



WHO ARE ATLAS?

EVOLUTION OF REGIONAL, AGE AND GENDER DEMOGRAPHICS IN THE ATLAS COLLABORATION

SAHAL YACOOB



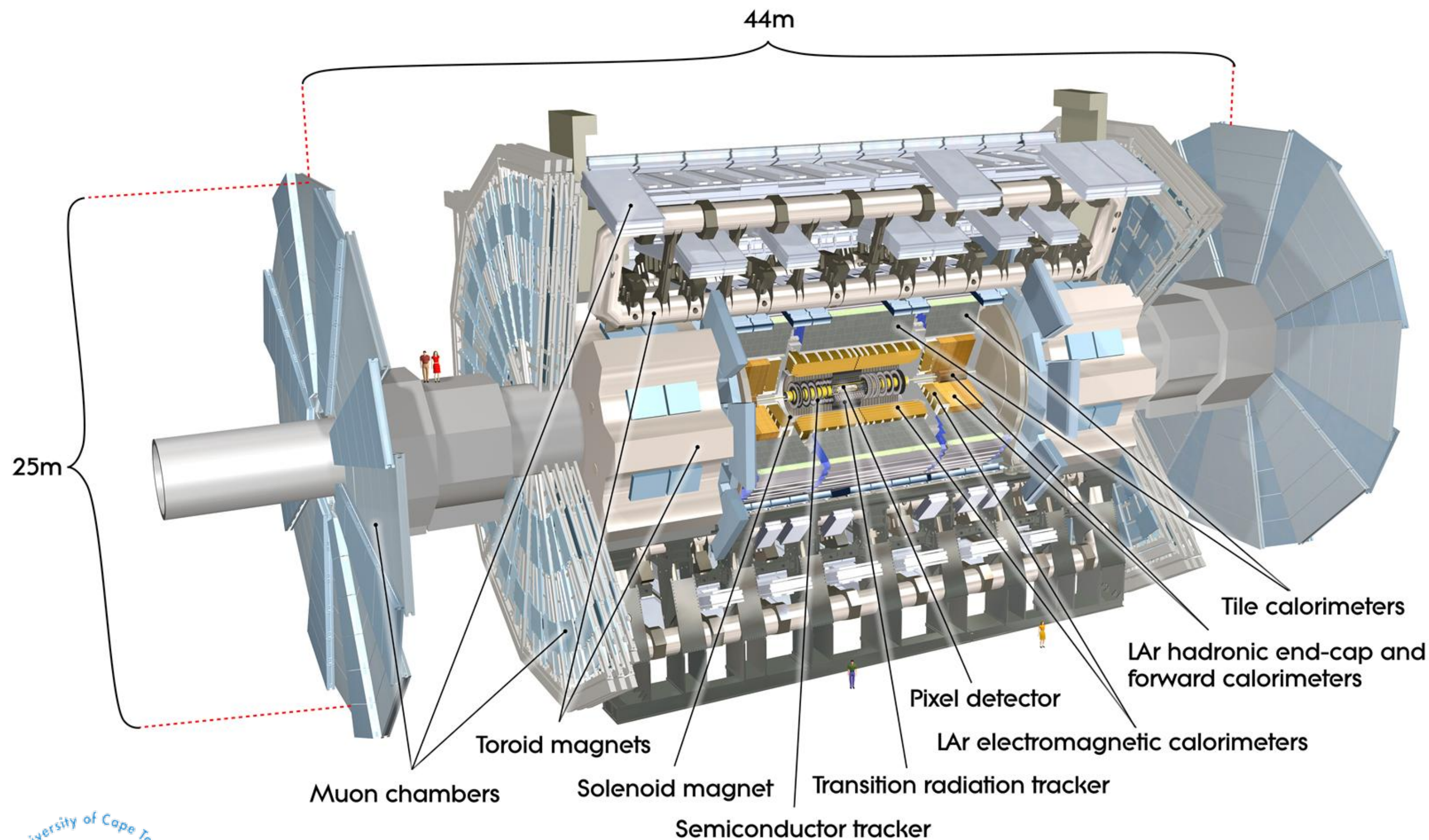
UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

THE ATLAS COLLABORATION

- ▶ (Truncated) Timeline:
 - ▶ Founded in 1992
 - ▶ Formal Approval in 1997
 - ▶ 2008 End of Construction
 - ▶ 2010 First LHC Collisions at 7 TeV
 - ▶ 2015 LHC Collisions at 13 TeV

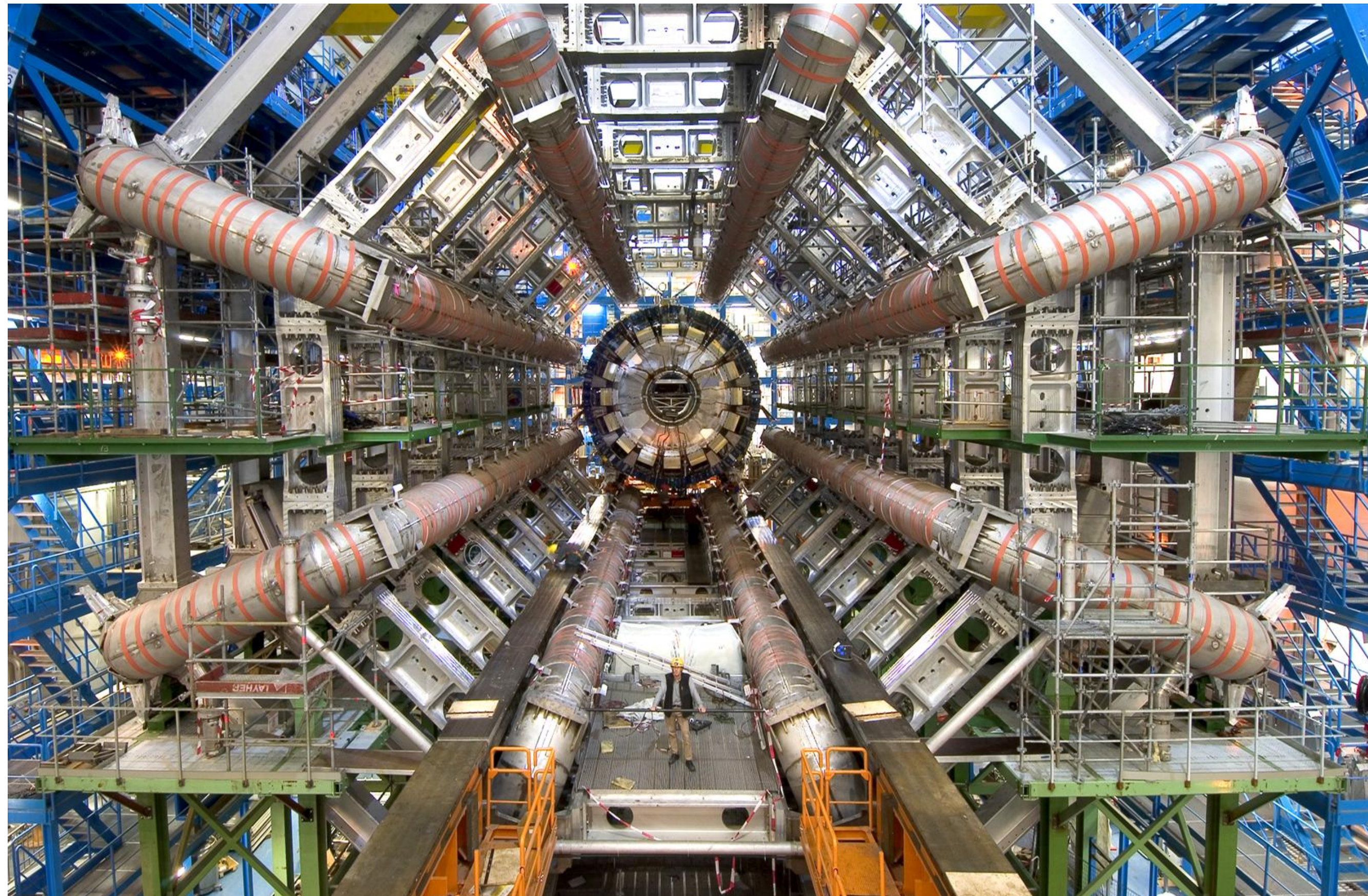


THE ATLAS DETECTOR



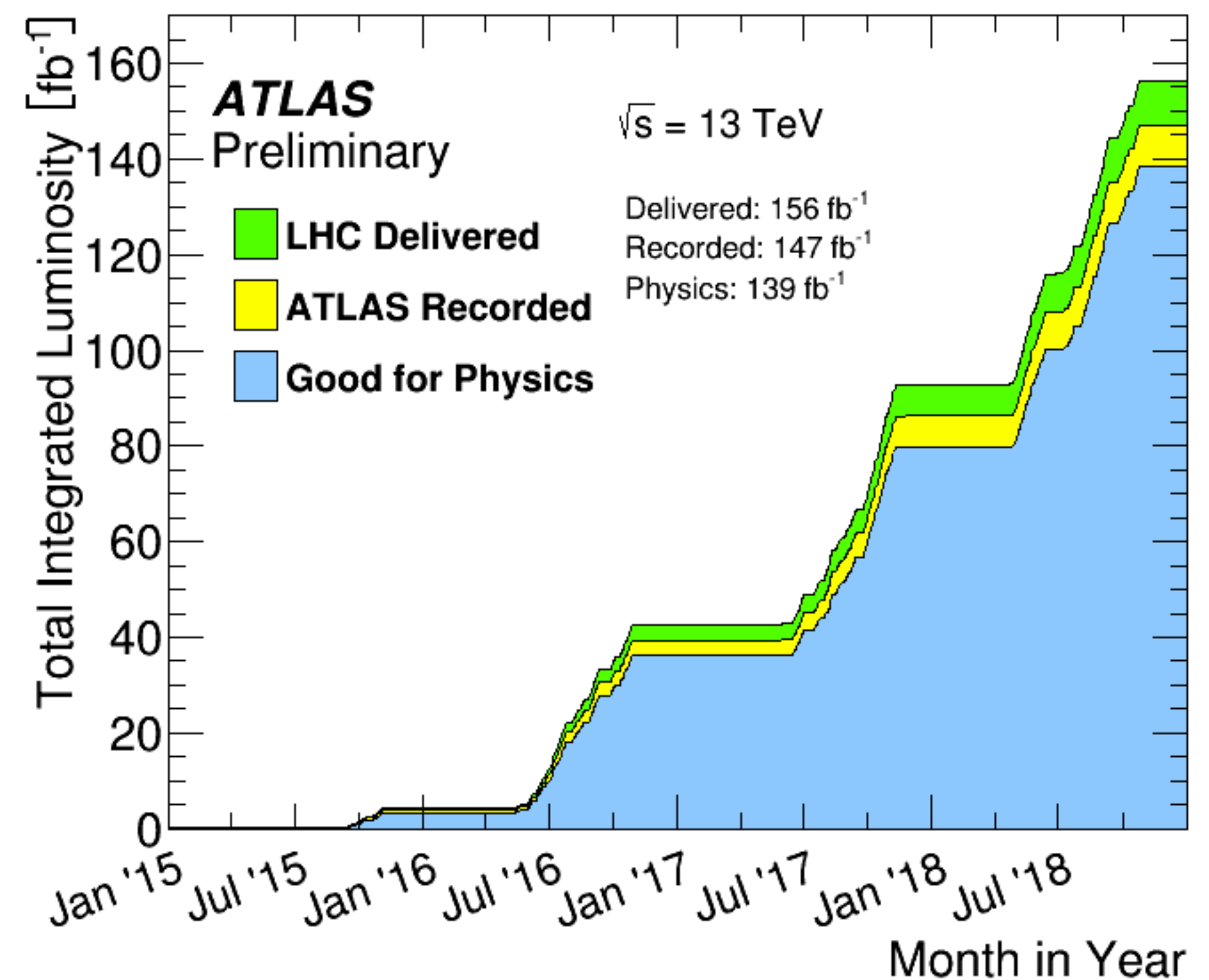
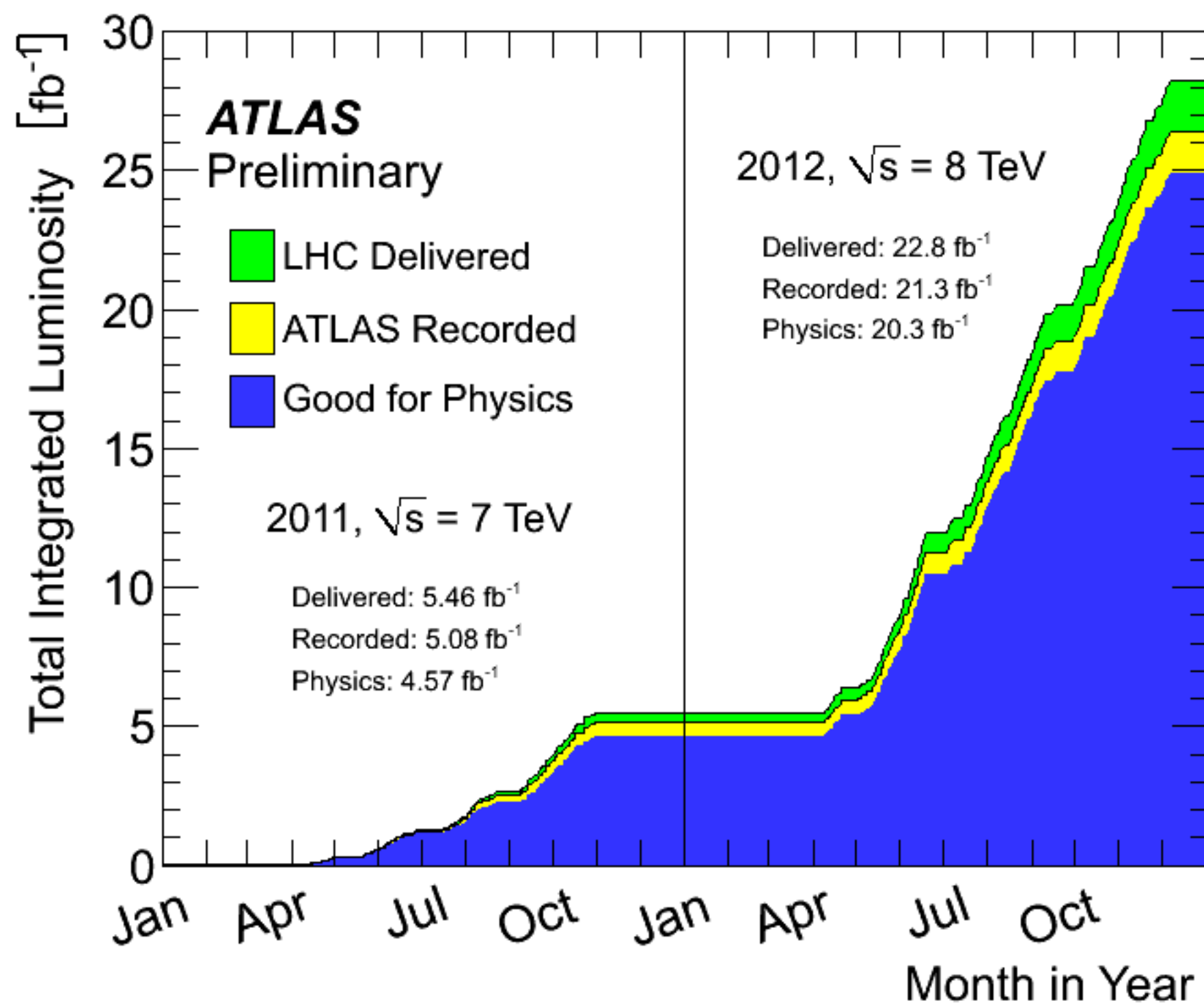
- ▶ 86M Tracking channels
- ▶ 200K Calorimeter Channels
- ▶ 400K Muon system Channels
- ▶ RF Buckets cross every 25 ns

THE ATLAS DETECTOR



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PROTON-PROTON DATA COLLECTED



SCIENTIFIC OUTPUT

6463 papers found, 5382 of them citeable (published or arXiv)

Citation summary results

Total number of papers analyzed:

Citeable papers

5,382

Published only

1,132

Total number of citations:

136,819

101,993

Average citations per paper:

25.4

90.1

Breakdown of papers by citations:

Renowned papers (500+)

27

18

Famous papers (250-499)

59

45

Very well-known papers (100-249)

224

176

Well-known papers (50-99)

315

252

Known papers (10-49)

729

388

Less known papers (1-9)

1,566

188

Unknown papers (0)

2,462

65

h_{HEP} index [\[?\]](#)

162

145



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| Average citations per paper: | 25.4 | 90.1 |
| Breakdown of papers by citations: | | |
| Renowned papers (500+) | <u>27</u> | <u>18</u> |
| Famous papers (250-499) | <u>59</u> | <u>45</u> |
| Very well-known papers (100-249) | <u>224</u> | <u>176</u> |
| Well-known papers (50-99) | <u>315</u> | <u>252</u> |
| Known papers (10-49) | <u>729</u> | <u>388</u> |
| Less known papers (1-9) | <u>1,566</u> | <u>188</u> |
| Unknown papers (0) | <u>2,462</u> | <u>65</u> |
| h_{HEP} index [?] | 162 | 145 |

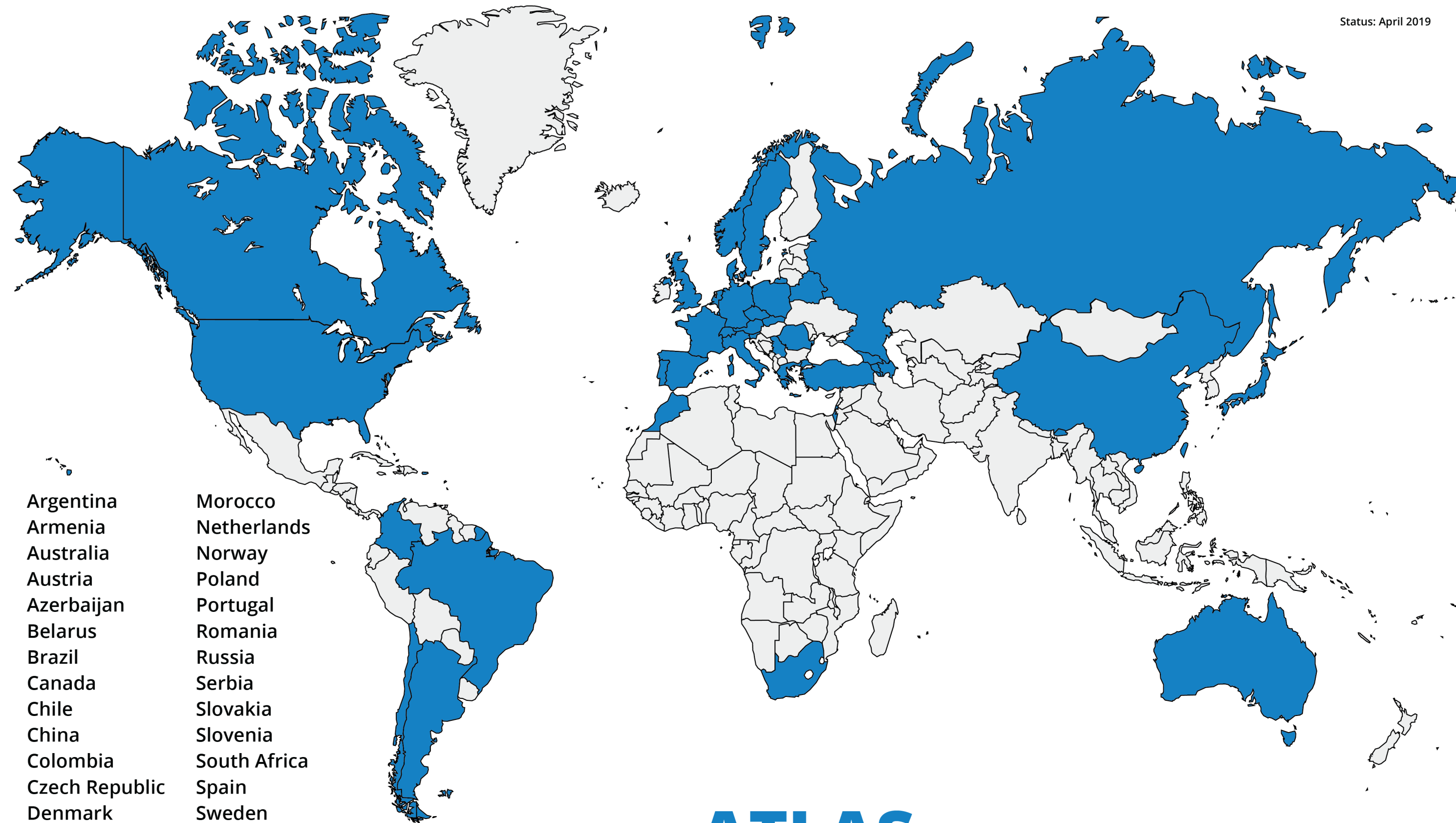
ACCORDING TO OUR OWN DB:

(Published: 836 - Accepted: 7 - Submitted: 34)



CURRENT MEMBERSHIP

▶ 5892 Members 2961 Authors 233 institutes 38 countries



- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Belarus
- Brazil
- Canada
- Chile
- China
- Colombia
- Czech Republic
- Denmark
- France
- Georgia
- Germany
- Greece
- Israel
- Italy
- Japan
- Morocco
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia
- Slovakia
- Slovenia
- South Africa
- Spain
- Sweden
- Switzerland
- Taiwan
- Turkey
- UK
- USA
- CERN
- JINR

ATLAS Collaboration

183 institutions (232 individual institutes) from 38 countries



CURRENT MEMBERSHIP

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ATLAS Collaboration member nationalities

Over 5500 members of 103 nationalities

Physicists: **2422**

Engineers without PhD: **588**

Physics PhD students: **1223**

Engineers with PhD: **319**

Undergraduate/summer students: **350**

Technician or equivalent: **290**

Physics masters/diploma students: **495**

Engineering students: **88**

Administrator/others: **100**



DIVERSITY AND INCLUSION

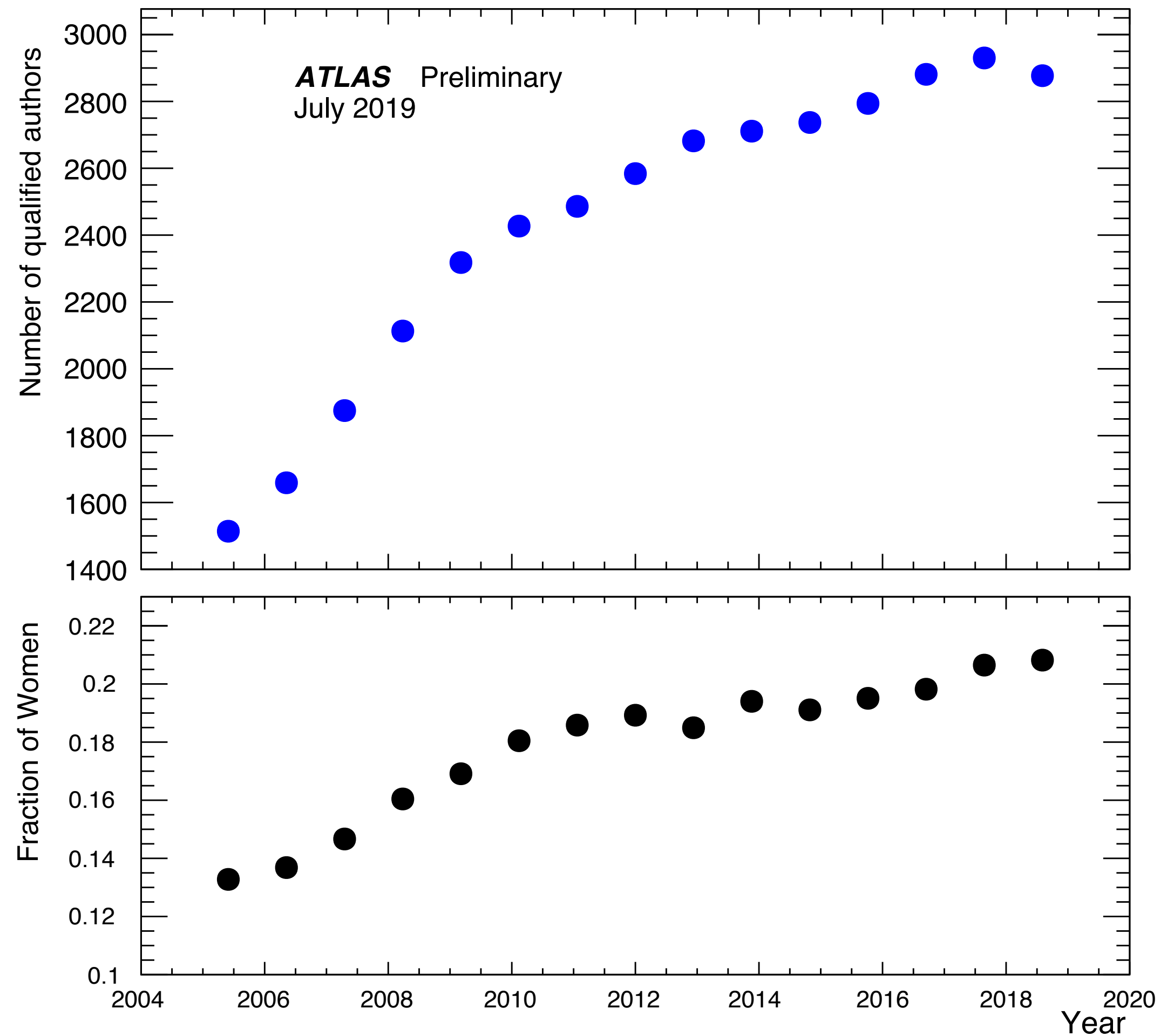
- ▶ ATLAS is a large international collaboration
 - ▶ As a community we acknowledge our responsibility to society is greater than to pursue the physics goals of the collaborations
 - ▶ We have the opportunity to be an agent for change
 - ▶ We have a responsibility to provide a healthy environment
 - ▶ I believe that the end result of these efforts will lead to the best achievement of our physics goals



DIVERSITY AND INCLUSION CONTACTS

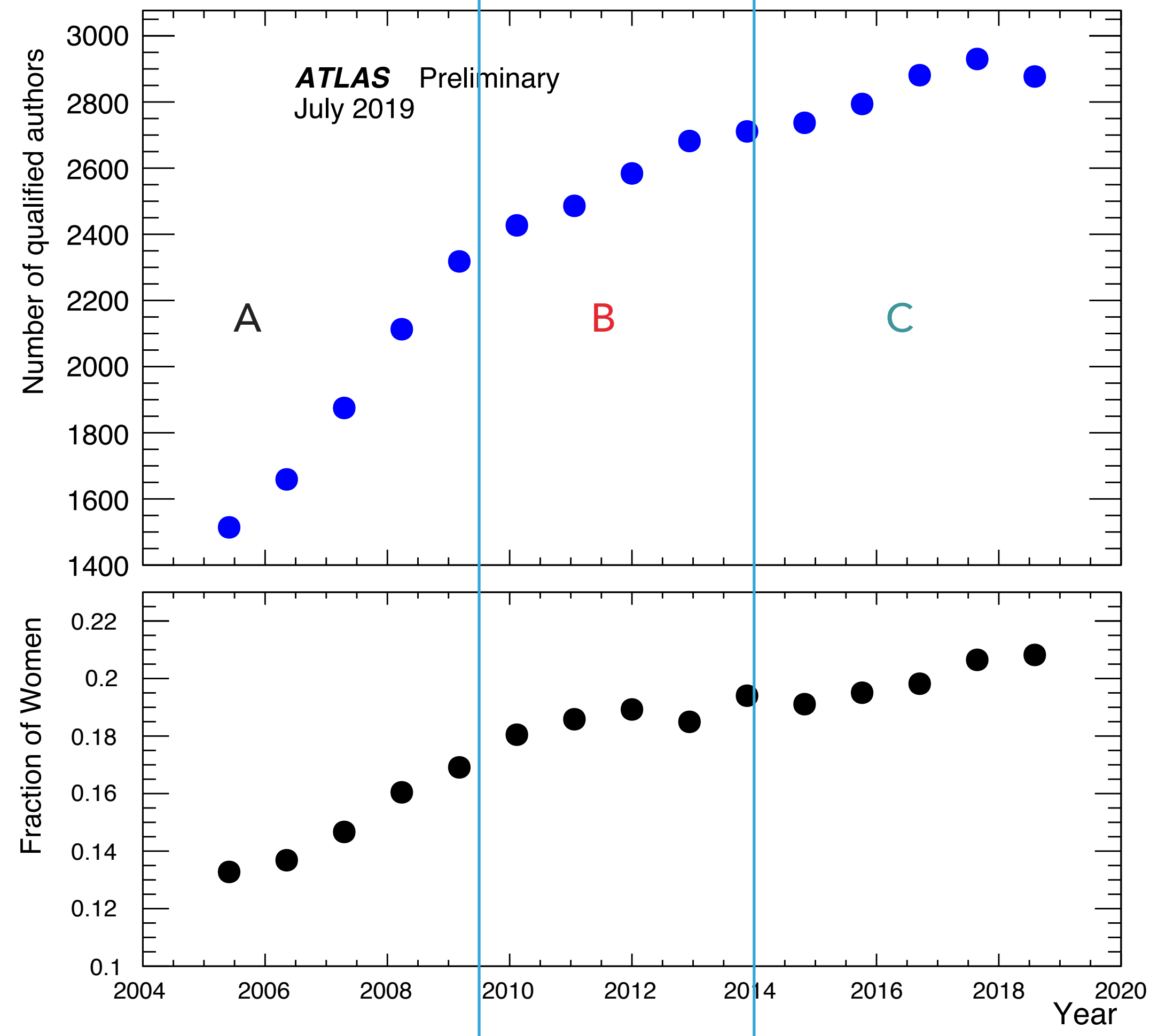
| Role | Activities |
|---|--|
| <ul style="list-style-type: none">▶ Act as contact for ATLAS members to discuss concerns related to diversity and inclusion.▶ Maintain contacts with diversity groups or contacts in other HEP experiments and at CERN.▶ Maintain a list of resources that can be referenced or employed when issues related to diversity and inclusion occur.▶ Evaluate possibilities of training courses offered by CERN or external providers, and (if applicable) propose them | <ul style="list-style-type: none">▶ Maintain a Wiki of resources▶ Foster behaviour in line with the ATLAS code of conduct▶ Push for inclusive language▶ Encourage diversity in appointments, and speaker selection▶ Respond to concerns raised<ul style="list-style-type: none">▶ Sometimes completely anonymously |

ANNUAL AUTHORSHIP COUNT (1 JULY IN EACH YEAR)

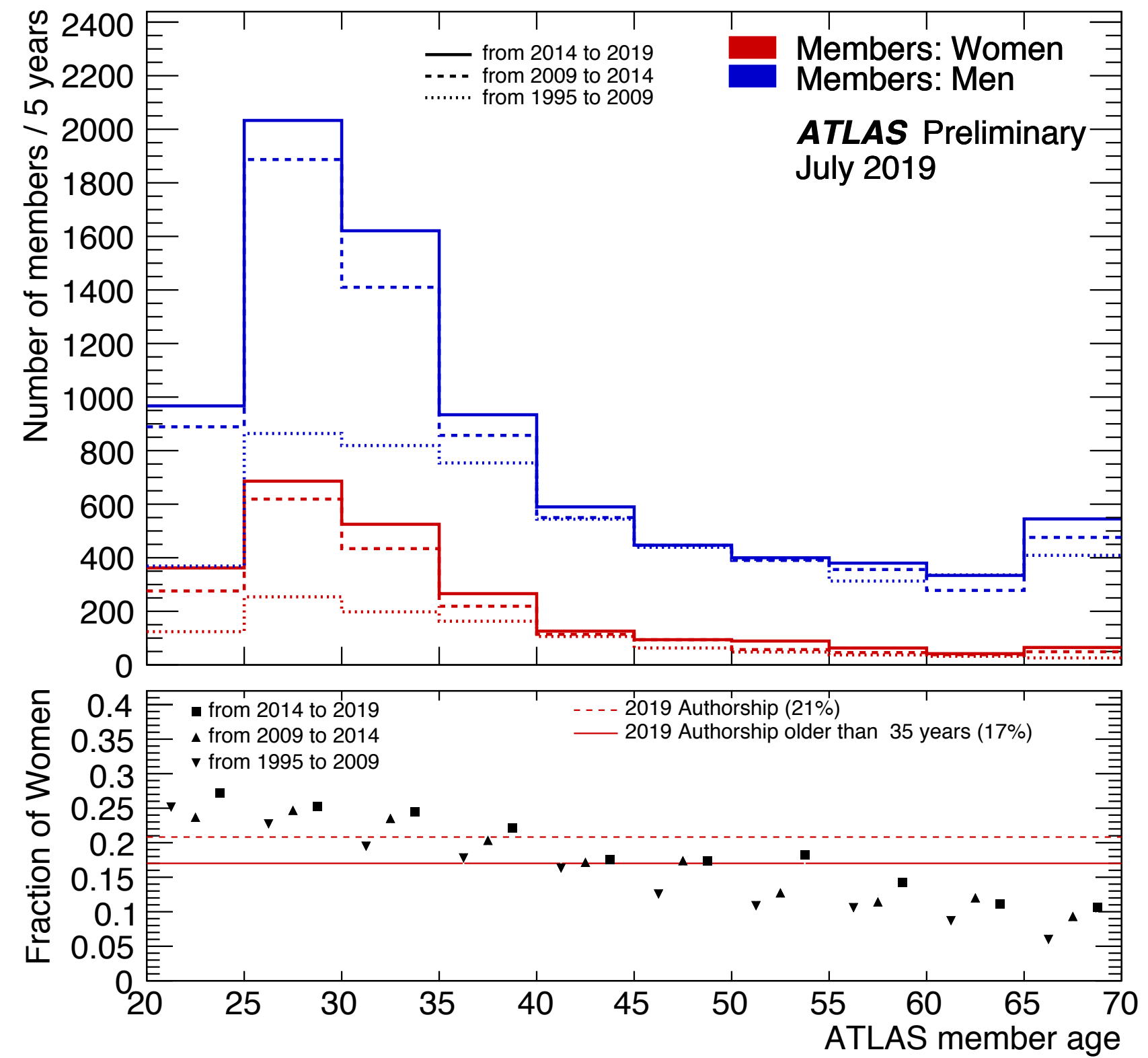
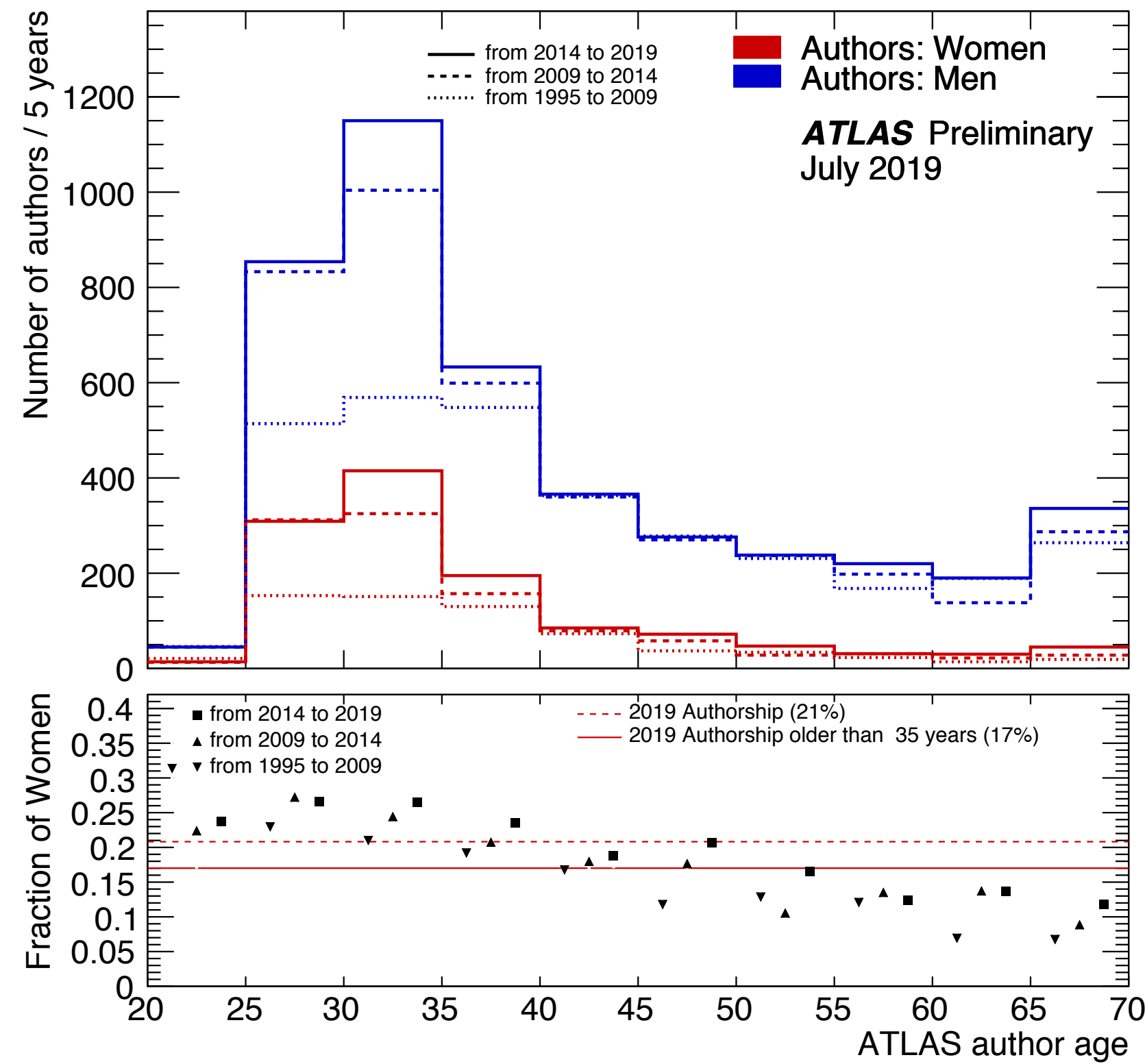


ANNUAL AUTHORSHIP COUNT (1 JULY IN EACH YEAR)

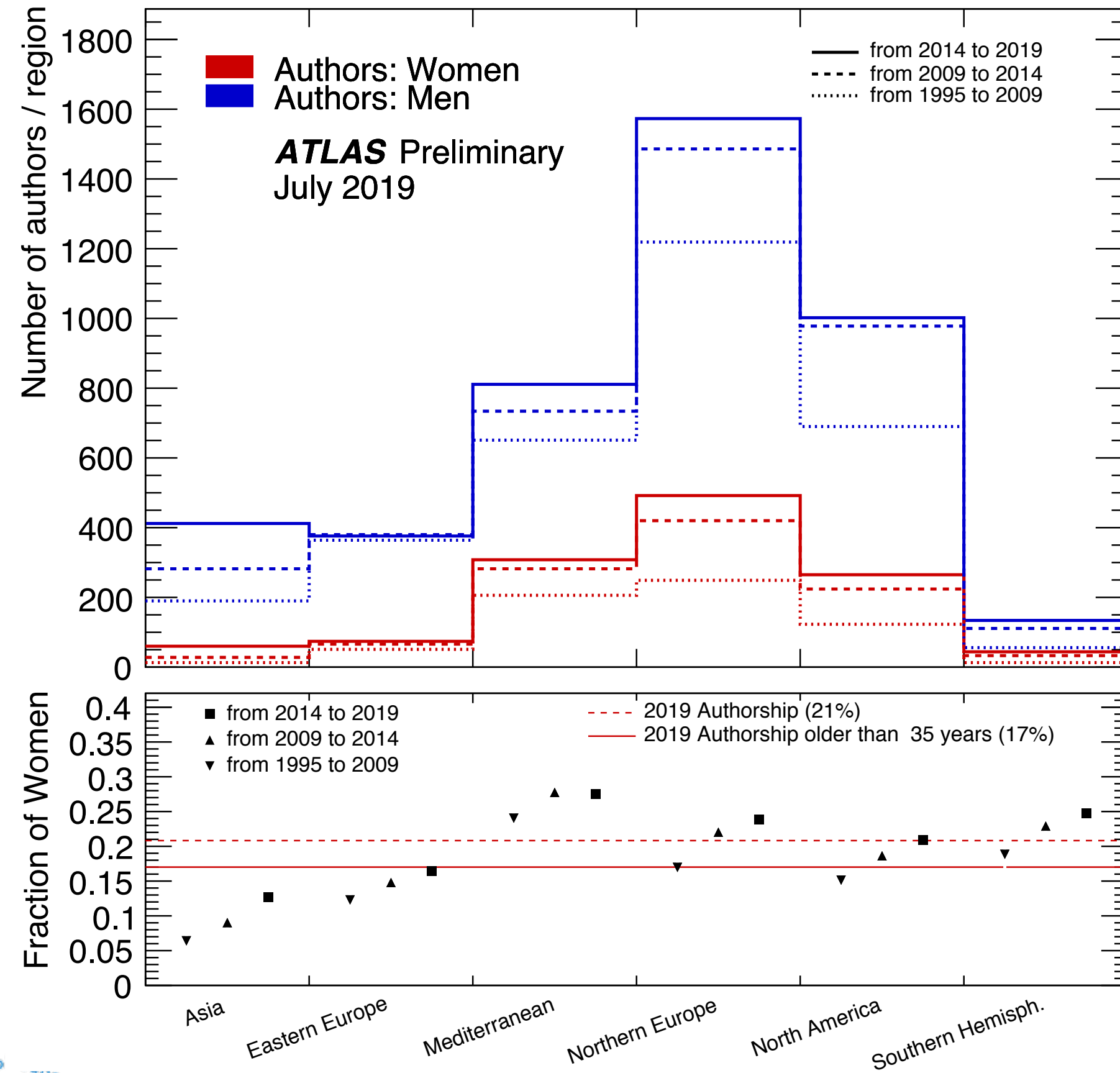
- ▶ Period A (2005–2009)
- ▶ Construction
- ▶ **Period B (2009-2014)**
- ▶ **Run 1**
- ▶ **Period C (2014 - 2019)**
- ▶ **Run 2**



WE'RE GETTING YOUNGER (AND MORE GENDER DIVERSE) !



REGIONAL EVOLUTION



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

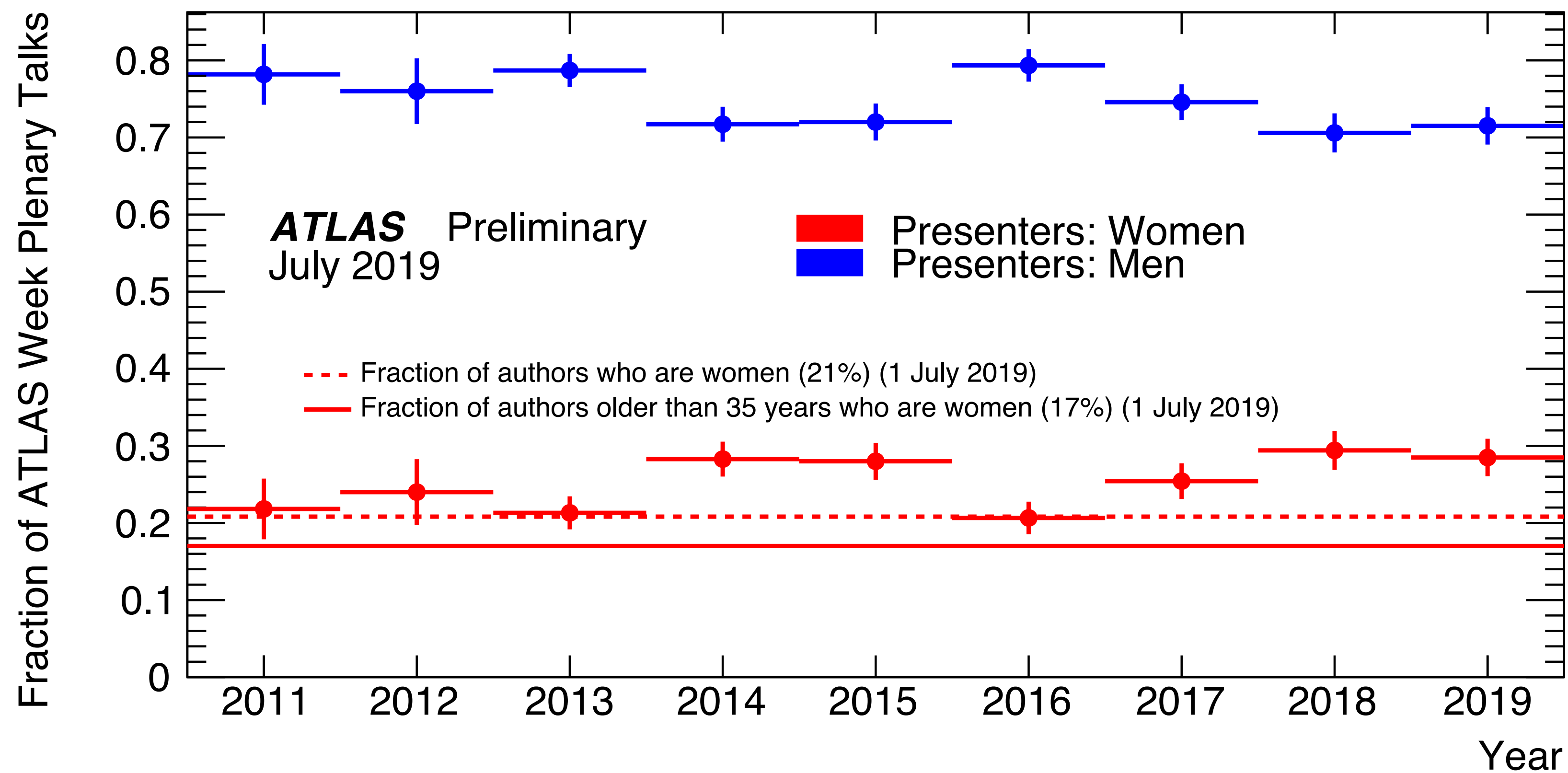


ATLAS WEEK

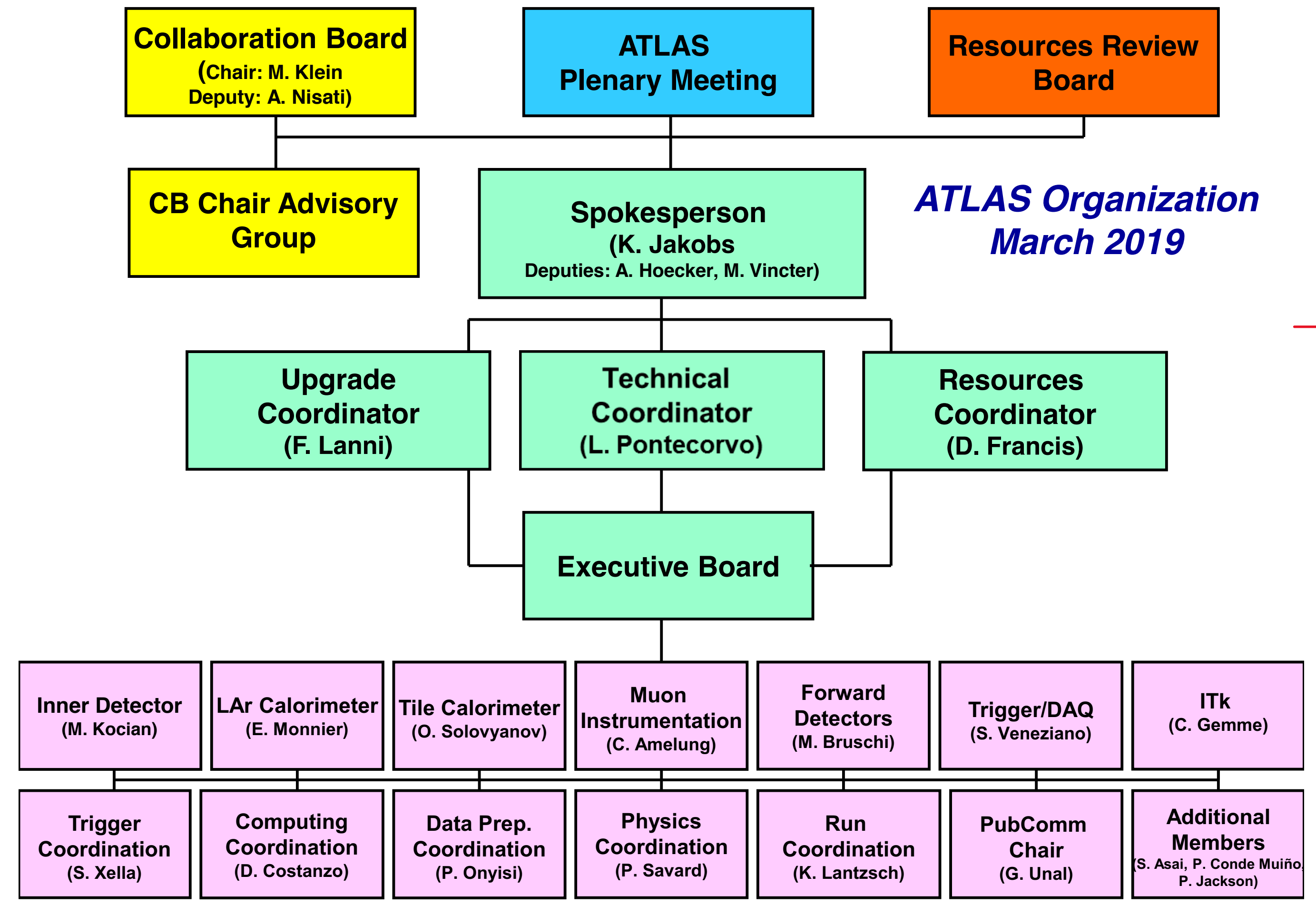
- ▶ 3 per annum
- ▶ 2 at CERN
- ▶ 1 may be outside CERN
- ▶ A good forum for visibility



ATLAS WEEK PLENARY TALKS DISTRIBUTION



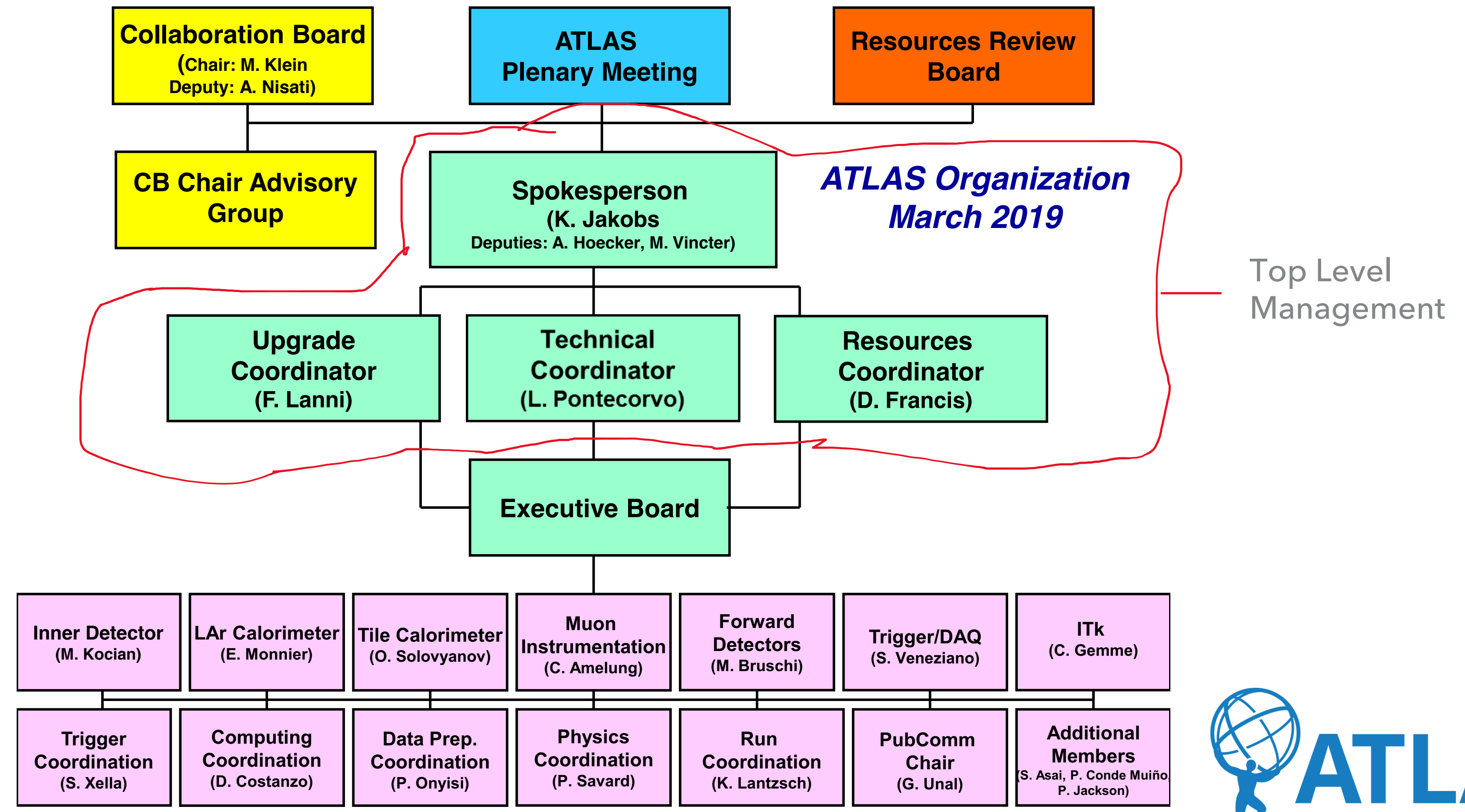
MANAGEMENT STRUCTURE



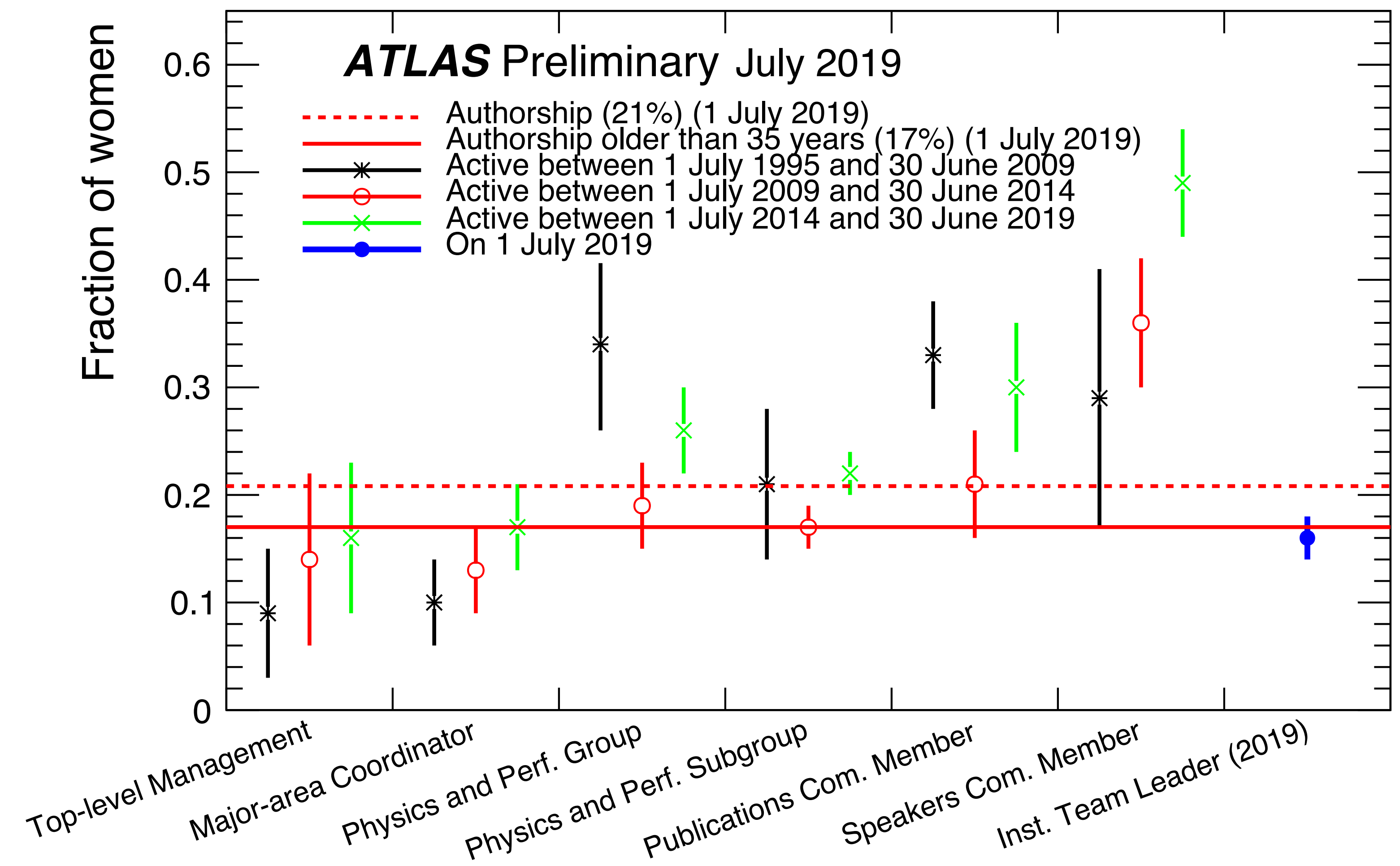
*ATLAS Organization
March 2019*



MANAGEMENT STRUCTURE



SENIOR APPOINTMENTS BY GENDER



DIVERSITY AND INCLUSION

- ▶ ATLAS is large, and diverse
 - ▶ Both by necessity, and by choice
- ▶ The collaboration has committed to being inclusive and diverse
 - ▶ We are a work in progress
 - ▶ Positions of leadership are broadly reflective of our gender demographics
- ▶ We are constantly working to improve our environment

