



EPS Conference on High Energy Physics
Venice, Italy 5-12 July 2017



The Junior Community in ALICE

Hans Beck for the ALICE collaboration
07/07/2017

Contents

1. Structure of ALICE & its junior community
2. Juniors' activities within their group
3. Impact of juniors beyond their community
4. A survey: How helpful is the project?
5. Opinions from juniors and seniors

In ALICE “junior” means:
Bachelor, Master, and PhD students +
Postdocs within first 5 years of PhD

Behind most analyses is a junior










Quark Matter, 2014














ALICE









- ❖ 1900+ members
- ❖ 700+ juniors
 - 46% of signing authors

Organization

- ❖ Collaboration Board (CB)
 - Legislative body
- ❖ Management Board (MB)
 - Executive body
- ❖ Junior Representative participates in MB
- ❖ Juniors vote in the CB
 - 93 institute + 3 junior votes
- ❖ **Strong junior representation!**

Collaboration Board  John Harris <i>Chairperson</i>  Silvia Masciocchi <i>Deputy Chairperson</i>	Management Board  Federico Antinori <i>Spokesperson</i>  Tapan Nayak <i>Deputy</i>  Boris Hippolyte <i>Deputy</i>	Financial Board  Adriana Telesca <i>Chairperson</i>  Peggy Pithioud <i>Assistant</i>
---	--	---

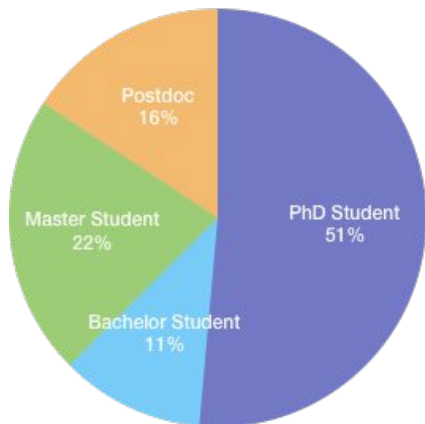
Technical Board  Werner Riegler <i>Chairperson</i>  Arturo Tauro <i>Deputy</i>	Computing Board  Predrag Buncic <i>Chairperson</i>	Physics Board  Marco Van Leeuwen <i>Chairperson</i>  Andrea Dainese <i>Deputy</i>  Andreas Morsch <i>Deputy</i>
Editorial Board  Enrico Scomparin <i>Chairperson</i>  Constantinos Loizides <i>Chairperson</i>	Conference Committee  Pietro Antonioli <i>Chairperson</i>  Ralf Averbeck <i>Chairperson</i>	Safety  Klaus Barth <i>GLIMOS</i>  Andre Augustinus <i>Deputy</i>  Arturo Tauro <i>Flammable Gas Safety Officer</i>

Run Coordination

Grazia Luparello
Run Coordinator

Kristjan Gulbrandsen
*Deputy Run Coordinator***Juniors Representative**

Erin Gauger

Deepa Thomas

Mike Sas**Secretariat**

Nathalie Gouriou

Julia Cachet

Guylaine Pachoud

How the juniors are organized

❖ Representatives

❖ Community



❖ Committee

- Organizes Junior's Day during ALICE Week

Junior Committee



JinJin Pan Jihye Song Jacopo Margutti

❖ Ambassadors

- National contact person
- Raise country specific issues

28 Junior Ambassadors

Brazil	Danilo Silva de Albuquerque	Japan	Hiroki Yokoyama
China	Jinjin Pan & Qiye Shou	Korea	Myunggeun Song
Croatia	Goran Simatovic	Mexico	Abraham Villatoro Tello
Czech Republic	Lada Ducheckova	Netherlands	Annelies Marianne Veen & Alberto Caliva
Denmark	Christian Bourjau	Poland	Łukasz Graczykowski
Egypt	Ehab Gamal Abbas	Romania	Mihai Niculescu
Finland	Jussi Viinikainen	South Africa	Sibalis Mhlanga
France	Audrey Francisco & Jana Crkovska	Sweden	Vytautas Vislavicius
Hungary	Monika Kofarago & Soňa Pochybova	Turkey	Serpil Yalcin
India	Rathijit Biswas, Rajendra Patra & Shyam Kumar	UK	Jaime Norman
Italy	Anastasia Barbano	USA	Raymond Ehlers

Juniors Activities: Junior's Day

- ❖ Scientific presentations by juniors
 - Typically first collaboration-wide presentation
 - Junior only audience
 - Broad range of topics covered
 - Opportunity to present service work
 - Welcoming and collegial atmosphere
- ❖ Invited, educative talk by a senior expert
 - Casual discussion, including basics, is encouraged
- ❖ Junior's dinner
 - Network and socialize



- ❖ Communication training
- ❖ Presentation skills
- ❖ ... much more!

Juniors Activities: Career Talks

- ❖ Presented by former ALICE juniors
 - Easy to identify with
- ❖ Show wide range of possible careers, specifically with training in ALICE
 - Positions in academia and industry
- ❖ How to:
 - translate HEP skills to other areas
 - apply for jobs
 - present yourself
- ❖ Create and maintain job network

Juniors involvement in CERN initiatives

- ❖ Students Careers Study
- ❖ Career Networking Event



Juniors Activities: Analysis Tutorial

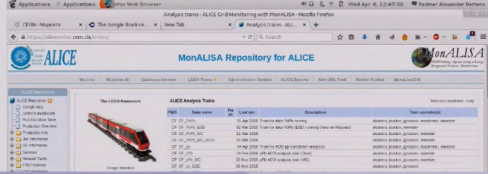
- ❖ Open to all, video added to website for later viewing
- ❖ Learn core analysis tools & procedures
 - e.g. using ALICE analysis framework, GitHub, etc
- ❖ The place for newcomers to learn how to do analysis
- ❖ Also covers advanced analysis techniques

LEGO trains in a nutshell

Launching your job on GRID is not very efficient (each analysis task requires one instance of AliROOT running)

- More efficient: add **many jobs** (gagons) of different users that require the same data to a single analysis manager (engine)
- Run these in an **automated way** (train)

This is done in the **LEGO trains** (<https://alimonitor.cern.ch/trains/>)



MonALISA Repository for ALICE

Job	User	Description
CE 17_1716	17 Apr 2016	Train to store 1716 events
CE 17_1717	17 Apr 2016	Train to store 1717 events
CE 17_1718	17 Apr 2016	Train to store 1718 events
CE 17_1719	17 Apr 2016	Train to store 1719 events
CE 17_1720	17 Apr 2016	Train to store 1720 events
CE 17_1721	17 Apr 2016	Train to store 1721 events
CE 17_1722	17 Apr 2016	Train to store 1722 events
CE 17_1723	17 Apr 2016	Train to store 1723 events
CE 17_1724	17 Apr 2016	Train to store 1724 events
CE 17_1725	17 Apr 2016	Train to store 1725 events
CE 17_1726	17 Apr 2016	Train to store 1726 events
CE 17_1727	17 Apr 2016	Train to store 1727 events
CE 17_1728	17 Apr 2016	Train to store 1728 events
CE 17_1729	17 Apr 2016	Train to store 1729 events
CE 17_1730	17 Apr 2016	Train to store 1730 events

Reiner Alexander Bertens - November 11, 2016 - slide 51 of 93 - Writing a Task

Juniors Activities: Analysis Tutorial

- ❖ Open to all, video added to website for later viewing
- ❖ Learn core analysis tools & procedures
 - e.g. using ALICE analysis framework, GitHub, etc
- ❖ The place for newcomers to learn how to do analysis
- ❖ Also covers advanced analysis techniques
- ❖ Typically 80 attendees



LEGO trains in a n

Launching your job on c
requires one instance of

- More efficient: addi
the same data to a
- Run these in an au

This is done in the LEG

Applications | Applications | @Globe Bookmarks |
CEOS: Helpdesk | The Jangle Bookmarks |
ALICE MonALISA Repository for ALICE

ALICE Analysis Tools	Job	Operator	Description	Task completed
01_01_01	01_01_01_01	01_01_01	01_01_01_01_01_01_01	01_01_01_01_01_01_01_01
01_01_02	01_01_02_01	01_01_02	01_01_02_01_01_01_01	01_01_02_01_01_01_01_01
01_01_03	01_01_03_01	01_01_03	01_01_03_01_01_01_01	01_01_03_01_01_01_01_01
01_01_04	01_01_04_01	01_01_04	01_01_04_01_01_01_01	01_01_04_01_01_01_01_01
01_01_05	01_01_05_01	01_01_05	01_01_05_01_01_01_01	01_01_05_01_01_01_01_01
01_01_06	01_01_06_01	01_01_06	01_01_06_01_01_01_01	01_01_06_01_01_01_01_01
01_01_07	01_01_07_01	01_01_07	01_01_07_01_01_01_01	01_01_07_01_01_01_01_01
01_01_08	01_01_08_01	01_01_08	01_01_08_01_01_01_01	01_01_08_01_01_01_01_01
01_01_09	01_01_09_01	01_01_09	01_01_09_01_01_01_01	01_01_09_01_01_01_01_01
01_01_10	01_01_10_01	01_01_10	01_01_10_01_01_01_01	01_01_10_01_01_01_01_01

Reimer Alexander Bertens - November 11, 2016 - slide 51 of 93 - Writing a Task

Juniors Activities: Analysis Tutorial

- ❖ Open to all, video added to website for later viewing
- ❖ Learn core analysis tools & procedures
 - e.g. using ALICE analysis framework, GitHub, etc
- ❖ The place for newcomers to learn how to do analysis
- ❖ Also covers advanced analysis techniques
- ❖ Typically 80 attendees

Juniors Activities: Journal Club

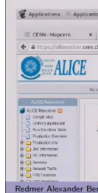
- ❖ Monthly meeting open for everyone (also outside ALICE)
- ❖ Invited speaker chooses a paper
 - Presents a summary
 - Low-pressure discussion follows
- ❖ Already discussed a range of topics



LEGO trains in a n

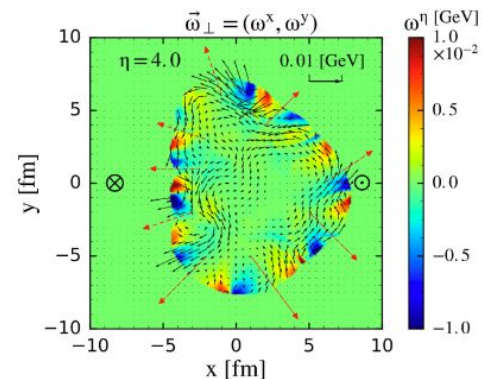
Launching your job on
requires one instance of

- More efficient: add
the same data to a
- Run thes
This is done in



April Journal Club: measurement of global polarisation of (anti-)Lambda

Published: 12 April 2017



[Credit: Long-Gang Pang]

The third appointment of the ALICE Journal Club is about to come. On Thursday 20 of April, **Isaac Upsal**, Ph.D. student at Ohio State University and member of the STAR Collaboration, will talk about **global lambda hyperion polarization in Au-Au collisions**.

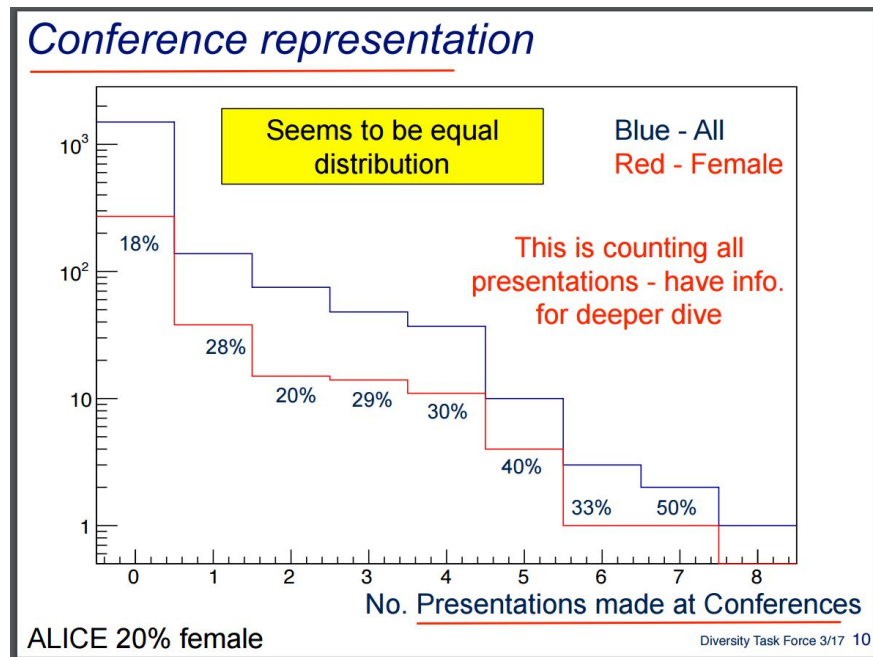
The latest results on this topic, explained in a recent **pre-print paper**, have been submitted to *Nature* for publication.

How We Make a Difference in the Collaboration

- ❖ Bring forward effects of new rules/procedures on juniors
 - E.g. Publication policy and national rules for PhD graduation
- ❖ Junior contribute to every task force of the Collaboration Board, e.g.,
 - Re-write of the constitution
 - Improvements on publication speed
- ❖ Communication
 - Seniors get to know junior viewpoint
 - Juniors learn and get involved in how the collaboration is run
- ❖ Different viewpoint on issues
 - Strengthen decision making process by tapping diverse pool of ideas
- ❖ Bring up new ideas, e.g.,
 - Effort for example analyses
 - Diversity Task Force

Diversity Task Force

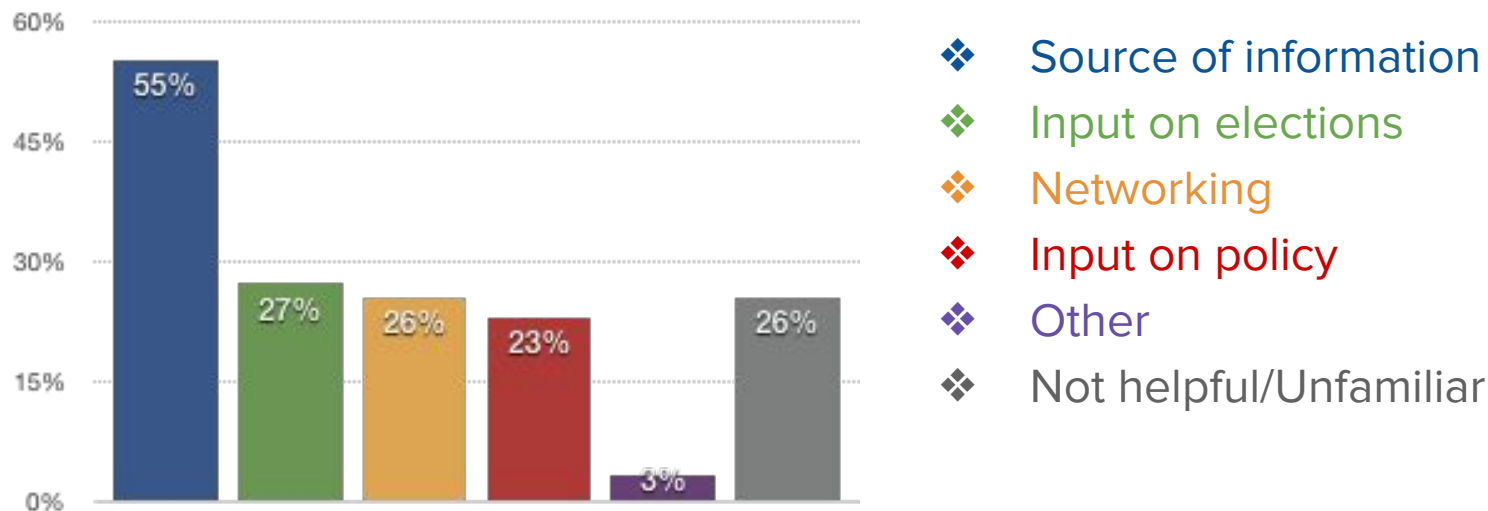
- ❖ Fact-finding team to investigate possible diversity issues within the ALICE collaboration
- ❖ Right: Statistics on gender balance in collaboration talks
- ❖ Collaboration-wide survey conducted
 - Good participation, 500+ respondents
- ❖ Also found aspects to improve
 - Being addressed by the collaboration now
- ❖ In general good idea to conduct a survey on possible diversity issues!



Survey Among Juniors - 120+ Respondents

- ❖ Open for ideas how to get more feedback

How is the juniors group helpful?

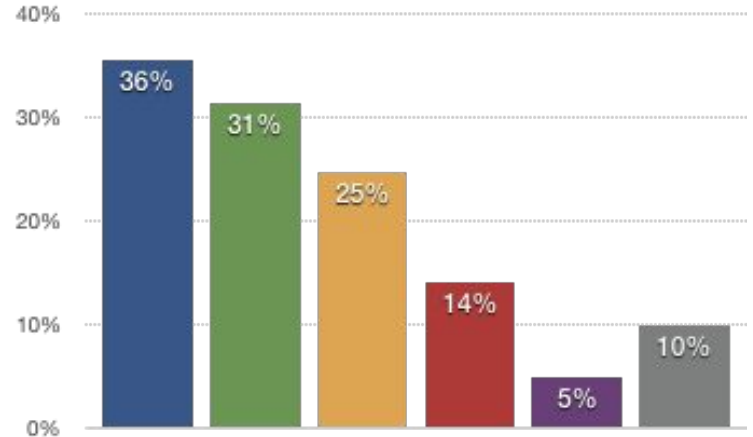


Juniors day

- ❖ 69% attended
- ❖ 20% gave a talk

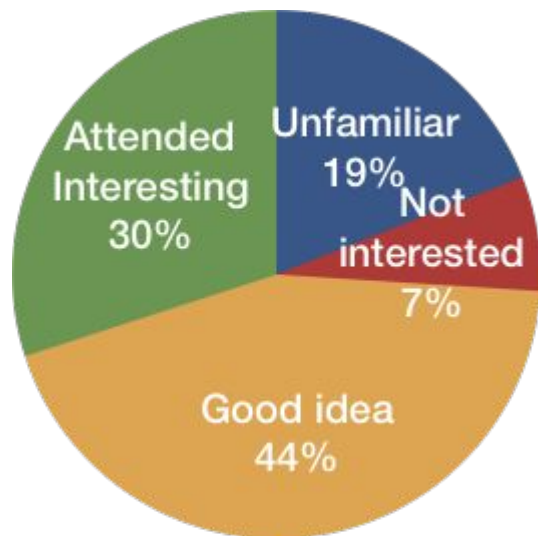
Junior Representatives

- ❖ Express opinion to management
- ❖ Role unclear
- ❖ Contact for specific problem
- ❖ Unknown
- ❖ No representation
- ❖ Other



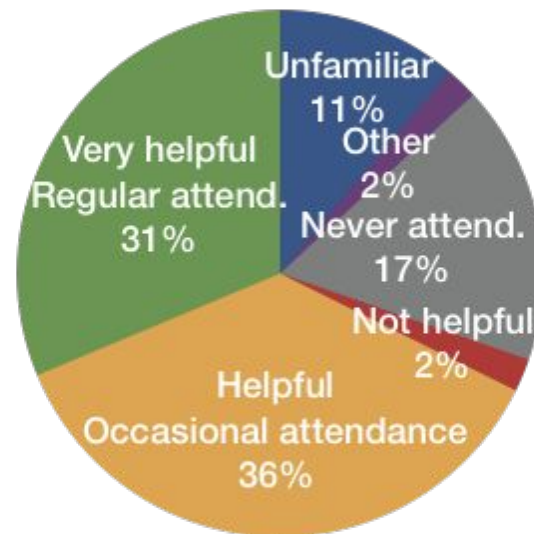
- ❖ Juniors on average < 3 years in ALICE
- ❖ Clear need for improved communication

Journal Club



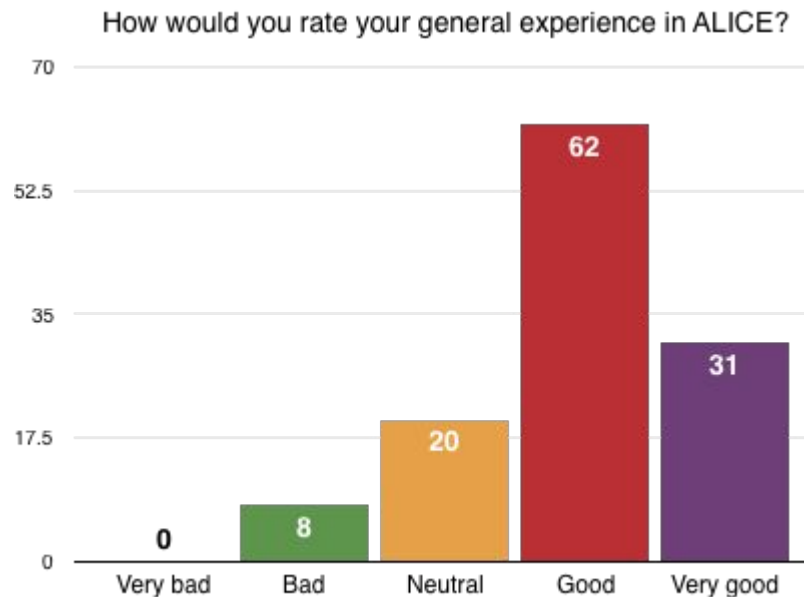
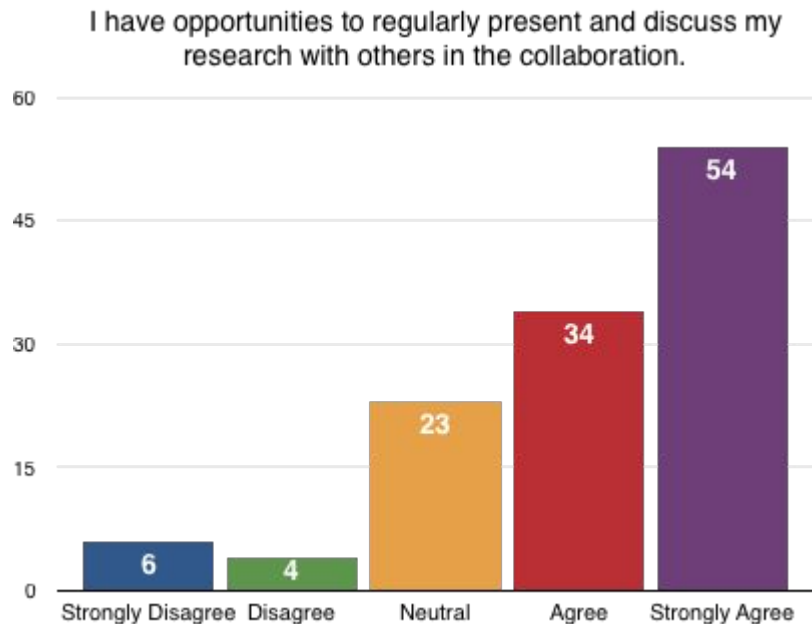
- ❖ Vast majority interested

Analysis Tutorial



- ❖ Good attendance
- ❖ Well received

Monitoring ALICE Work Environment



- ❖ Working constructively with Spokesperson team and others on improvements
- ❖ Good or very good climate

Opinions from Juniors

Kunal Garg, PhD student at the University of Catania

"Juniors helped me feel a **part of the community** at CERN, a sense of belonging. Also, juniors inspired me to be **more expressive.**"

James Mulligan, PhD student at Yale

"Over time, the **tutorials have continued to improve my coding abilities** as I contribute more code to the collaboration."

Sibalis Mhlanga, PhD student at the University of Cape Town

"In South Africa '**UMUNTU NGUMUNTU NGABANTU**' is a Zulu/Xhosa saying which means '**I am because you are.**' It offers a powerful African concept that supports a deeper understanding of inclusion. It is a mind-set, a point of view, and a way of interacting with other people. With this concept, we do not not minimise or ignore differences, but inherently respect and include the other person out of the awareness that one's existence, position, work and success are only possible because of the value and role of the people they work with."

Opinions from our Senior Collaborators

Prof. Thomas Peitzmann (Utrecht), Physics Working Group Convener

"I find the ALICE journal club very useful, healthy for the collaboration and of significant educational value for everyone."

Prof. John Harris (Yale), Collaboration Board Chair

"[The Juniors group] contributed significantly to the climate and diversity in ALICE."

Opinions from our Senior Collaborators

Prof. Anju Bashin (Jammu), Management Board member

"[The juniors community is] **bringing juniors [together] across borders and different backgrounds.**"

Federico Antinori, ALICE Spokesperson

"Students and young post-docs are the lymph of the collaboration. Without their enthusiasm, their dedication and their hard work, everything would come to a halt.

The juniors' organisation is a **precious asset** in ALICE, providing a very useful forum for the informal exchange of scientific, technical and career information among our younger colleagues. The presence of Junior Representatives in the Management and Collaboration Boards guarantees a **key two-way communication channel**, conveying the juniors' viewpoint to the decision making bodies, and providing a useful insight to the juniors on the many crucial issues that have to be addressed in order for the collaboration to run properly. **Everybody benefits** from this: the juniors, the management and the collaboration at large."

Summary

- ❖ Juniors group vital part of the collaboration
 - About half of signing authors are juniors
 - Actively engaged in decision making processes
- ❖ Provide head start for new collaborators
 - Highly appreciated analysis tutorial
 - Junior's day with educative talks and room for low-key questions
- ❖ Place for (self-)education
 - Physics, coding, career, respect for diversity, and more!

Summary

- ❖ Juniors group vital part of the collaboration
 - About half of signing authors are juniors
 - Actively engaged in decision making processes
- ❖ Provide head start for new collaborators
 - Highly appreciated analysis tutorial
 - Junior's day with educative talks and room for low-key questions
- ❖ Place for (self-)education
 - Physics, coding, career, respect for diversity, and more!

Thank you for your time and attention! Any questions?