



Evolution of Regional, Age and Gender Demographics in the ATLAS Collaboration

DILIA PORTILLO

ON BEHALF OF THE ATLAS COLLABORATION

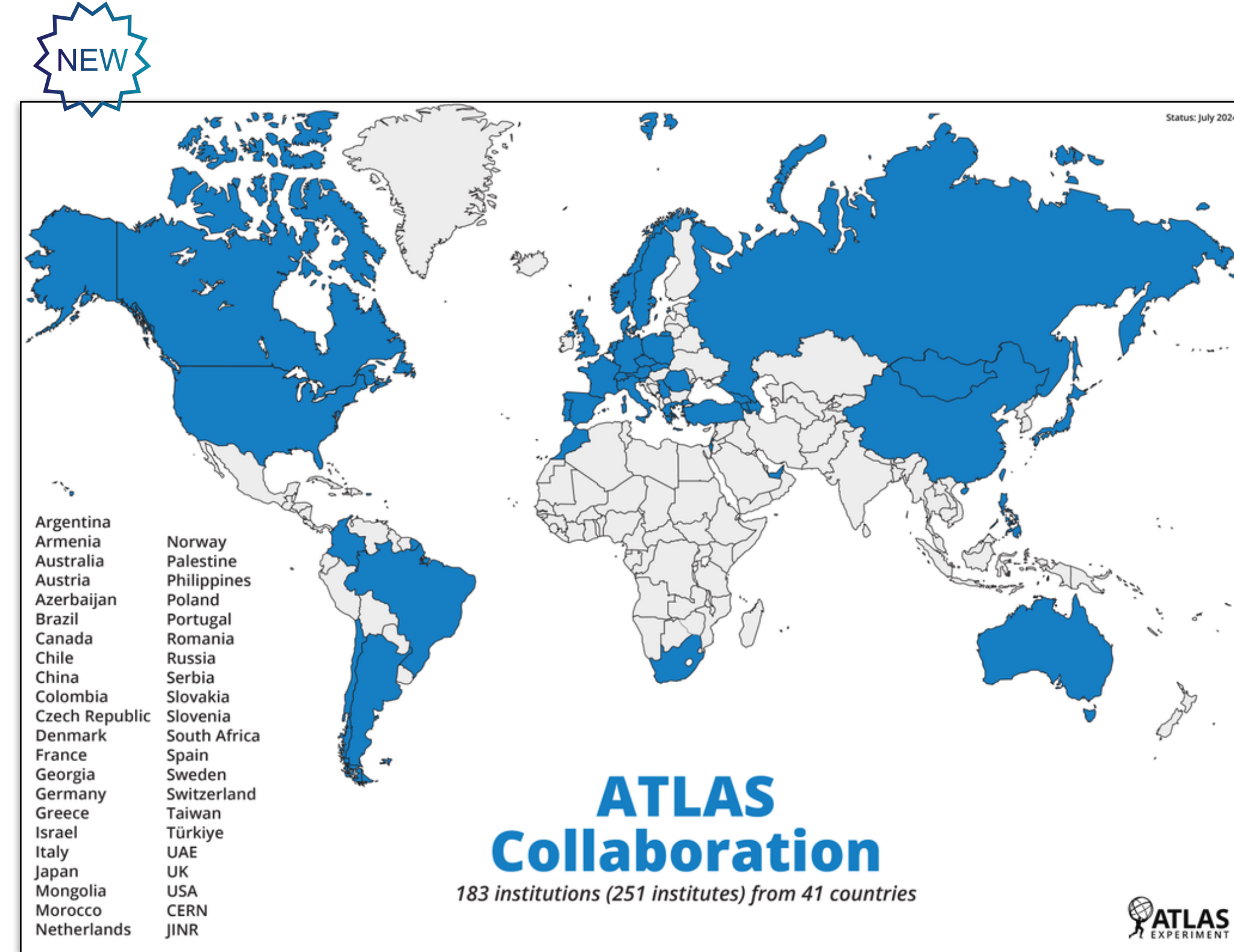
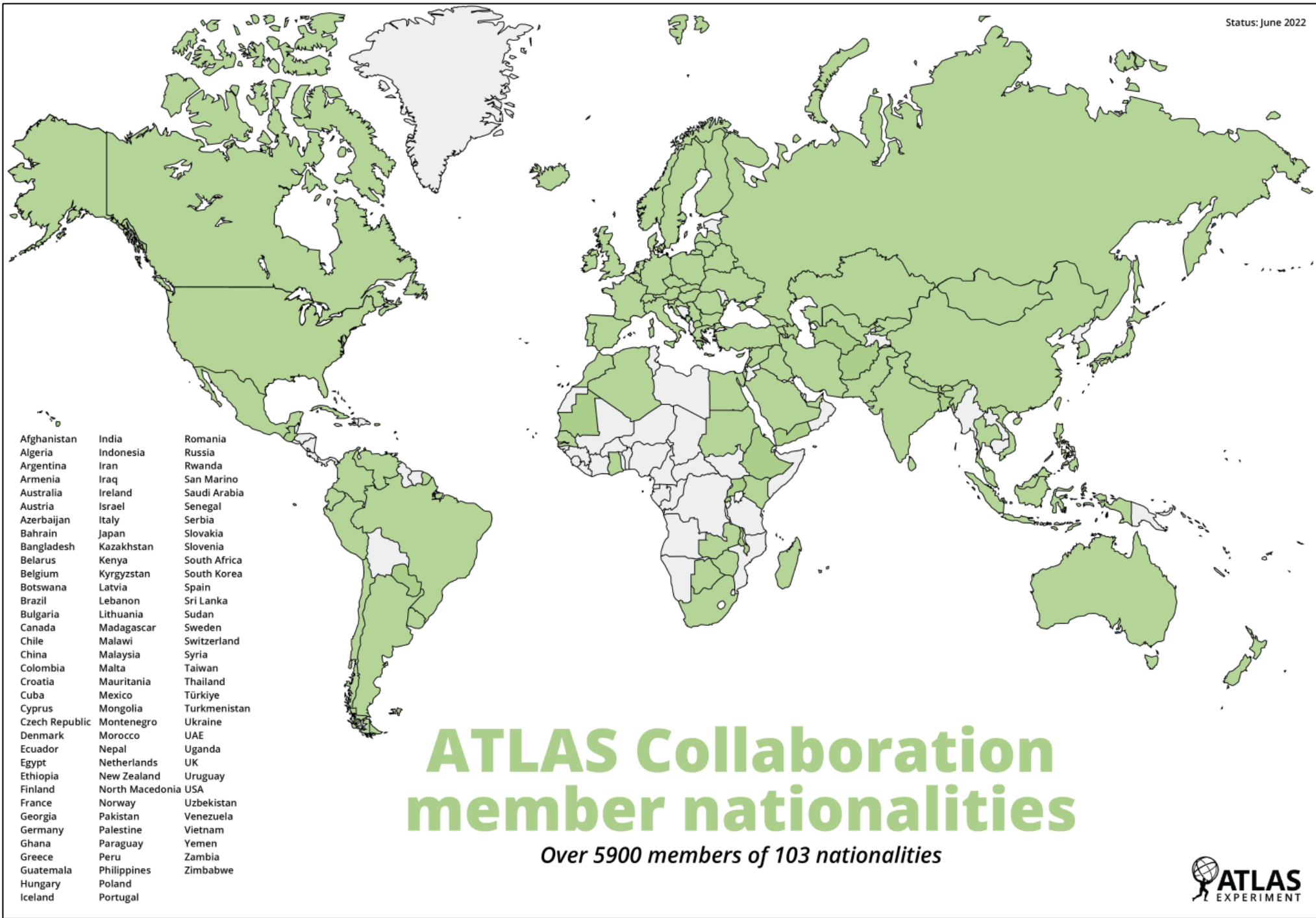
ICHEP 2024

18-24 July, Prague - Czech Republic





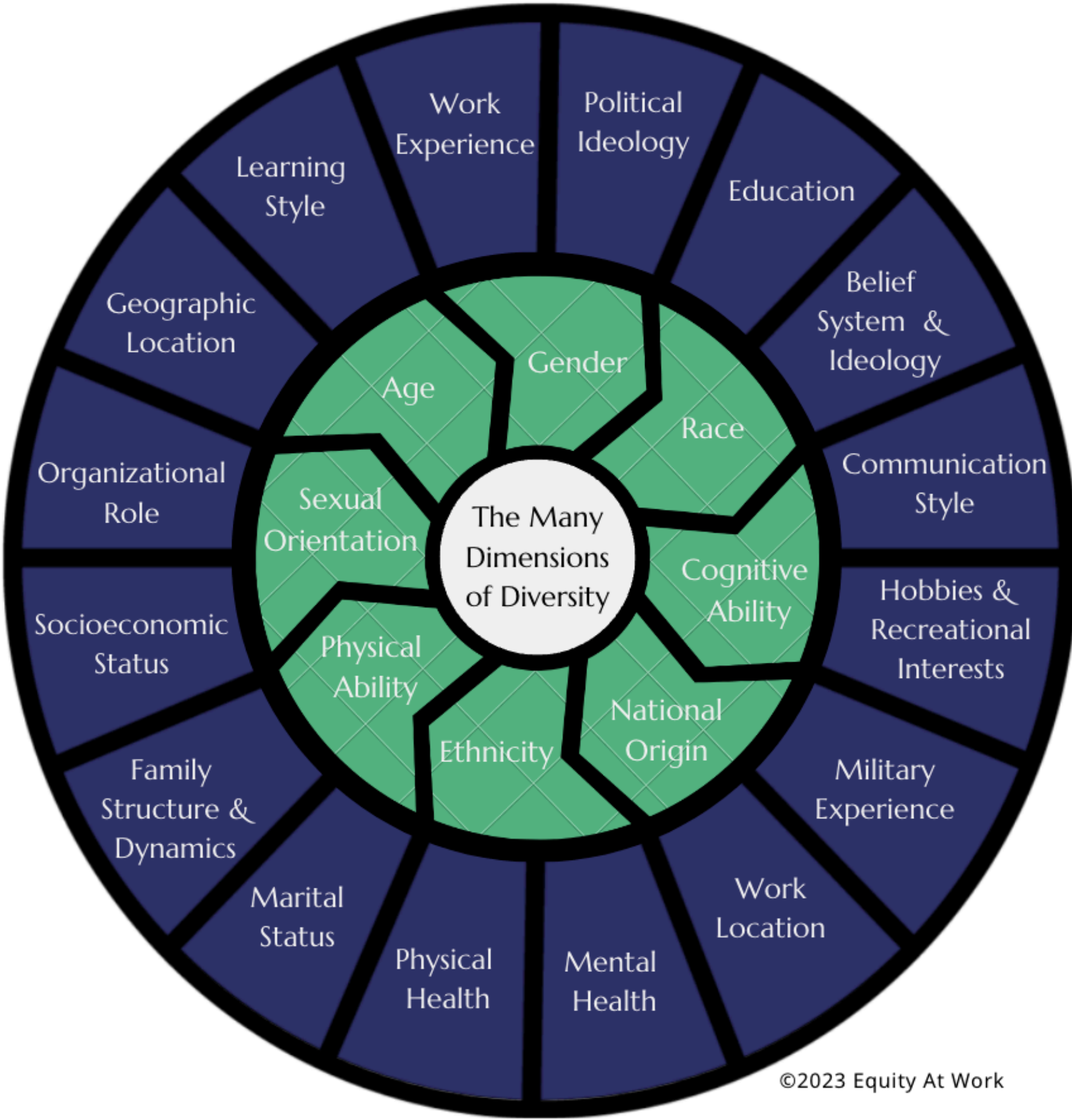
 **ATLAS**
EXPERIMENT



Over 5900 members of 103 nationalities (2022)

183 Institutions (251 institutes) from 41 countries (2024)

But there are many more dimensions...



Diversity

The **presence of differences** within a given setting. In the workplace, that can mean differences in race, ethnicity, gender, gender identity, sexual orientation, age and socioeconomic class. It can also refer to differences in physical ability, veteran status, whether or not you have kids, etc.

Equity

The process of ensuring that practices and programs are **impartial, fair and provide equal possible outcomes** for every individual.

Inclusion

The practice of ensuring that people feel a **sense of belonging** in the workplace. This means that every employee feels comfortable and supported by the organization when it comes to being their authentic selves.

*Fairness

- *We are publicly funded; all who want to participate ought to have the opportunity

*Need

- *Science benefits from input based on a variety of viewpoints

“The diversity of the scientific community helps facilitate specialization and provides different points of view that lead to diverse investigations, invigorate problem solving, and balance biases.”

U.C. Berkeley Study

“Diversity is an asset of humanity, it’s our richness, and we have to use it in the best possible way.”

Dr. Fabiola Gianotti

“Without deviation from the norm, progress is not possible.”

Frank Zappa

“UNITE PEOPLE FROM ALL OVER
THE WORLD TO PUSH THE
FRONTIERS OF SCIENCE AND
TECHNOLOGY, FOR THE BENEFIT
OF ALL”

- CERN MISSION

- * **Appointed** by CB Chair to 2-year overlapping terms
- * **Advise** on Codes of Conduct
- * Promote D&I and provide **resources** related to D&I
- * Evaluate and propose **training** courses
- * **Act as contact** for ATLAS members to discuss concerns related to D&I
- * **Liaison** with other diversity contacts in HEP / CERN
- * Compile / present a regular **report** on the composition of the collaboration
- * **Organise** collaboration week **discussions**



Maria Teresa
Dova



Steven
Goldfarb



Flavia De
Almeida Dias



Simon
Connell

Data Collected

*CERN Database

- *Name
- *Binary gender: male, female
- *Date of birth
- *Profession
- *Affiliation/Institution
- *Nationality

*ATLAS Database

- *Contributions
- *Technical
- *Leadership roles
- *Recognitions

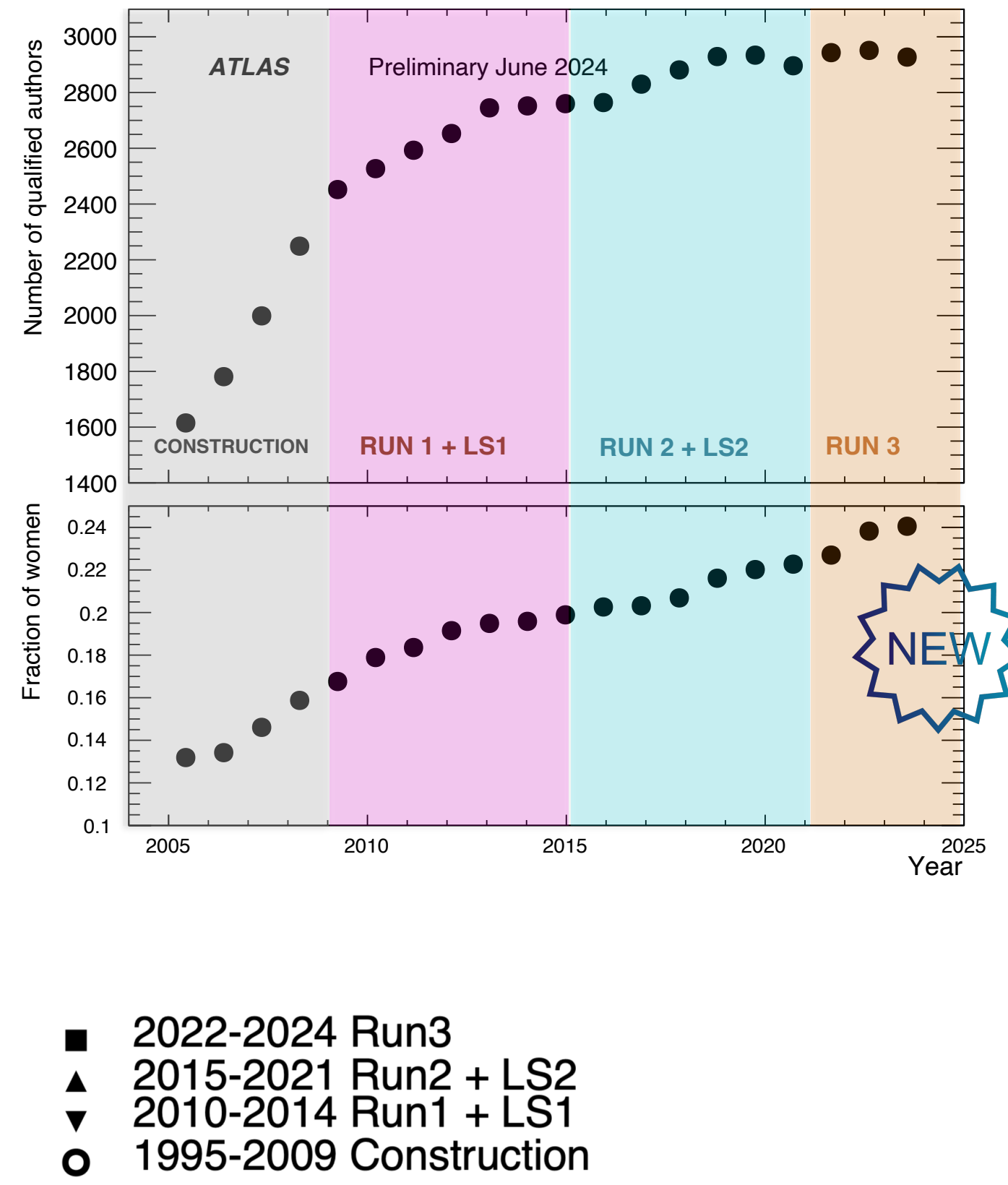
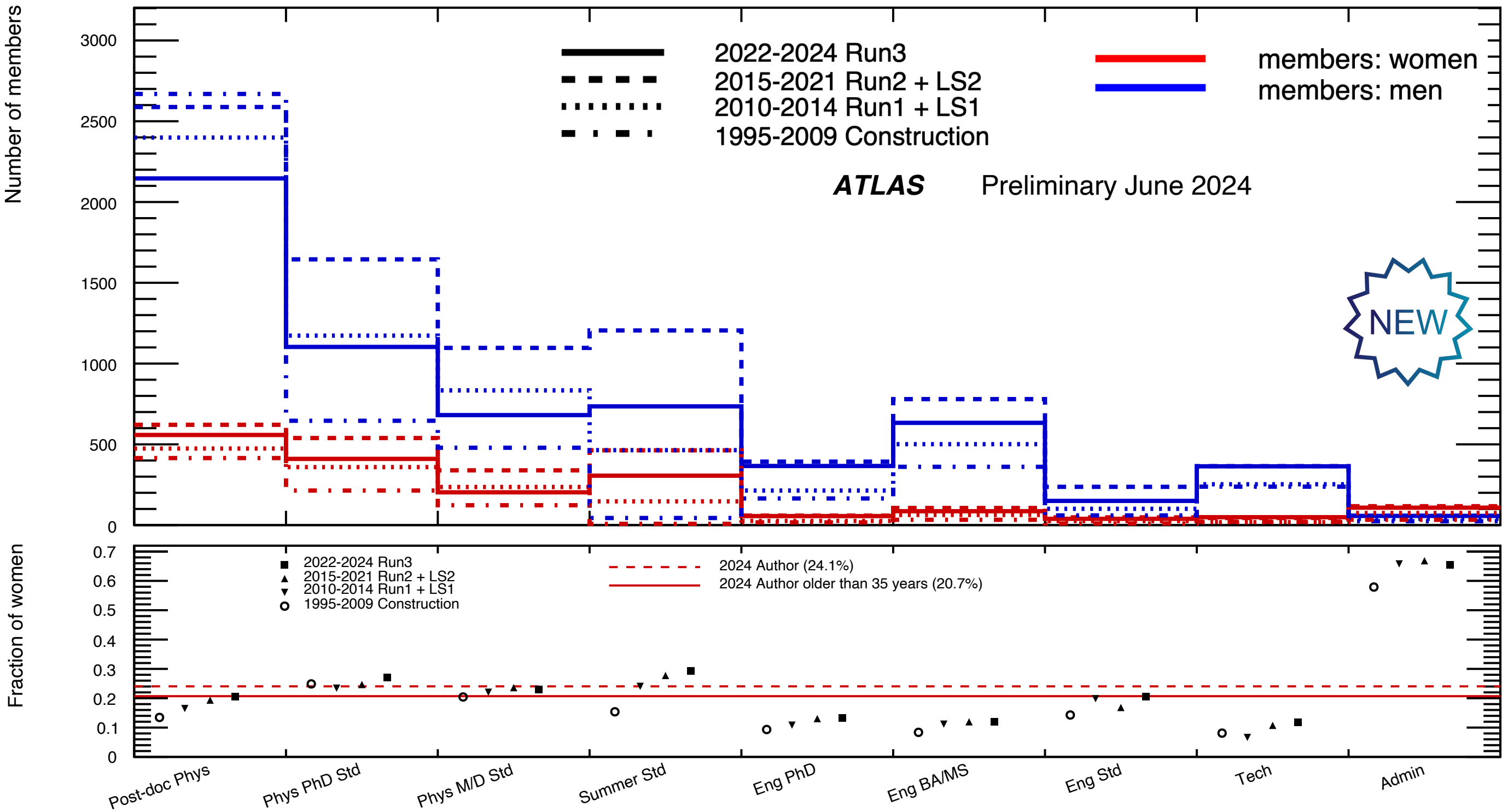
Definitions

- ***Member**: someone who belongs to the ATLAS Collaboration
- ***Author**: someone whose name is included in ATLAS publications
- ***Gender**: as stated by government issued ID with binary options between male or female
- * **Home institution**: research or educational organisation to which a person belongs (not to be confused with nationality)

Author and Fraction of Women*



- *Fraction of women* authors 24.1% (23% in 2022)
- *Fraction of women* author over 35 years: 20.7% (19.7% in 2022)
- *For CERN ([2022](#)): Fraction of women* (CERN staff & fellows): 22.5%

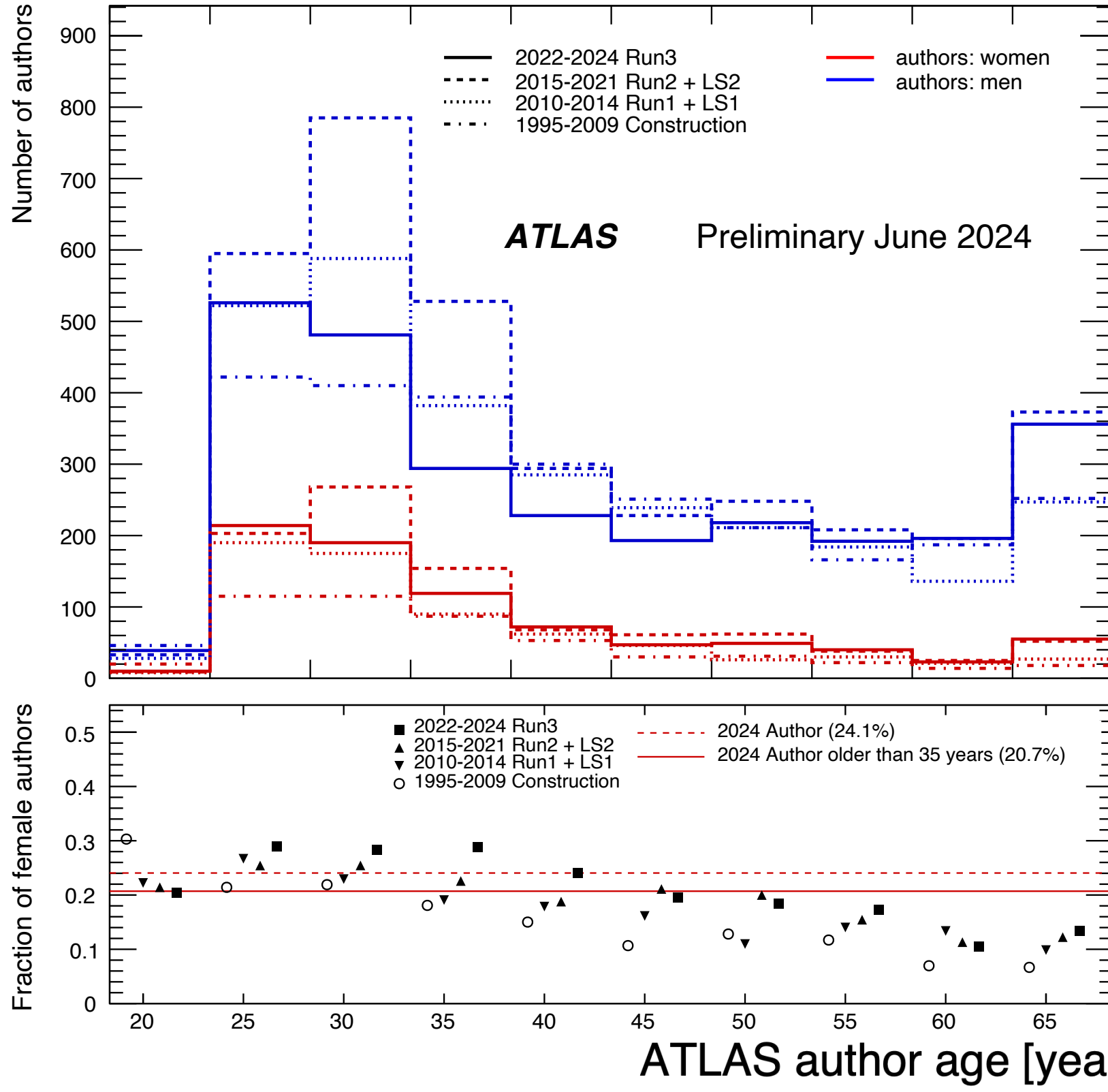
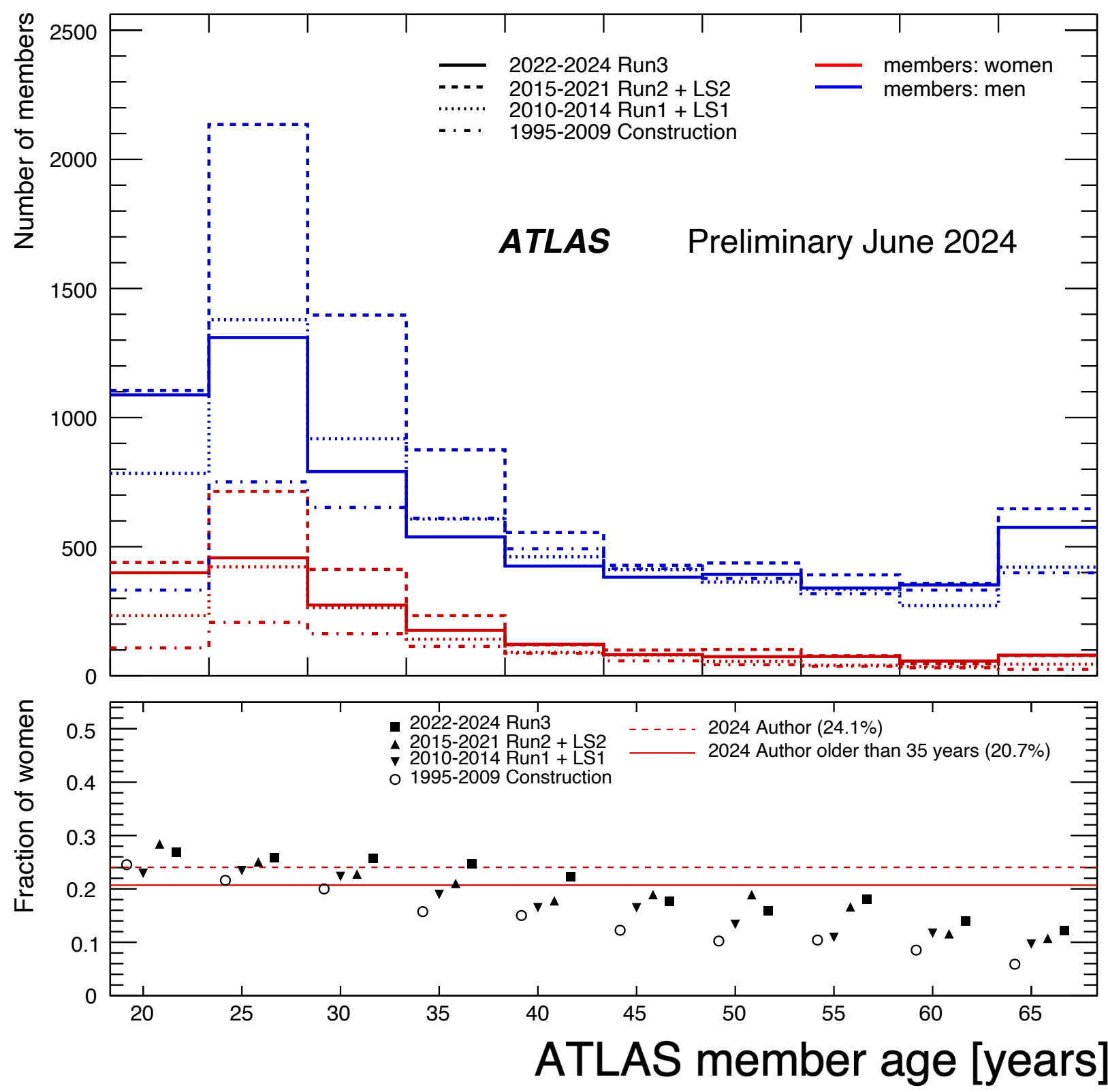


* Only recorded as male or female according to CERN HR database





- * Decreasing mean age of members
- * Increasing fraction of women members over time
- * Decreasing fraction of women author with age

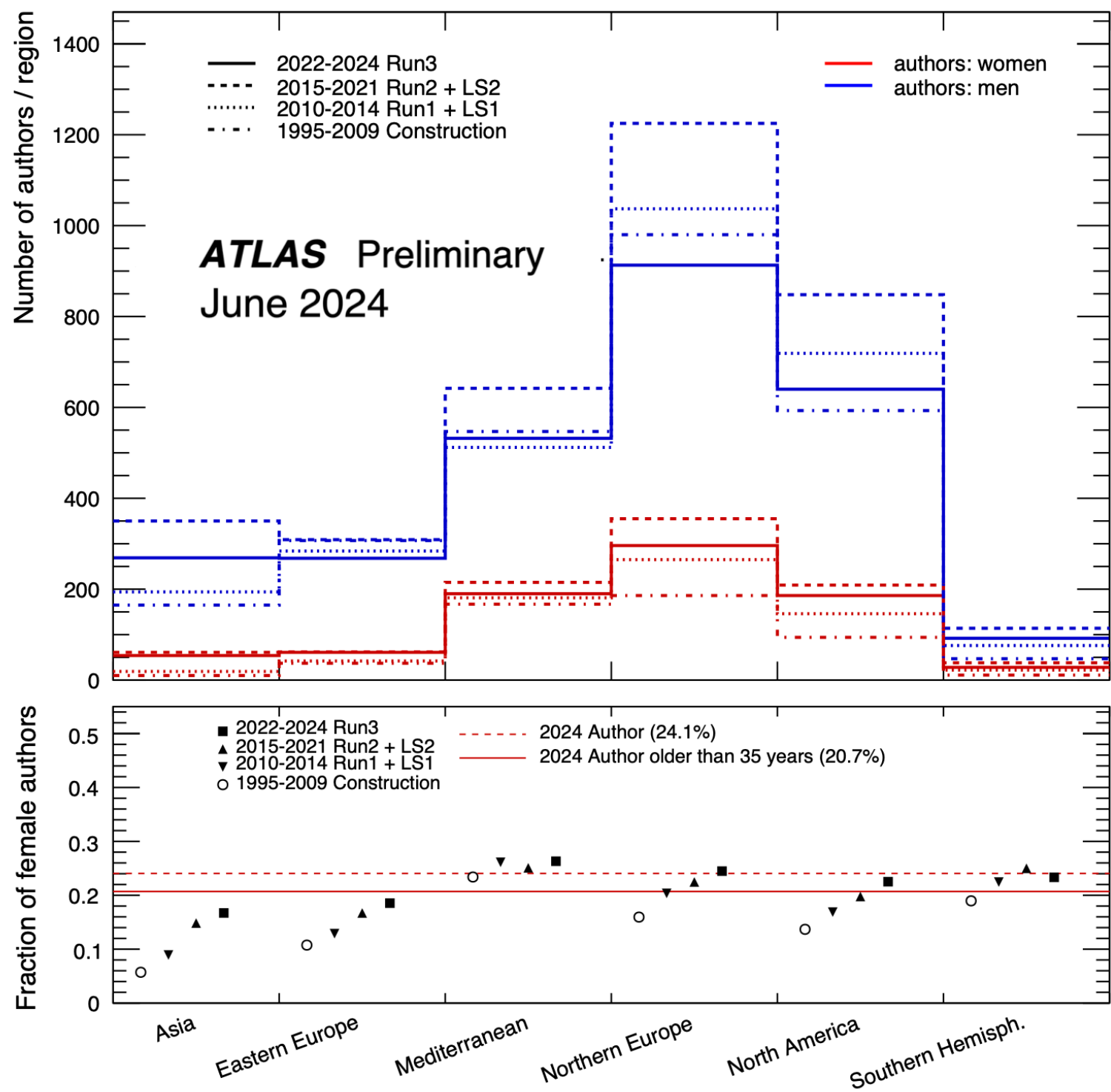
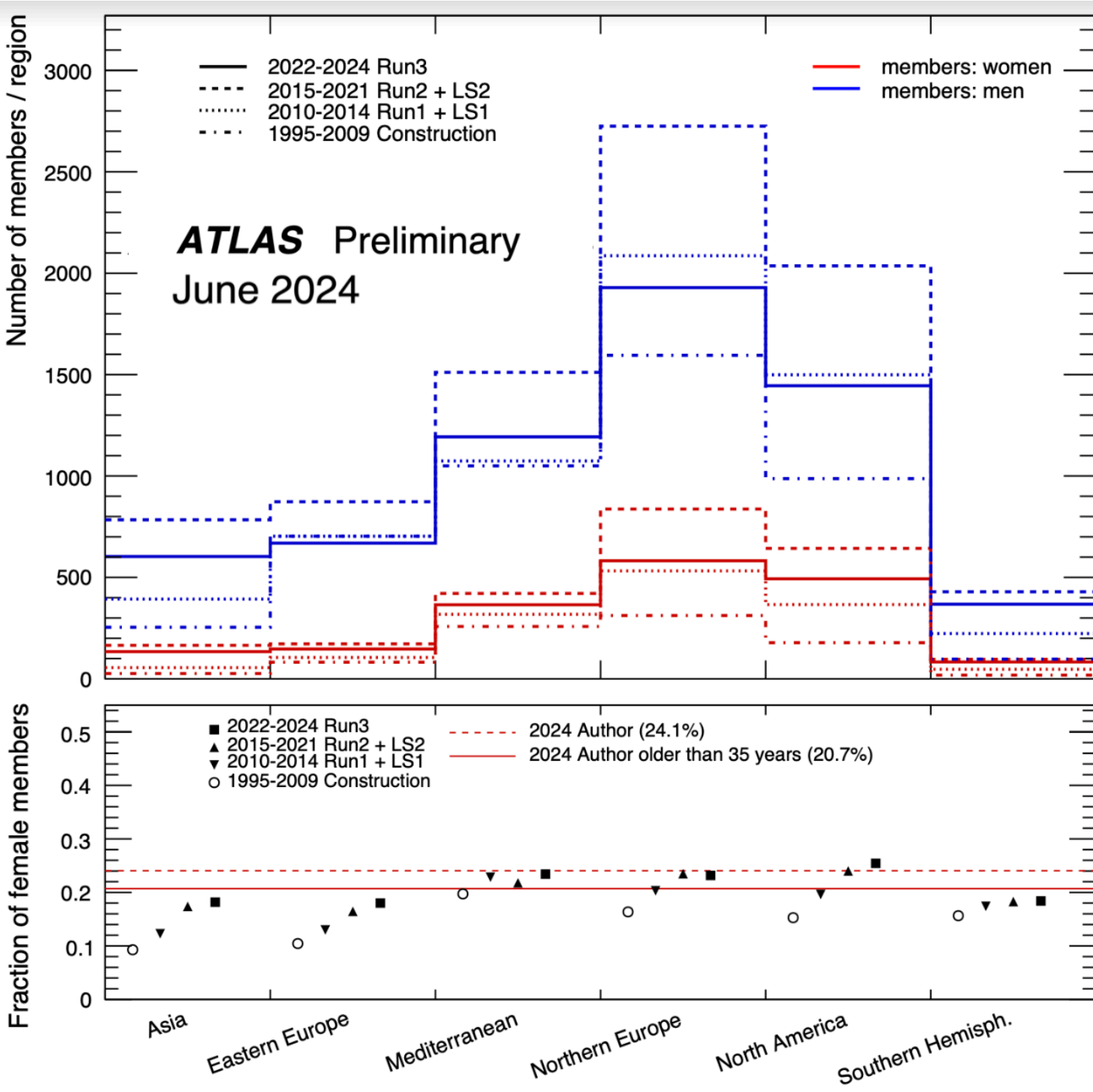


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Members

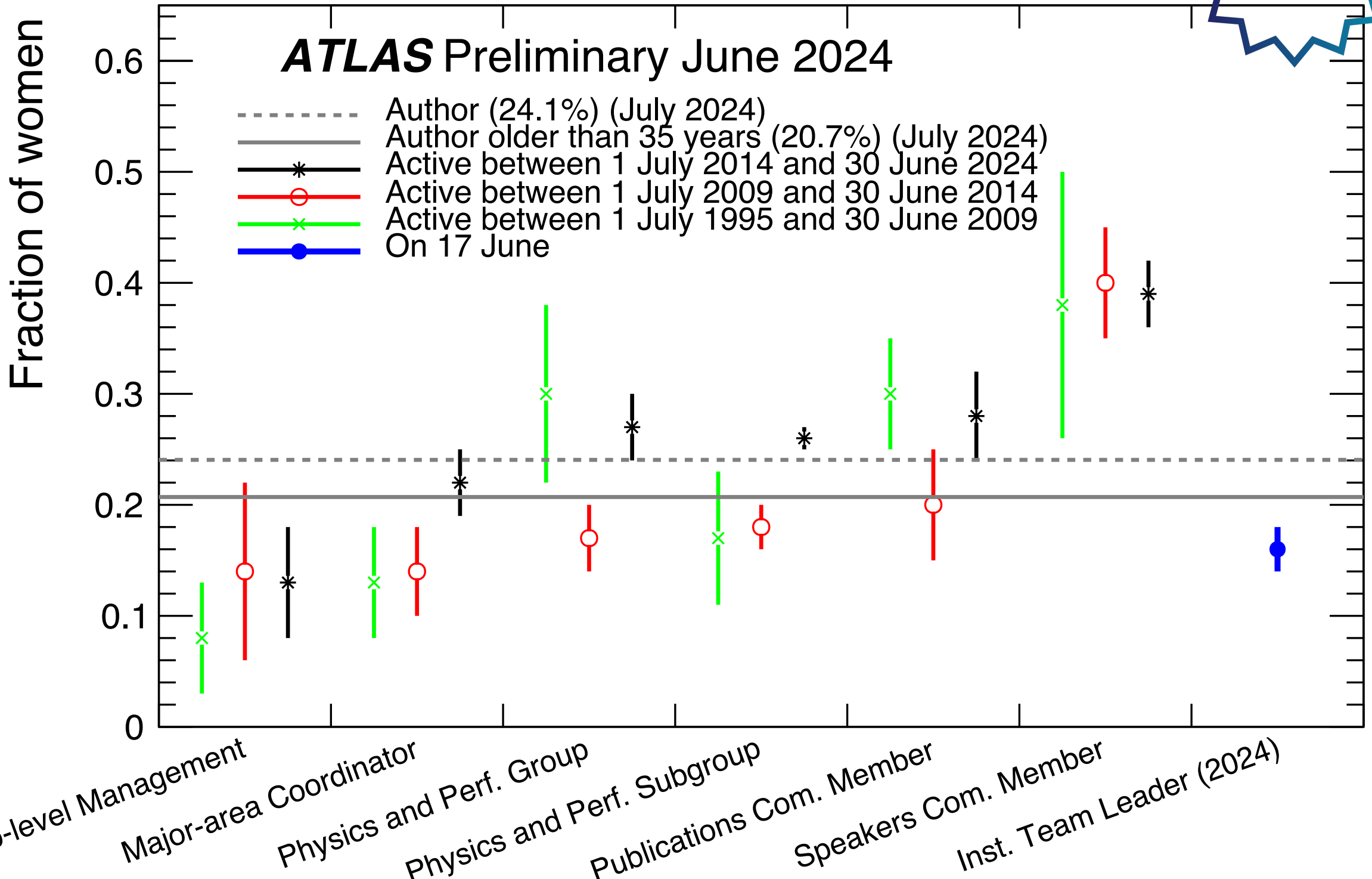
Authors



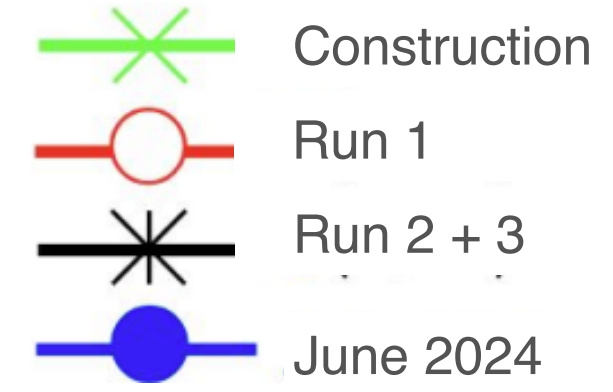
- Asia:** Armenia, Azerbaijan, China, Georgia, Japan, Taiwan
- Eastern Europe:** Belarus, Czech Republic, Poland, Romania, Russia (including JINR Dubna), Serbia, Slovakia, Slovenia
- Mediterranean:** France, Greece, Israel, Italy, Portugal, Spain, Turkey, Morocco
- North America:** Canada, USA
- Northern Europe:** Austria, Denmark, Germany, the Netherlands, Norway, Sweden, Switzerland (including CERN), UK
- Southern Hemisphere:** Argentina, Australia, Brazil, Chile, Colombia, South Africa

- ▲ --- Run 1
- — Run 2
- ▼ Construction

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- **Top level management:** spokesperson, 2 deputies; technical, resource, upgrade coordinator; 2y term
- **Major area coordinators:** ~16; 2y term
- **Physics & performance group:** 18 group leaders, 2 per group; 2y term
- **Physics & performance subgroup:** ~2 conveners per subgroup; ~2y term
- **Publications Committee:** 12 members, 2y term
- **Speakers Committee:** 15 members, 3y term.
- **Institution Team Leader:** 182 ATLAS member institutions Chosen by institutions



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Diversity is key
In outreach!

Outreach is key
In Diversity!

- * Relatability
- * Accessibility

Variety of language,
multiple cultural
representation, remote
activities.

Close Captioning,
exhibition material for
visual impaired,...

Show the human and
diverse side of science!

FOCUS ON **WOMEN** OF ATLAS



ATLAS VIDEO FOR
INTERNATIONAL
WOMENS DAY,
OVER 100K VIEWS
OVER THE
PLATFORMS



Content in other languages
and highlight under-
represented colleagues



Emphasis on
Early Career
Scientists



**Diversity is key
In outreach!**

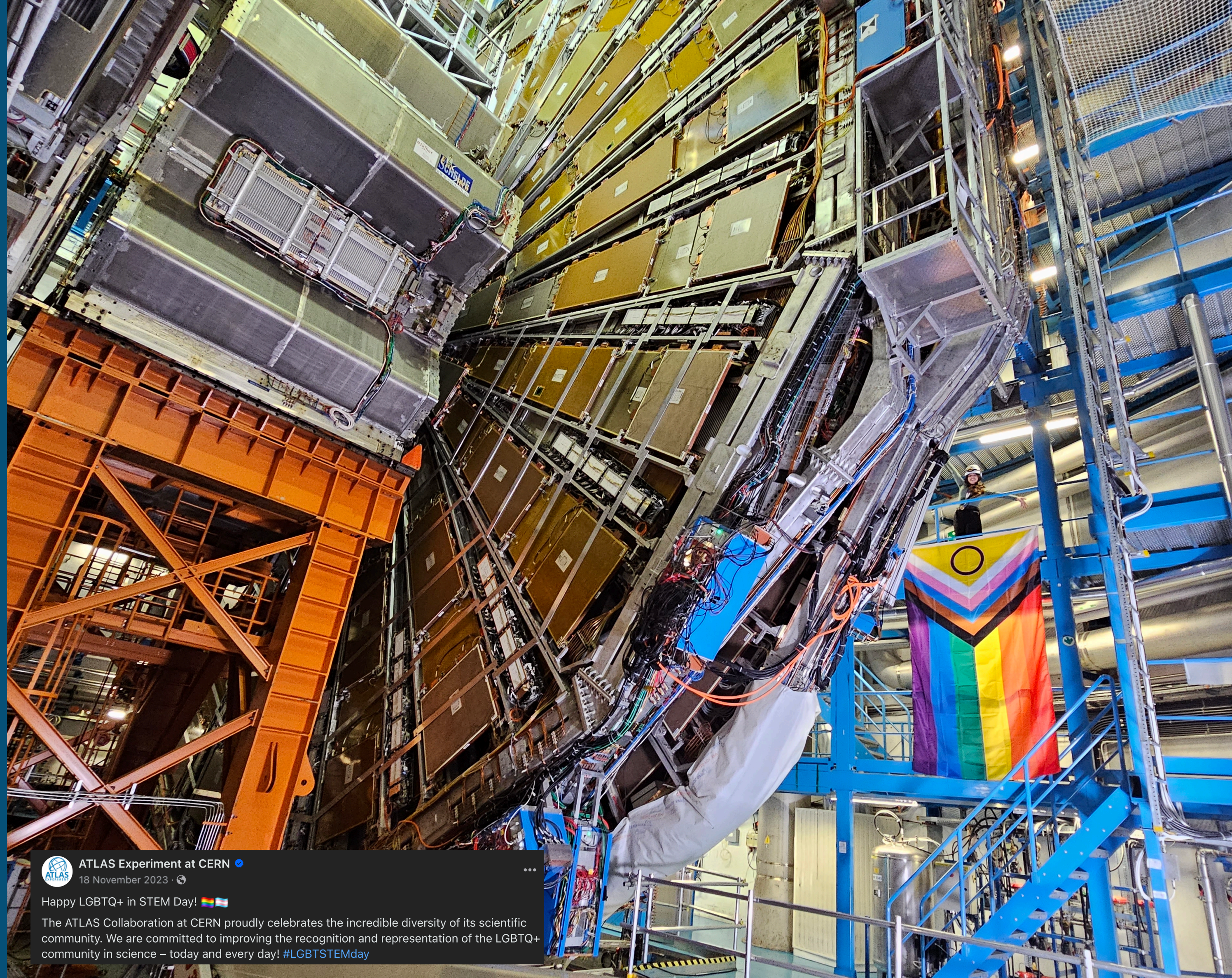
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ATLAS Experiment at CERN
18 November 2023 ·

Happy LGBTQ+ in STEM Day! 🏳️‍🌈

The ATLAS Collaboration at CERN proudly celebrates the incredible diversity of its scientific community. We are committed to improving the recognition and representation of the LGBTQ+ community in science – today and every day! #LGBTSTEMday

- ✳️ ATLAS is large and diverse
- ✳️ Fraction of women* members is increasing over time
- ✳️ Positions of leadership are broadly reflective of our gender demographics

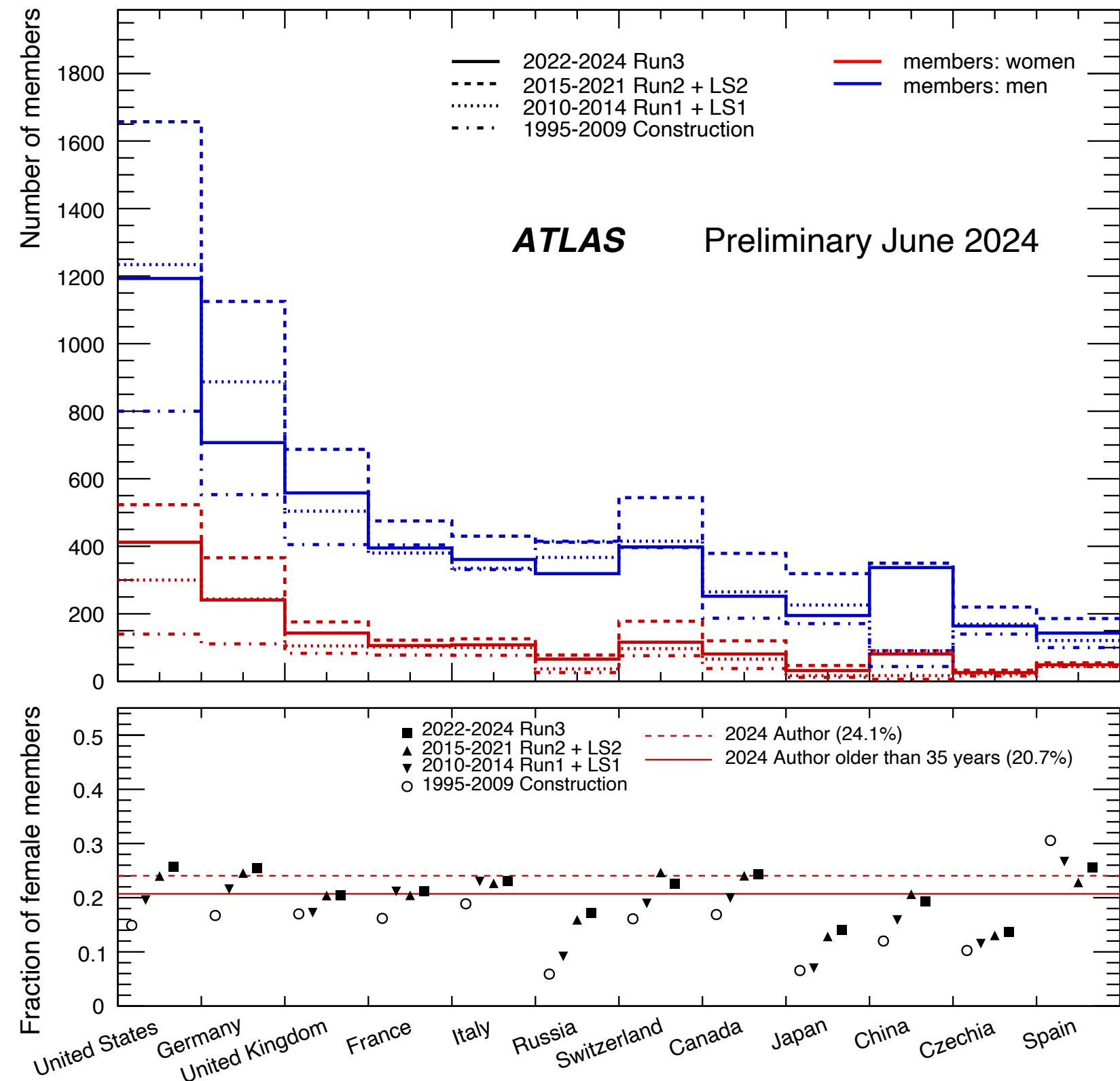


Thank you!

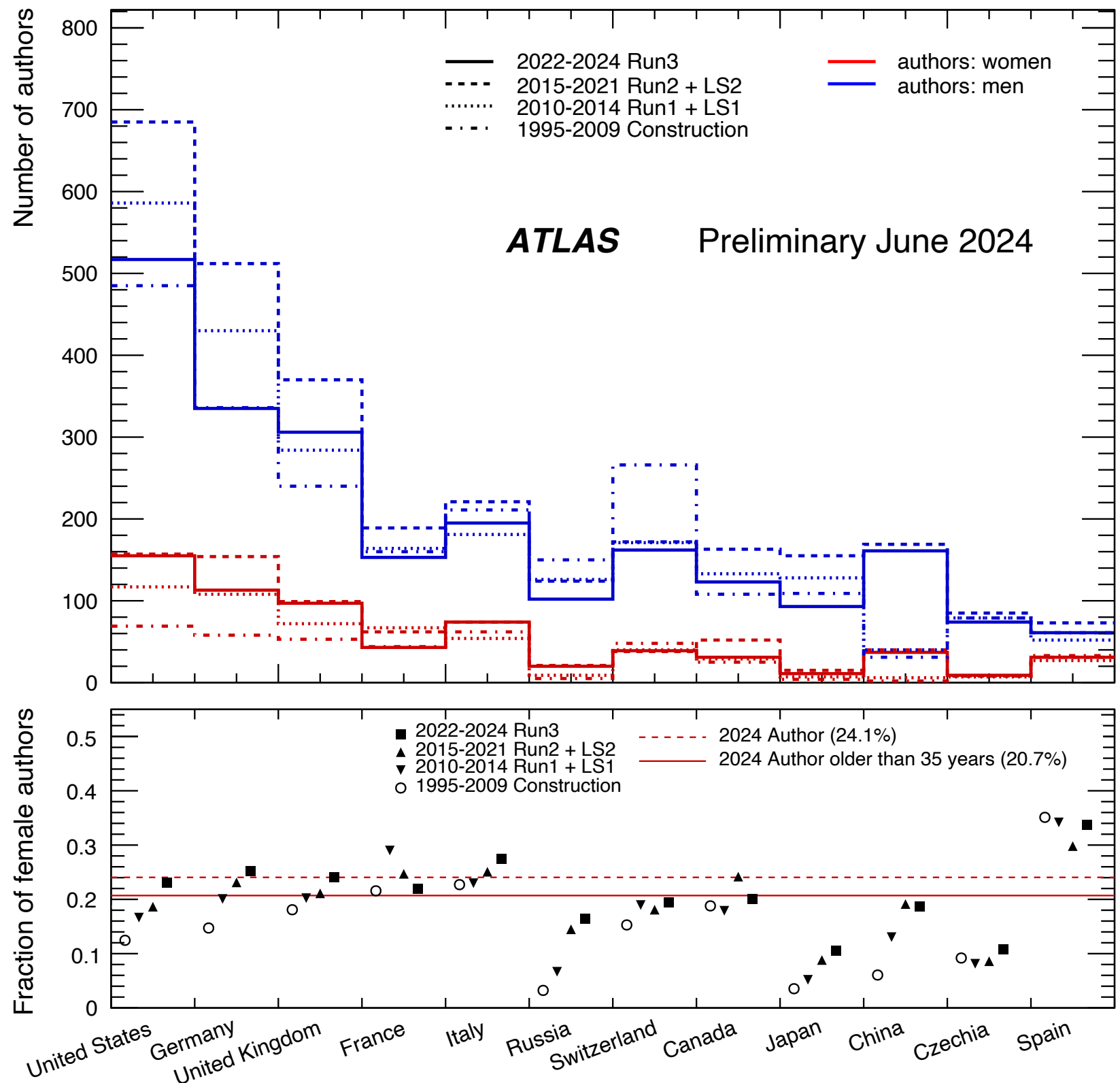




Members



Authors



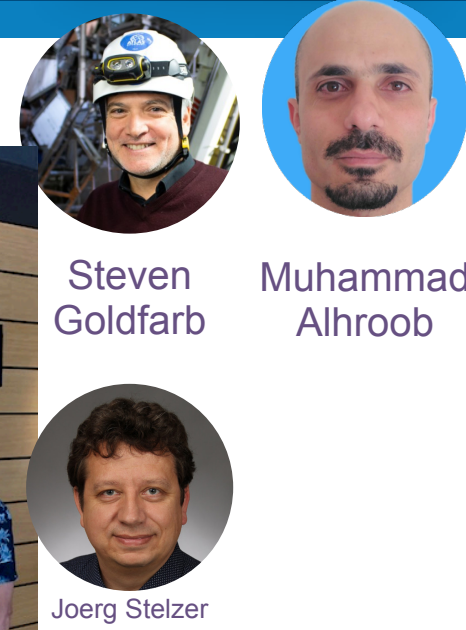
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- * Non-anonymous contact via members or list
 - * Follow-up, but all communications kept private
 - * Action can be recommended, but not taken unless requested
- * Anonymous contact via message box
 - * Communicated with Management, CB Chair, as needed
 - * Follow-up if requested and appropriate
 - * Records maintained for future reference
- * Discussion Sessions during Collaboration Weeks
 - * Summary of DEI activities and how to make contact
 - * Presentation from ATLAS institute on their programmes
 - * Typically hashing out a hot topic



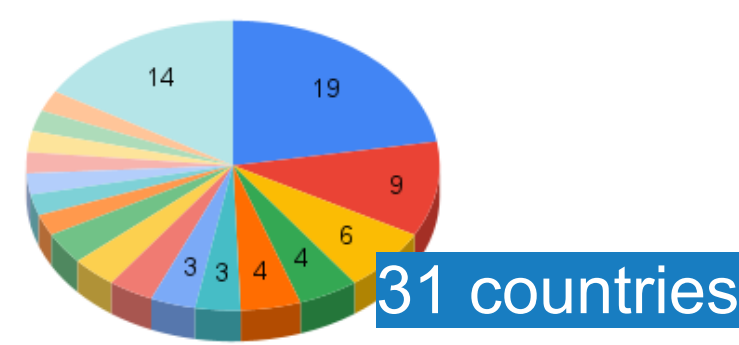


Now testing!
New AVC Virtual Visit Facility



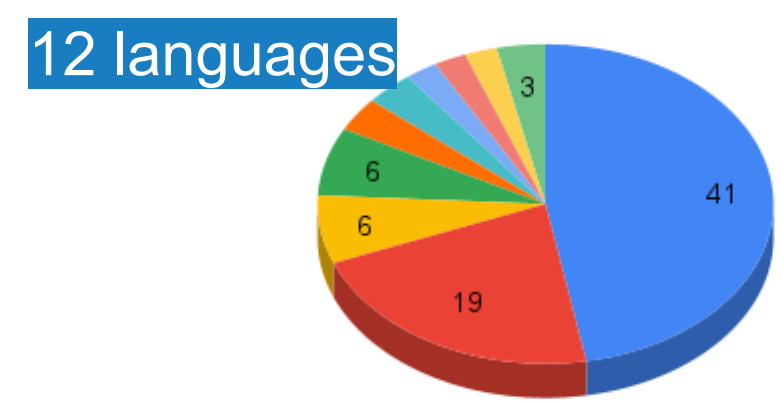
Countries booking virtual visits in 2023

- Brazil
- UK
- Greece
- Sweden
- USA
- India
- Australia
- Germany
- Italy
- Colombia
- Switzerland
- Slovakia
- Morocco
- Norway
- Ukraine
- Turkey
- Congo
- Others (14 countries)



Languages of virtual visits in 2023

- English
- Portuguese
- Spanish
- Greek
- German
- Swedish
- Italian
- Slovak
- French
- Others (3 languages)



IN 2023 THERE WERE
 90 virtual visits in total
 47 visit to the AVC
 40 underground
 2 streamed on YouTube
 1 open
 Between 10—1000 participants per visit.

IN 2024
 81 visits and counting!!

Visits & Virtual Visits make an important impact on globally diverse audiences.

Feedback: "One of [my students] on the way out of the room said, 'In six more years, I could be doing that.' That's exactly what we wanted to have happen - that feeling of possibilities."