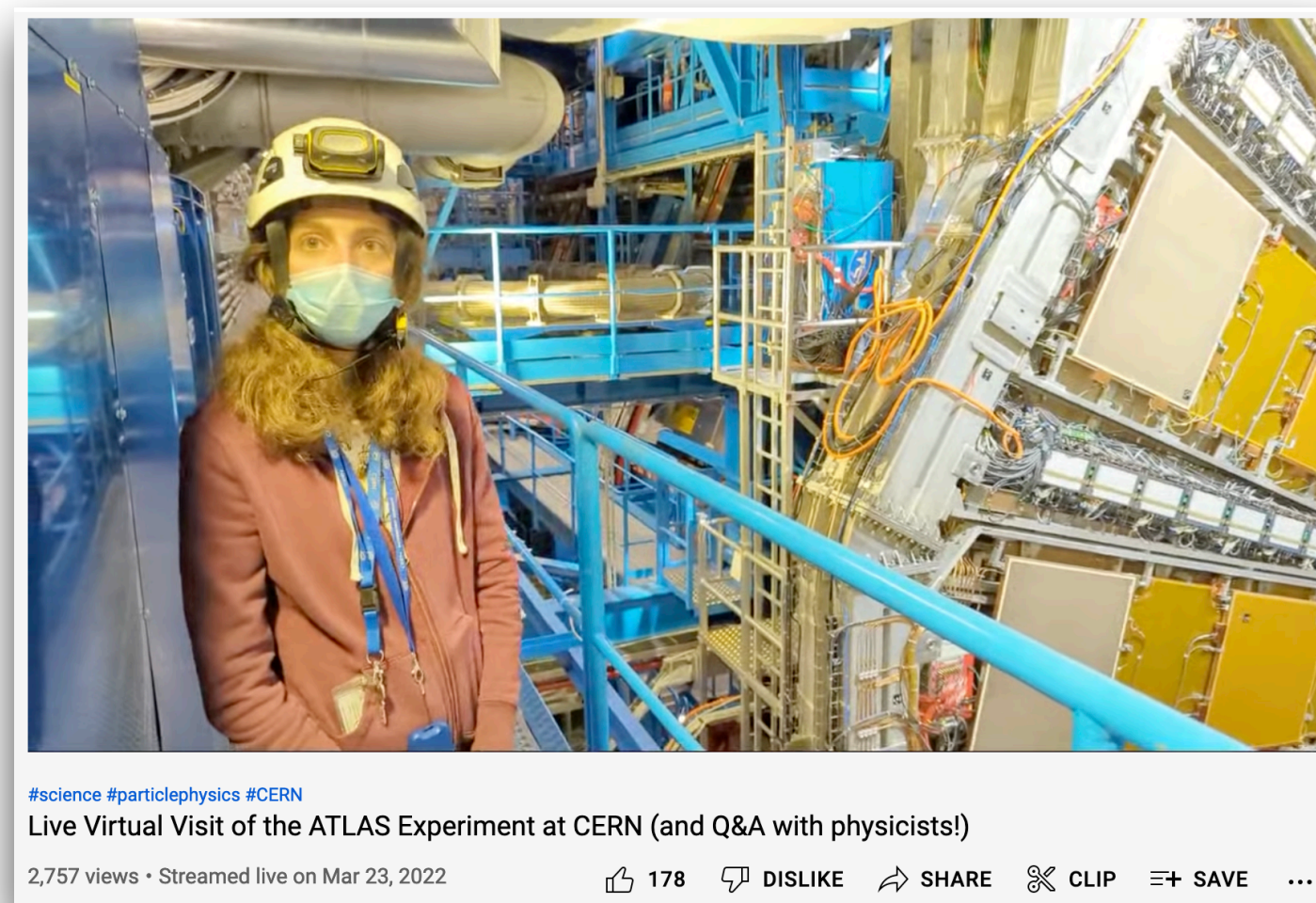
10 doors to ATLAS!

TikTok @atlasexperiment

# Tailoring content

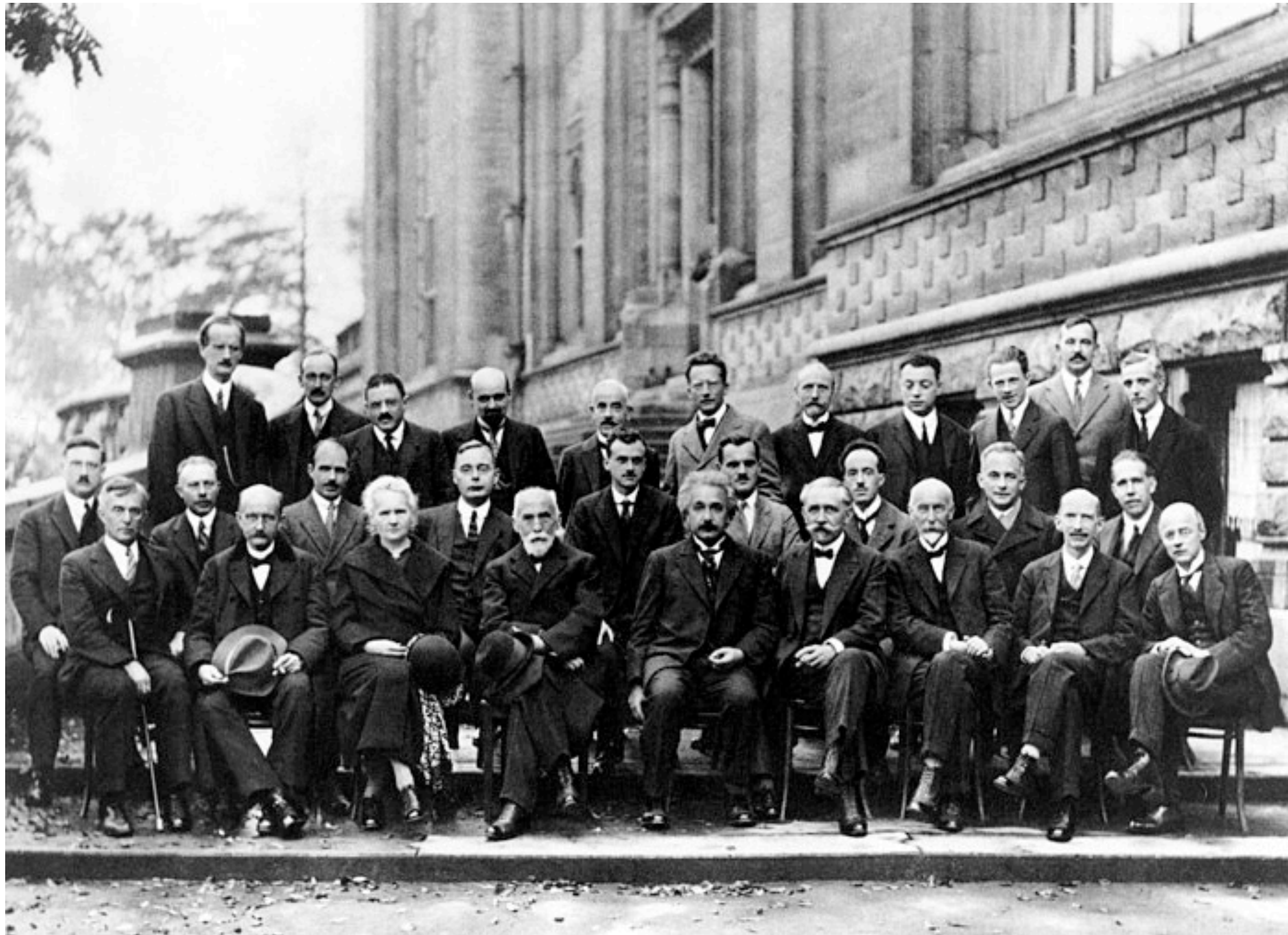
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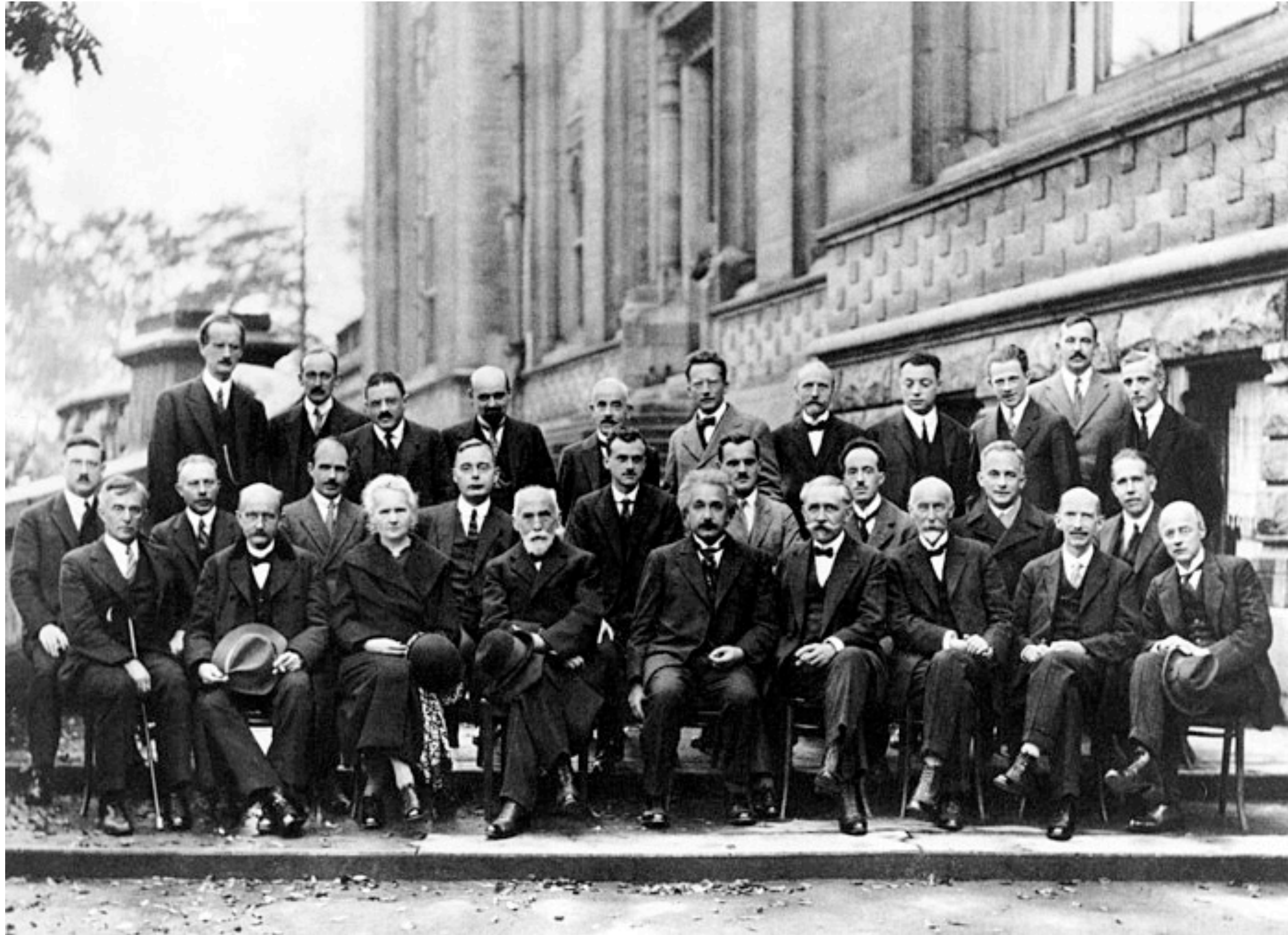
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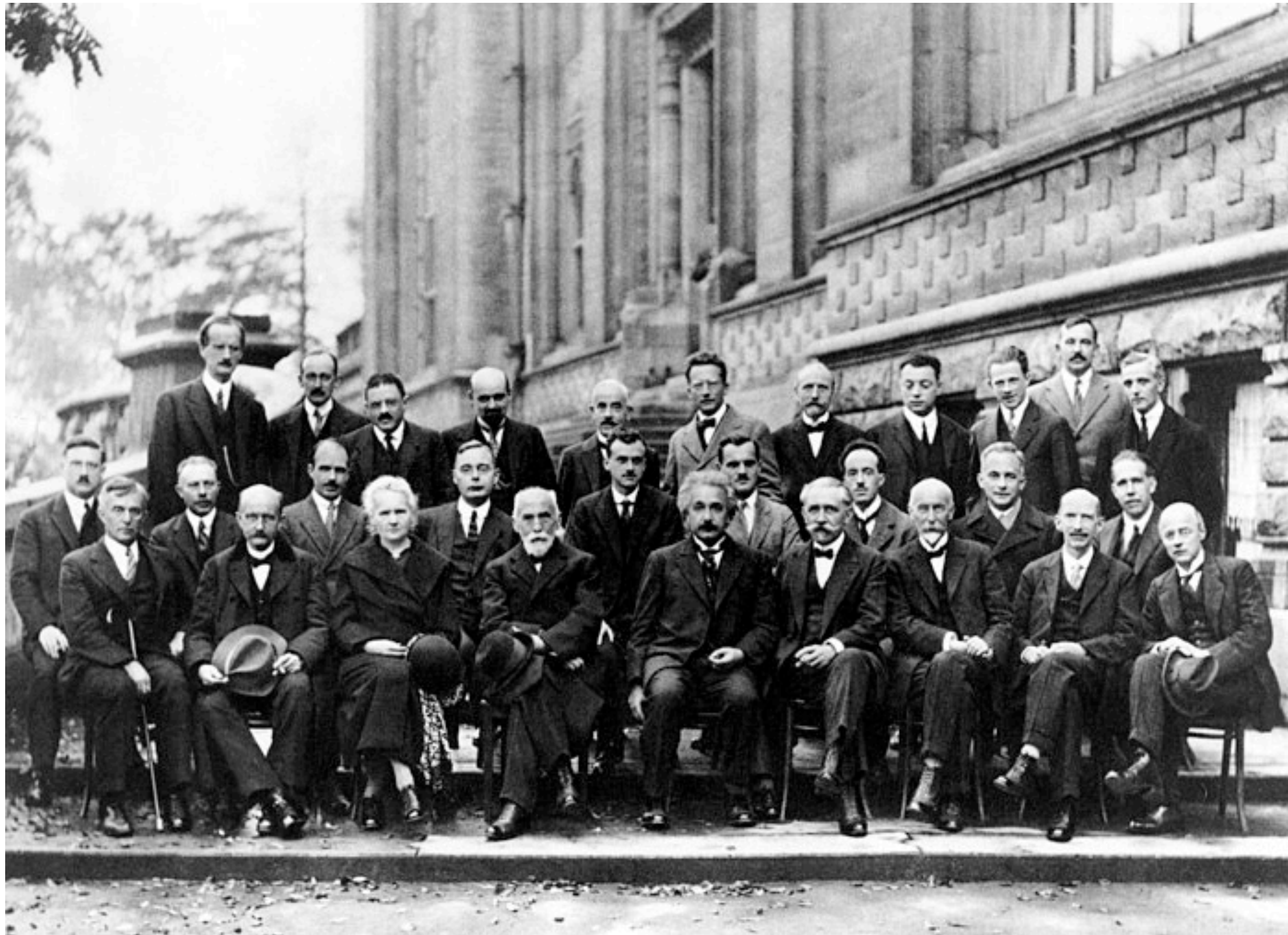
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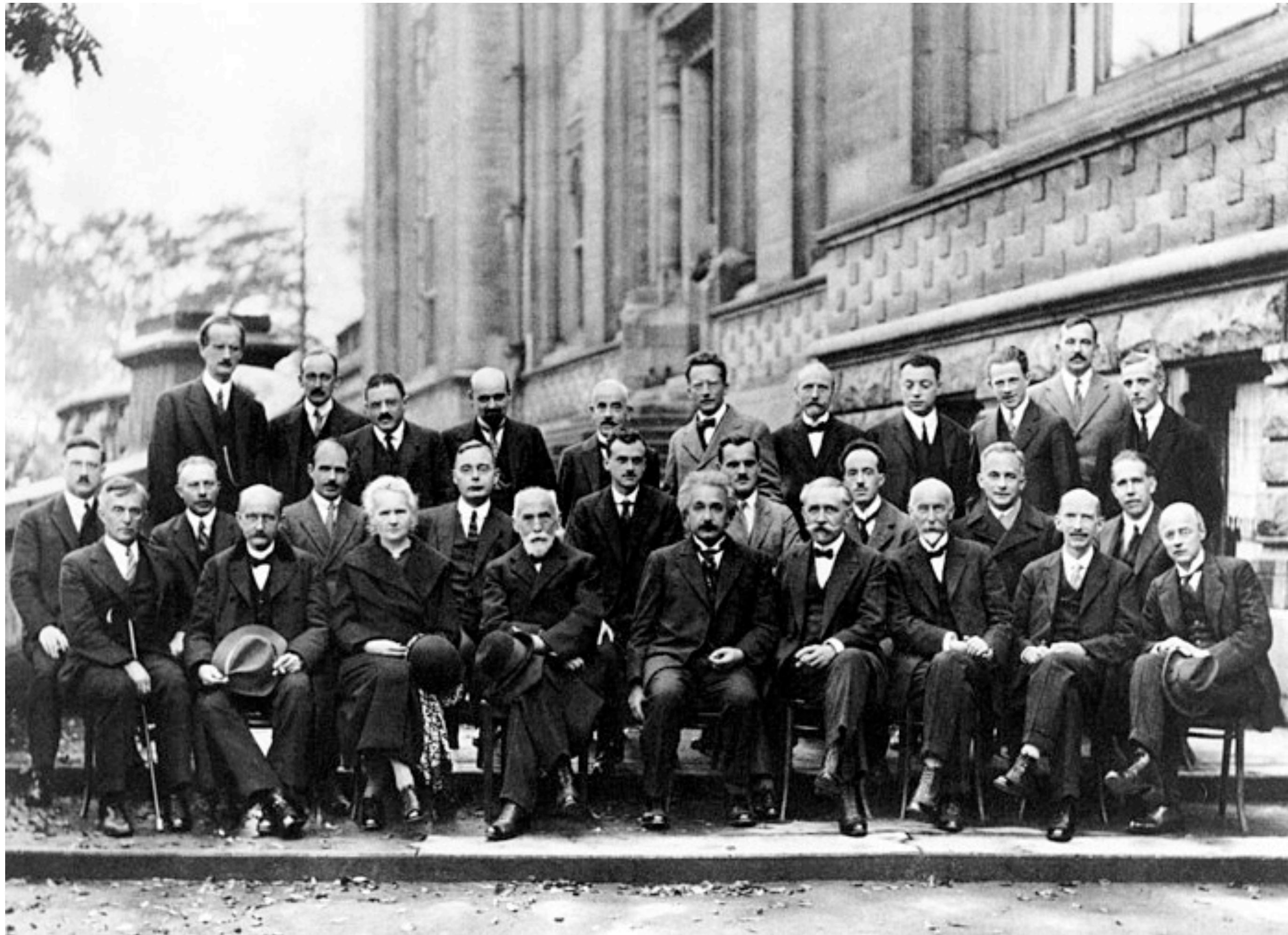
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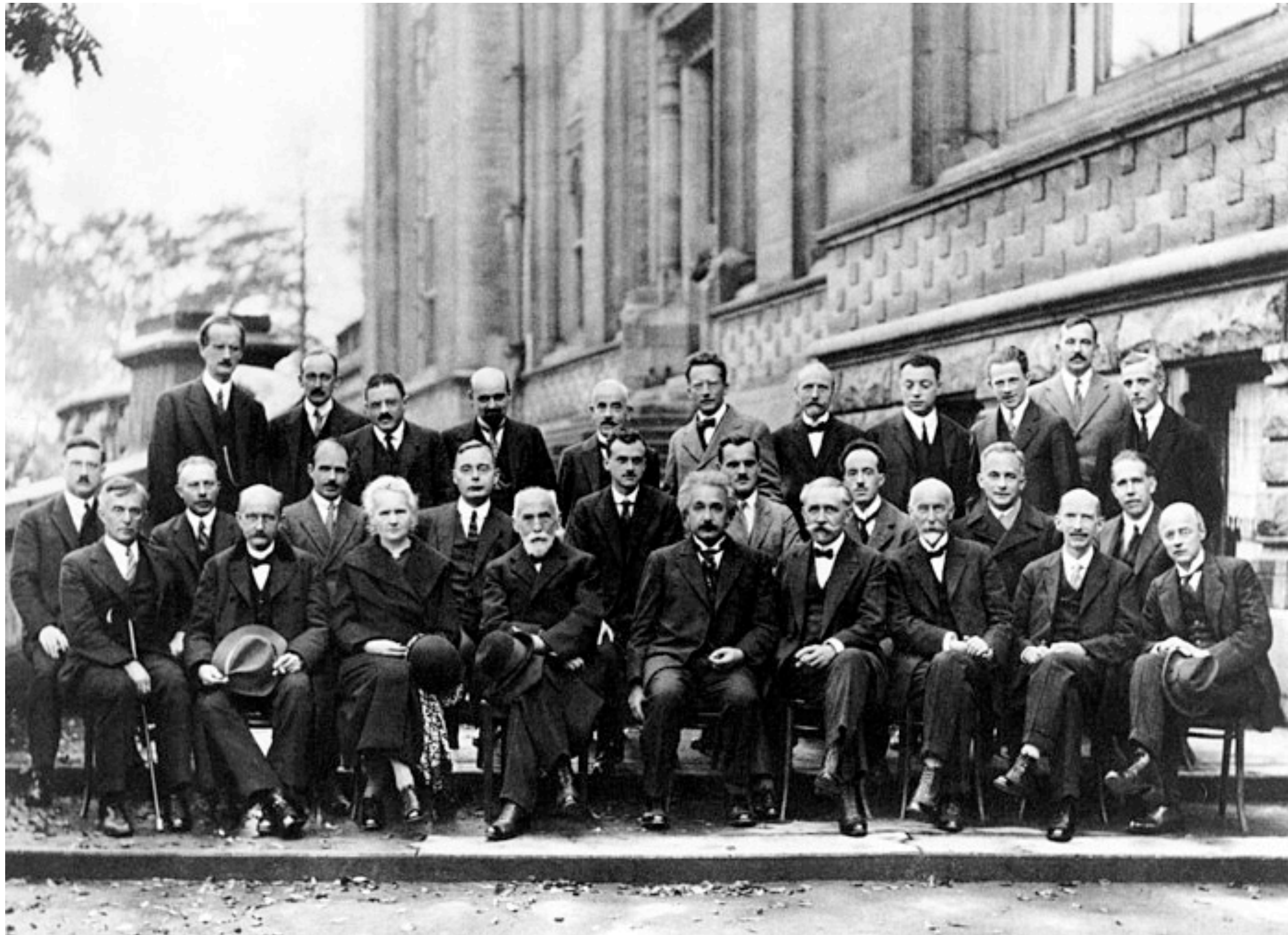
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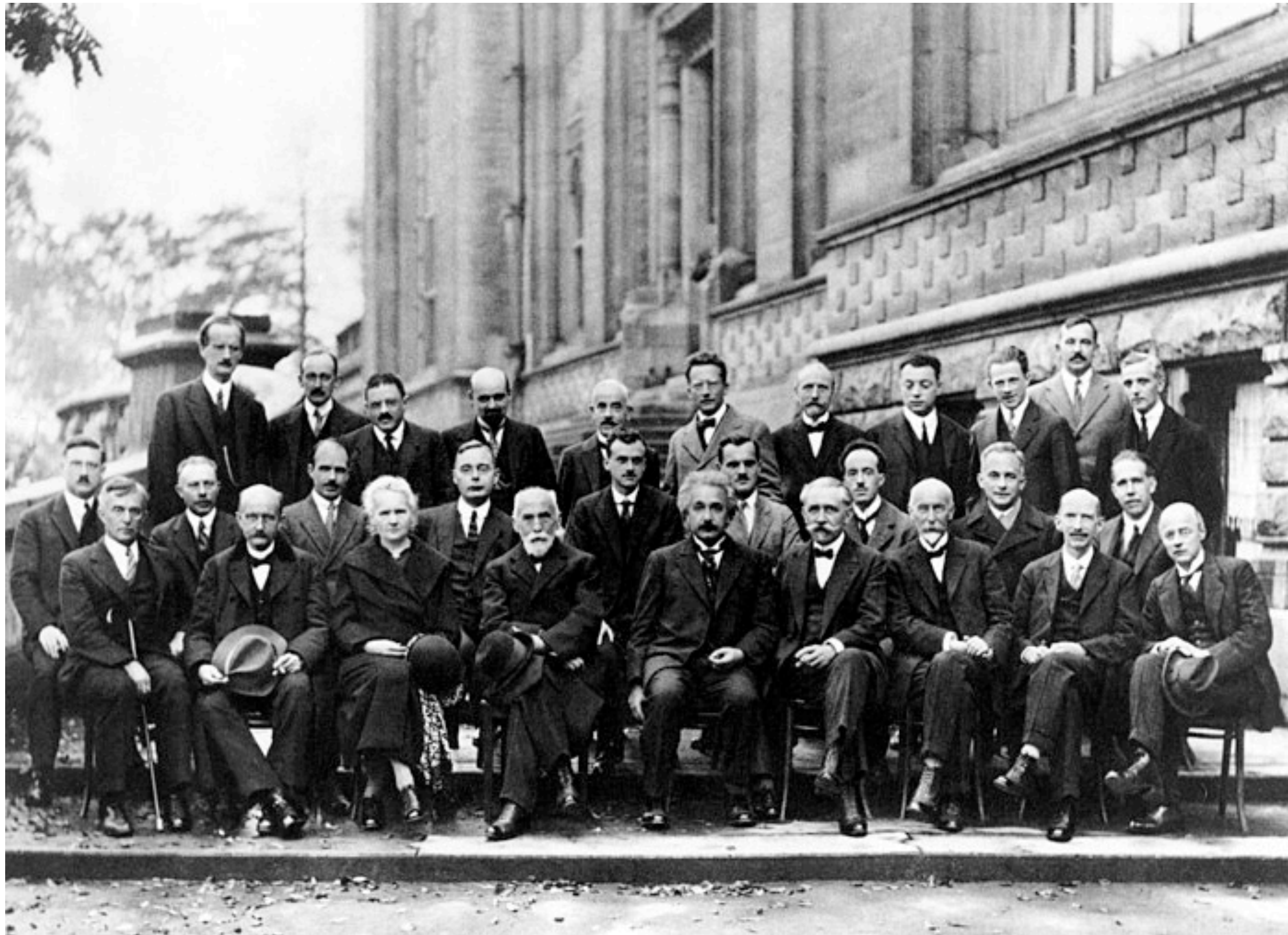
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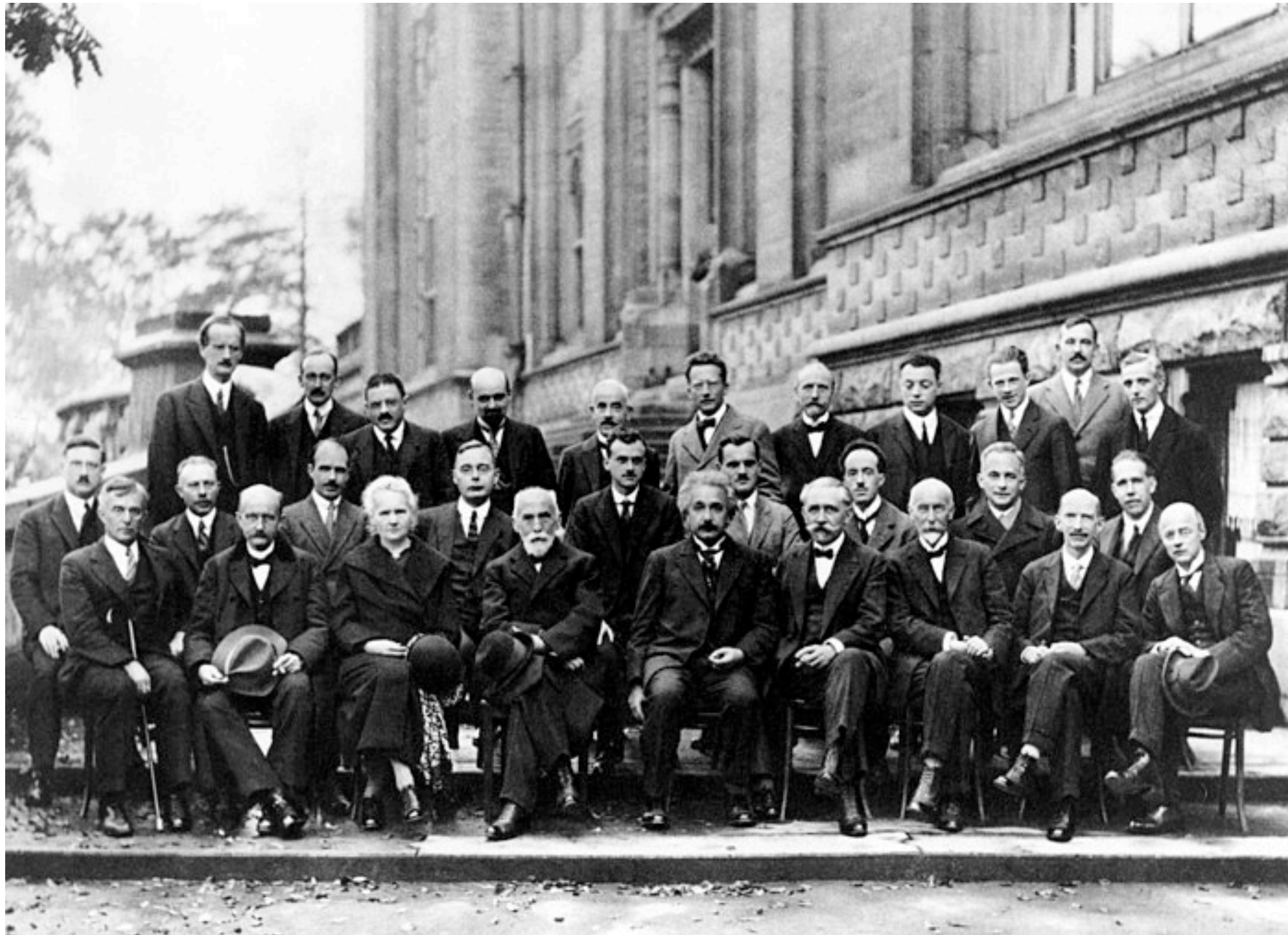


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  - Outreach can be a great asset here

# Diversity and inclusion



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    - we are aware of **codes of conduct** and we work to set them in place and apply them
- Much more can and needs to be done but it won't happen without an explicit effort





# Thanks for your attention!

This presentation could have not been made without Katarina Anthony, Kate Shaw, and many others  
All the photos in this presentation are from CERN (<https://cds.cern.ch/>).