

Report on PyHEP 2021

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University of Liverpool

Organising Committee

Eduardo Rodrigues - University of Liverpool (Chair)
Ben Krikler - University of Bristol (Co-chair)
Jim Pivarski - Princeton University (Co-chair)
Matthew Feickert - University of Illinois at Urbana-Champaign
Oksana Shadura - University of Nebraska-Lincoln
Philip Grace - The University of Adelaide

PyHEP workshops – a no longer new series of workshops

The **PyHEP workshops** are a series of workshops initiated and supported by the **HEP Software Foundation** (HSF) with the aim to provide an environment to discuss and promote the usage of Python in the HEP community at large. Further information is given on the **PyHEP WG website**.

<i>Workshop</i>	<i>Location</i>	<i>Date</i>	<i>Agenda link</i>
PyHEP 2021	Virtual workshop	July 5-9, 2021	Indico
PyHEP 2020	Virtual workshop	July 13-17, 2020	Indico
PyHEP 2019	Abingdon, U.K.	October 16-18, 2019	Indico
PyHEP 2018	Sofia, Bulgaria	July 7-8, 2018	Indico

PyHEP 2018

Sofia, Bulgaria



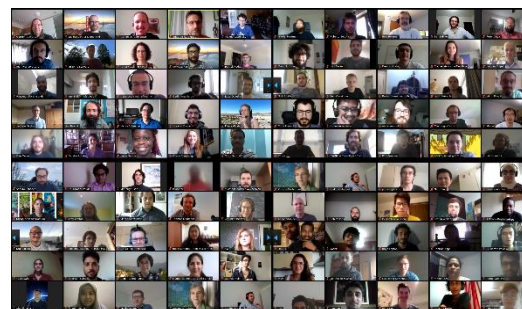
PyHEP 2019

Abingdon, U.K.



PyHEP 2020

Virtual, online

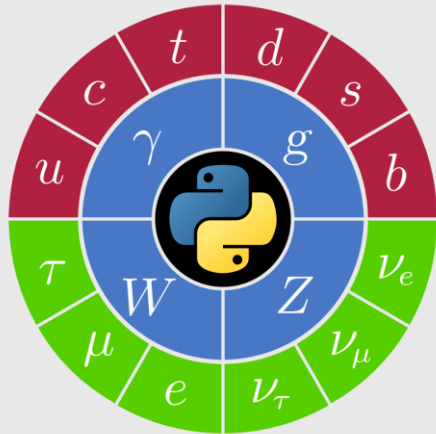


PyHEP 2021

Virtual, online



PyHEP 2021 Workshop




(From a poll with Slido)



PyHEP 2021 organisational aspects – largely unchanged wrt PyHEP 2020

☐ Sessions & presentations

- 4-5 hour sessions each day (no “Atlantic”- and “Pacific”-friendly time zones as in 2020)
- We strongly encouraged notebook presentations, available in public Github repositories with a [Binder](#) launch button
- All presentational material posted on workshop agenda and later given a DOI with [Zenodo](#), in a dedicated “[pyhep2021 community](#)” – formal citation, replaces proceedings
- All talks got recorded, captioned  **YouTube** and later uploaded to the [HSF YouTube channel](#) – dedicated playlist “[PyHEP 2021 Workshop](#)”



☐ Zoom and YouTube streaming

- Zoom for up to 1000 participants
- [YouTube streaming new this year](#)



☐ Questions & answers with slido

- Used *slido* to crowd-source questions, to prioritise the most popular ones upvoted by participants
- Session chair shares link to questions at end of presentation
- Most popular ones get answered/discussed
- At end of Q&A all questions are copied to Slack in the appropriate topical channel
⇒ participants can continue to discuss and exchange
- A few polls also run via slido



☐ Slack channels

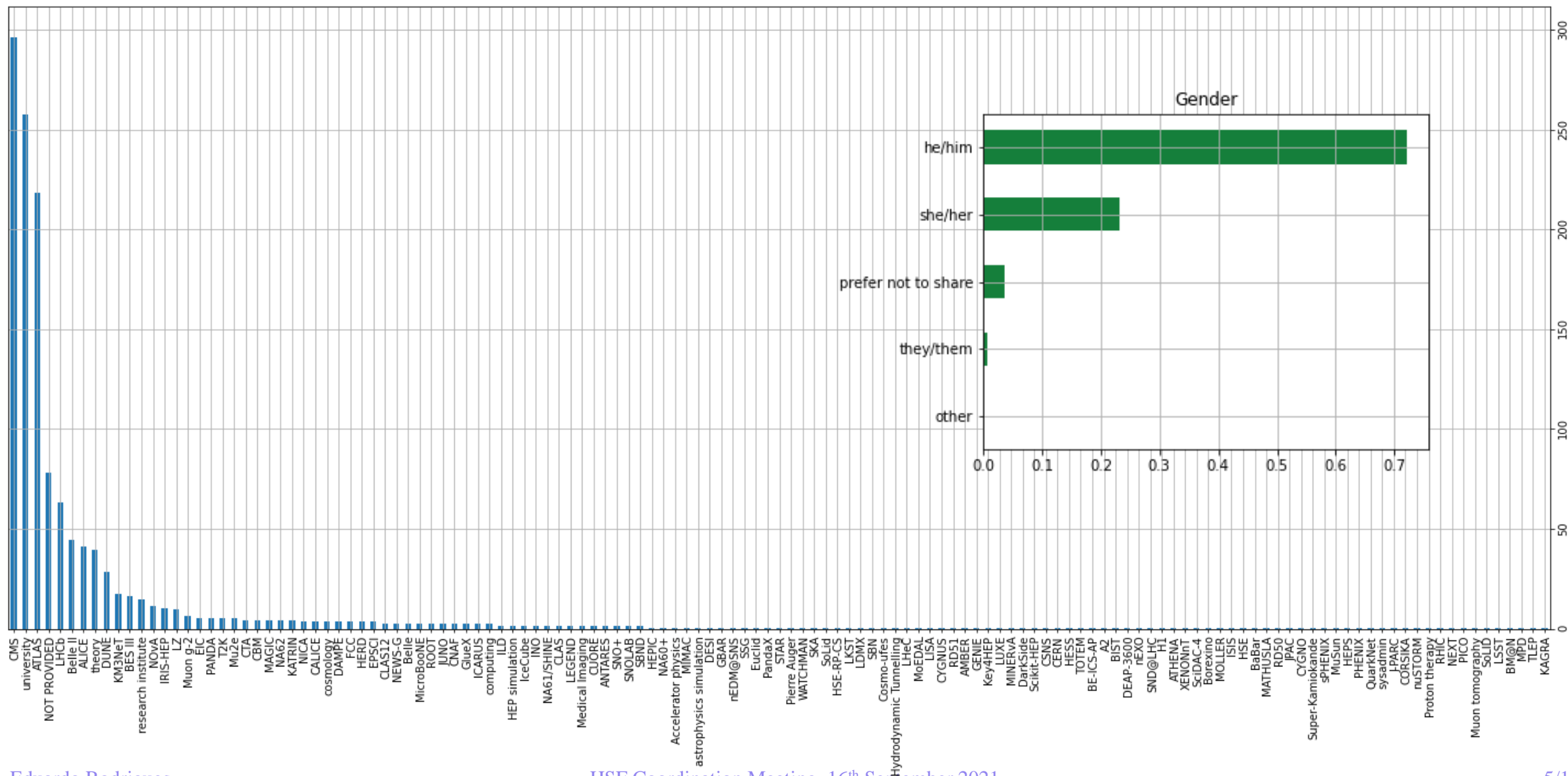
- Various channels:
- By topic, mapping to sessions, discussions encouraged here
- Announcements, for actual announcements
- Random, used to encourage community spirit and add social context



☐ Communication also on

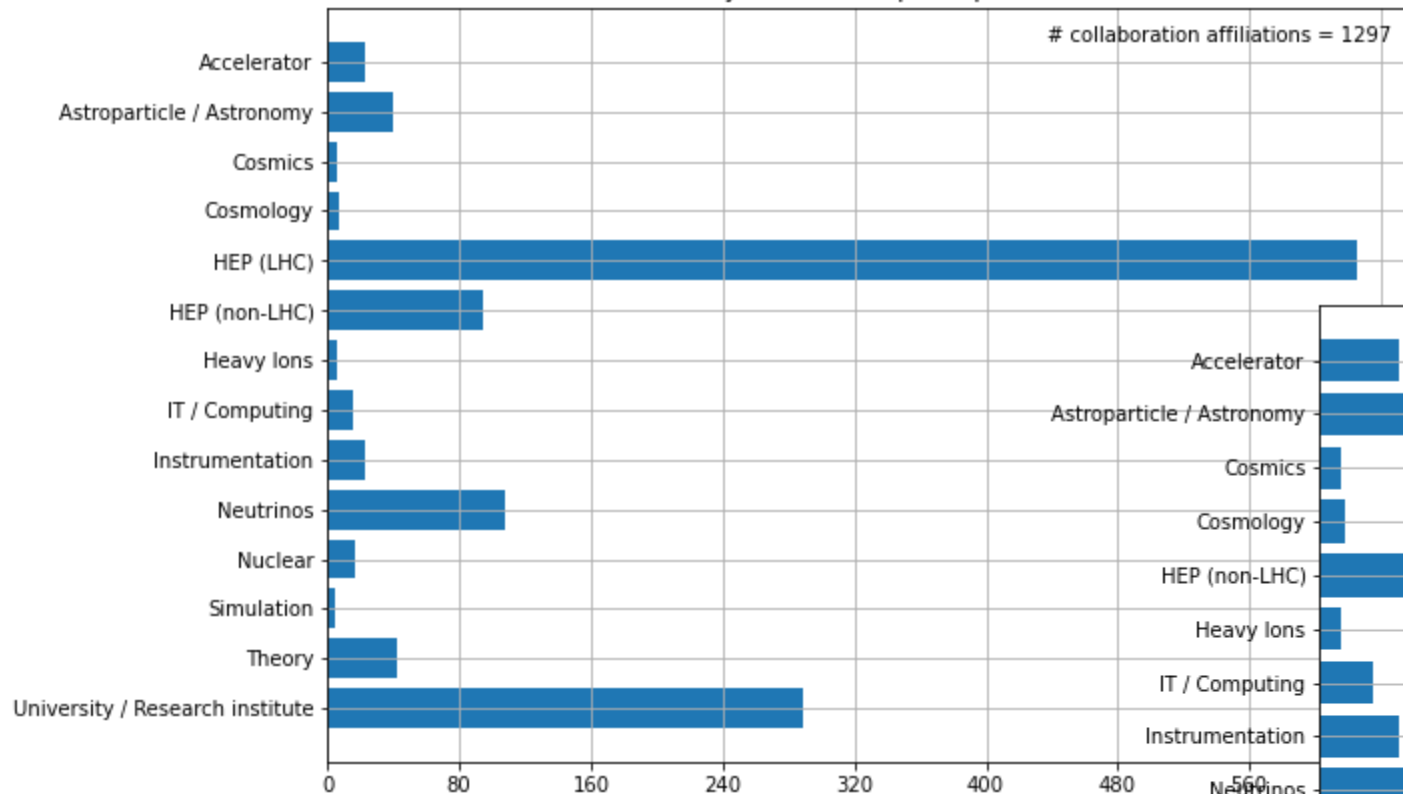


1323 registrants – collaborations represented

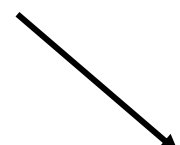


Physics areas represented

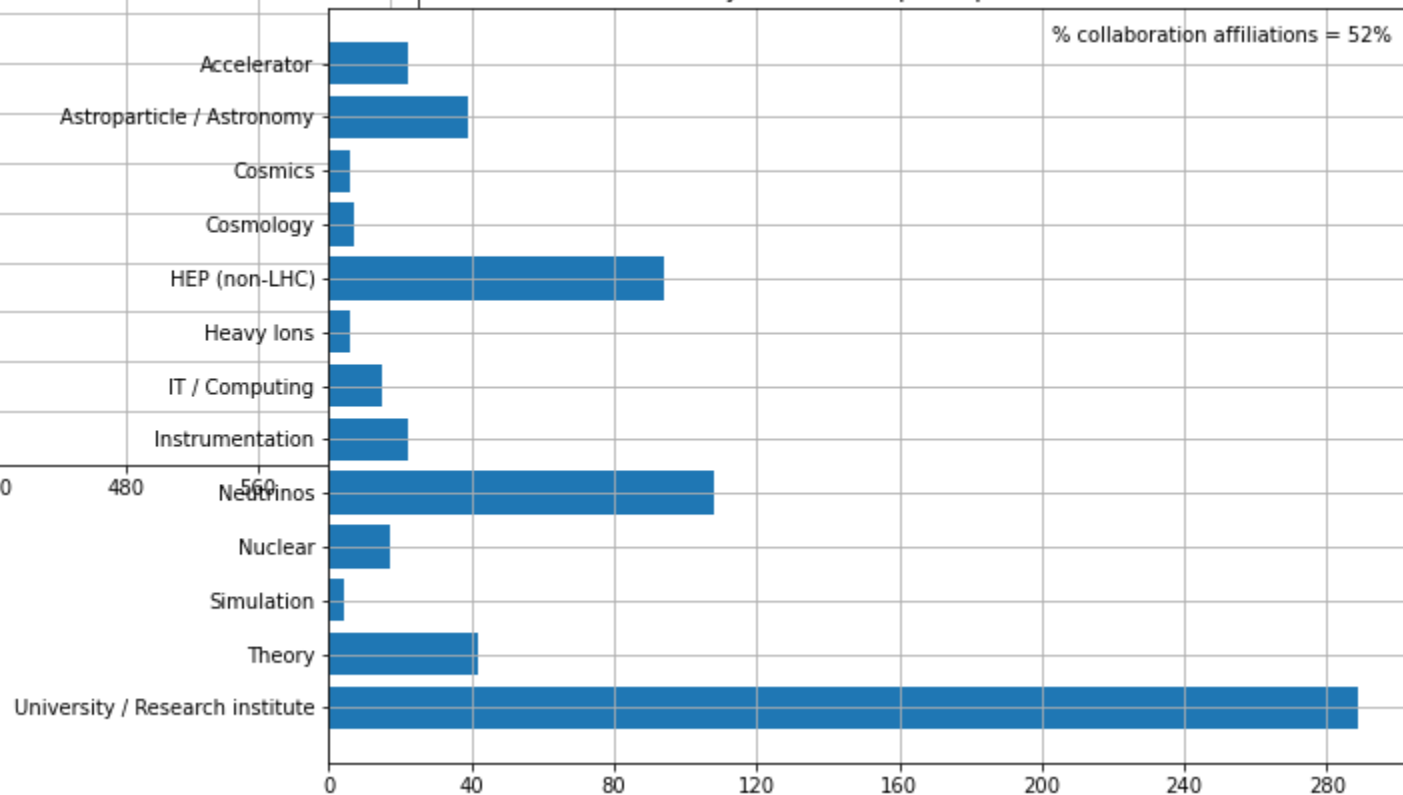
Physics areas of participants



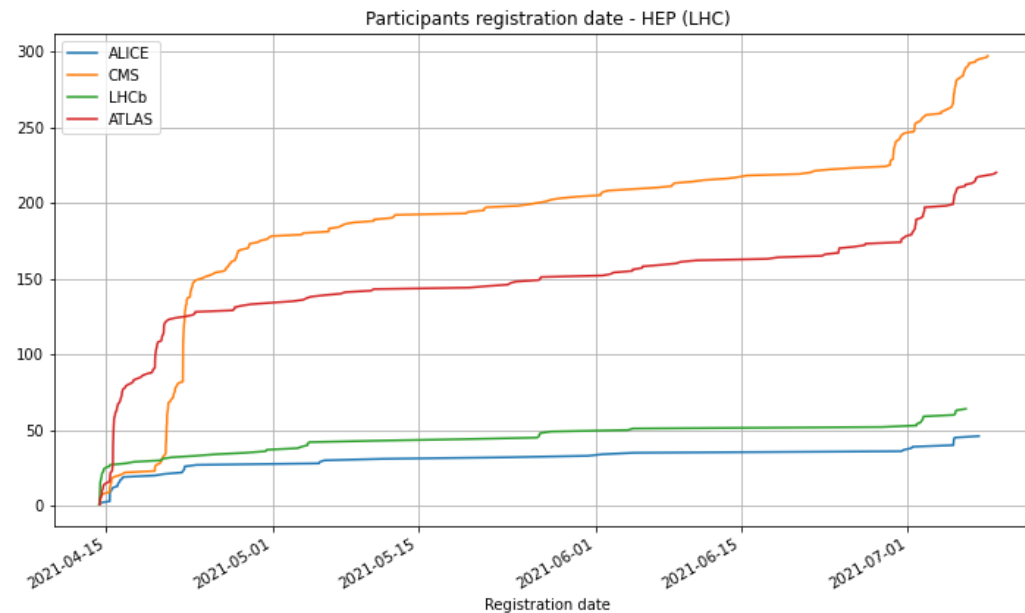
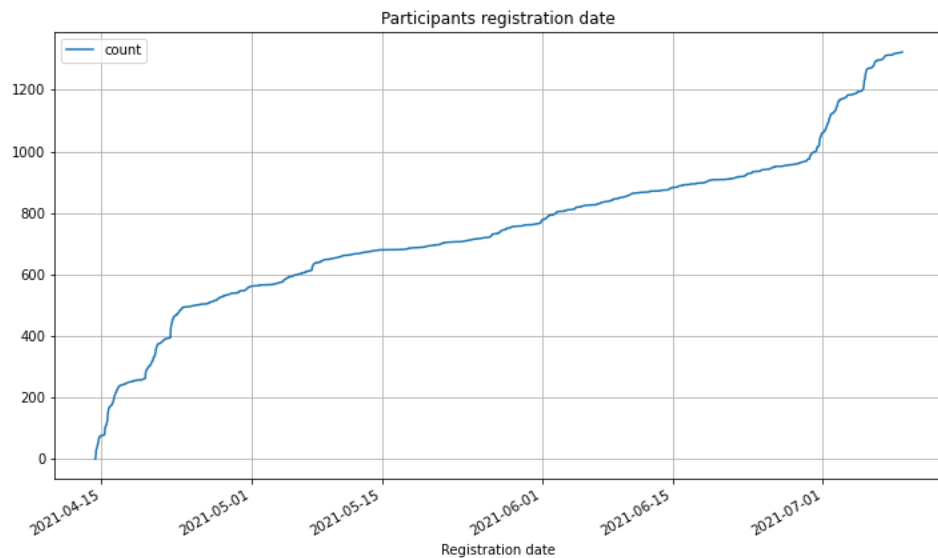
52% of registrants not "HEP (LHC)"



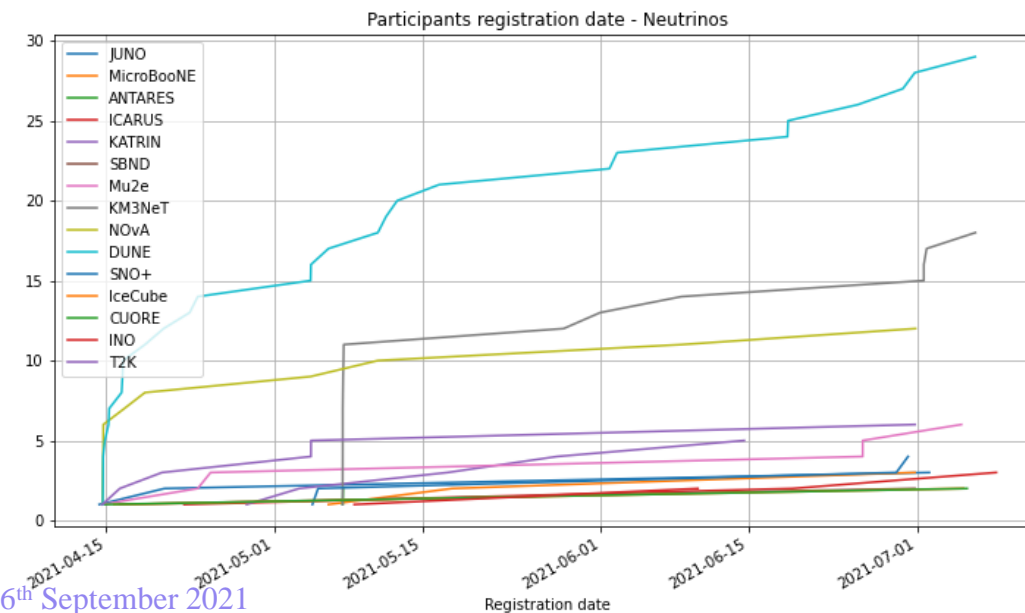
Physics areas of participants



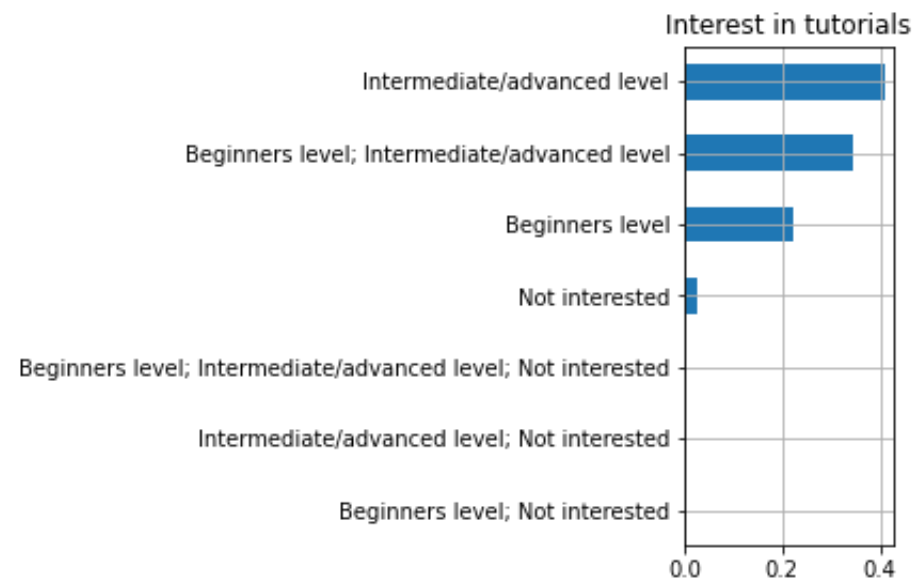
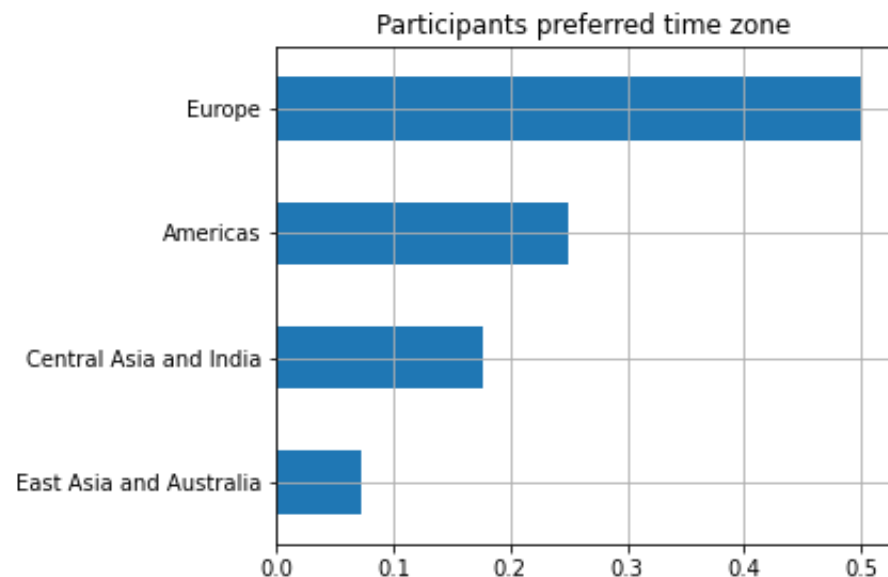
Registration vs time



□ **Direct contact with experiments / groups makes a big difference !**



Registrants preferences

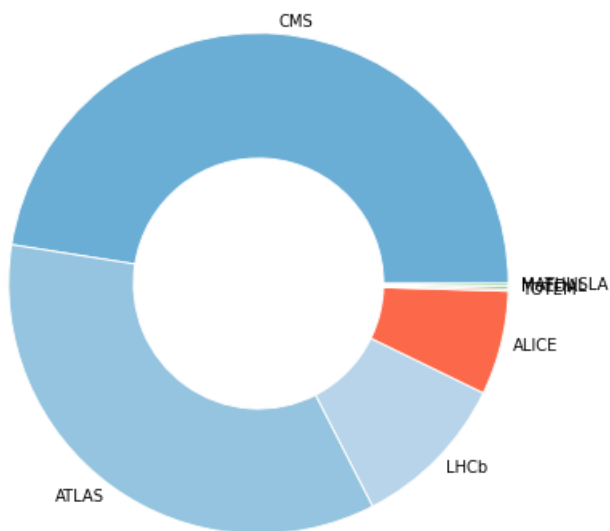


- Geographical distribution explains nominal 14 – 18h CEST sessions
- Some of the tutorials were “Level-up your Python” and not too advanced

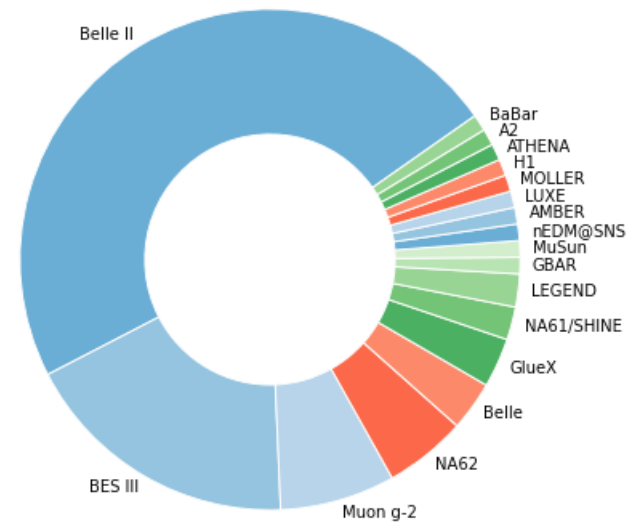


Physics areas represented

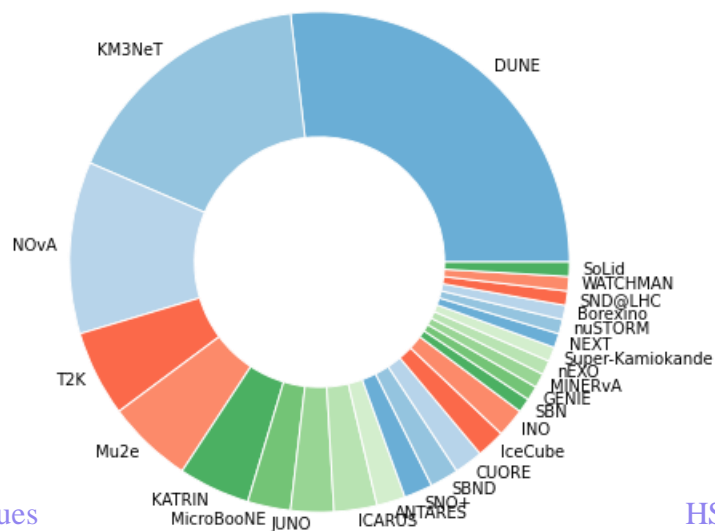
HEP (LHC)



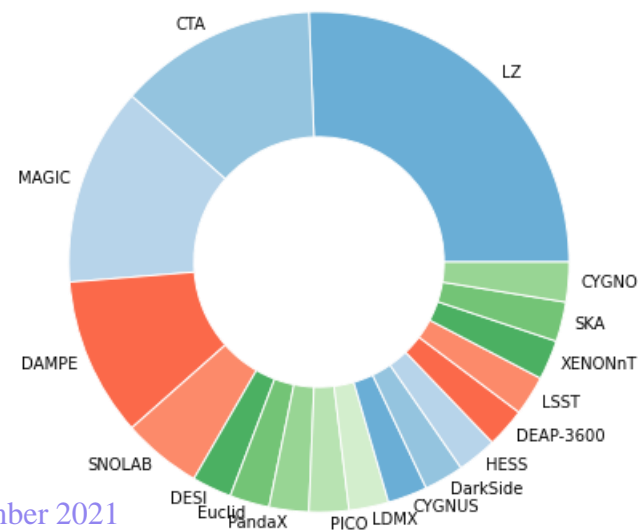
HEP (non-LHC)



Neutrinos

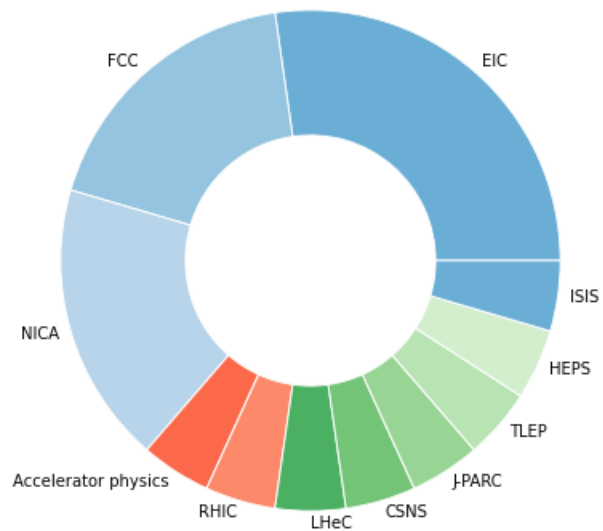


Astroparticle / Astronomy

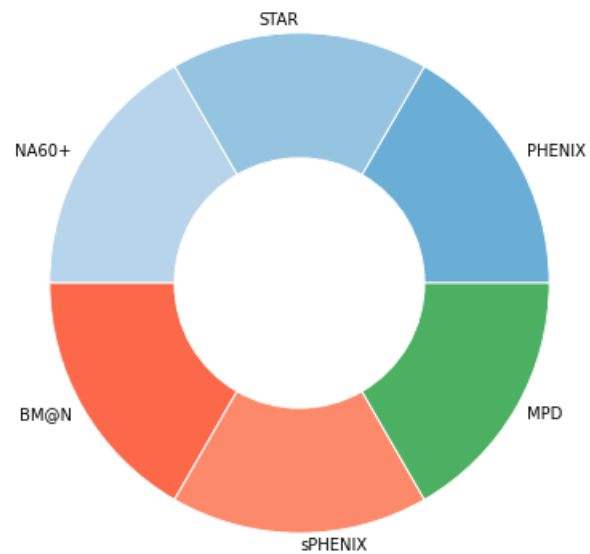


Physics areas represented

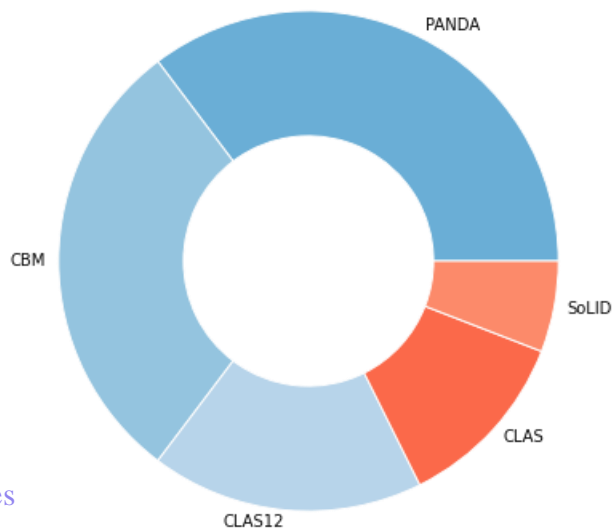
Accelerator



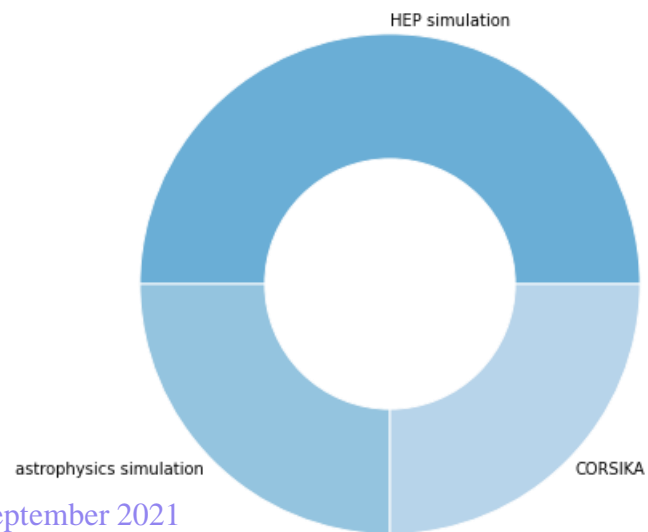
Heavy Ions



Nuclear

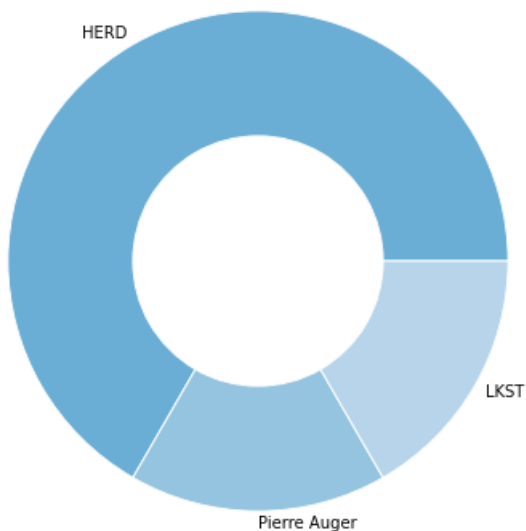


Simulation

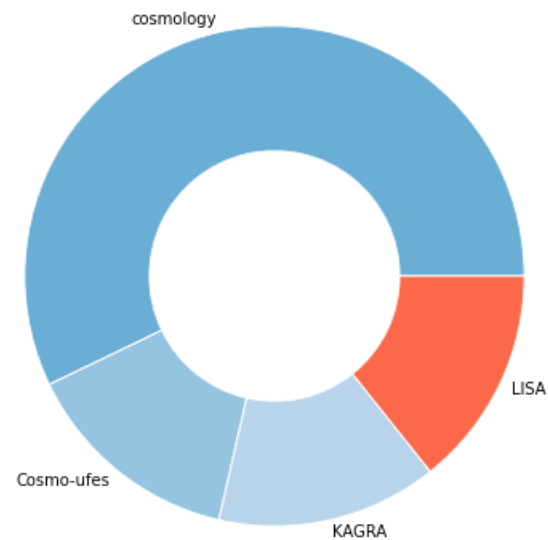


Physics areas represented

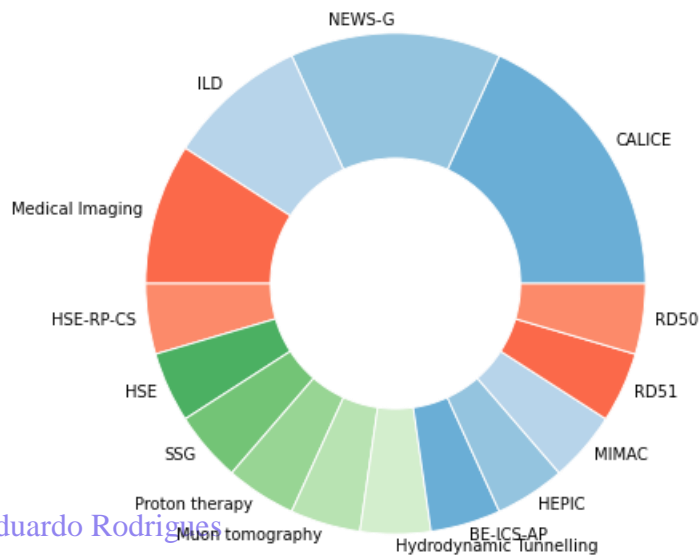
Cosmics



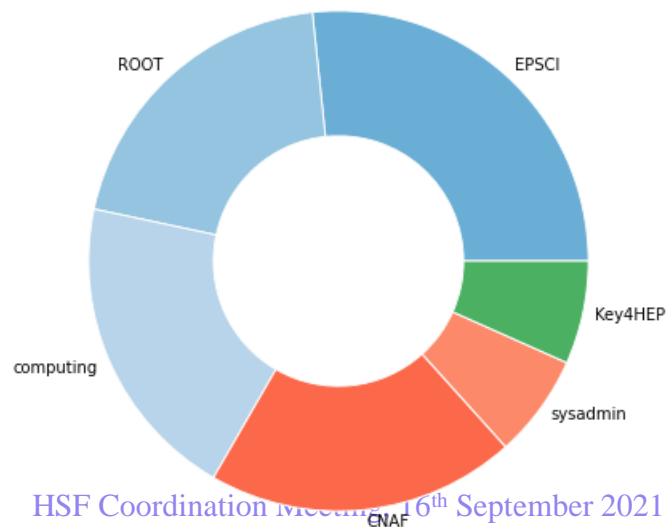
Cosmology



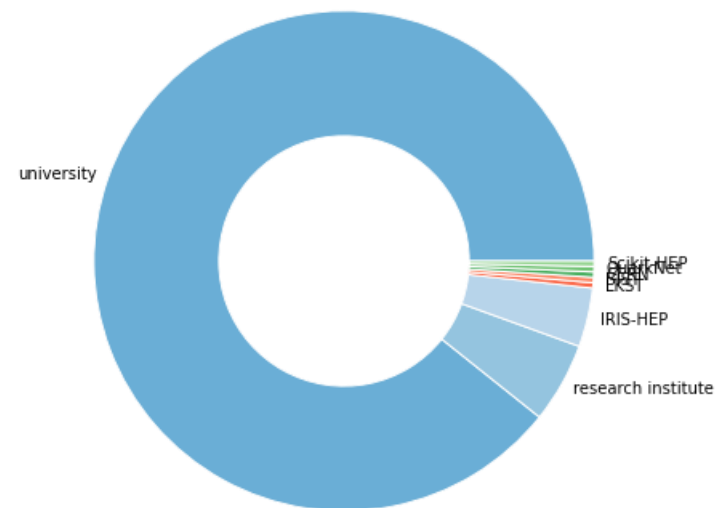
Instrumentation



IT / Computing

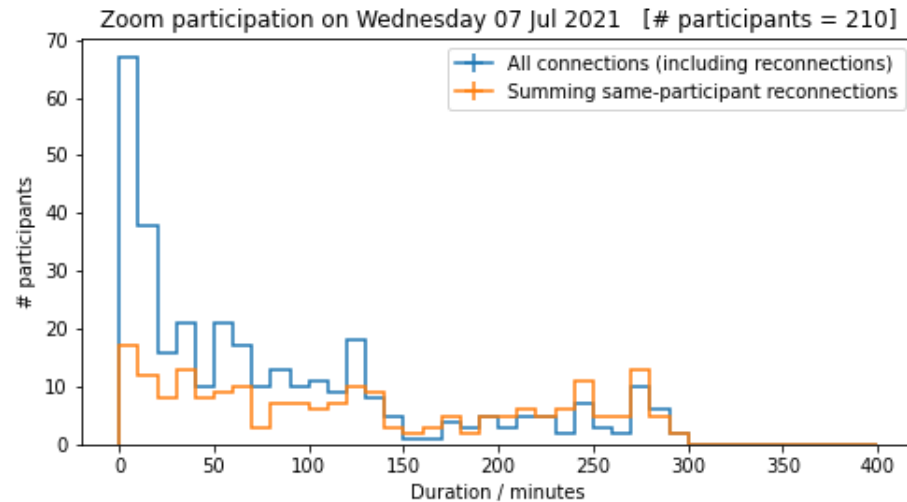
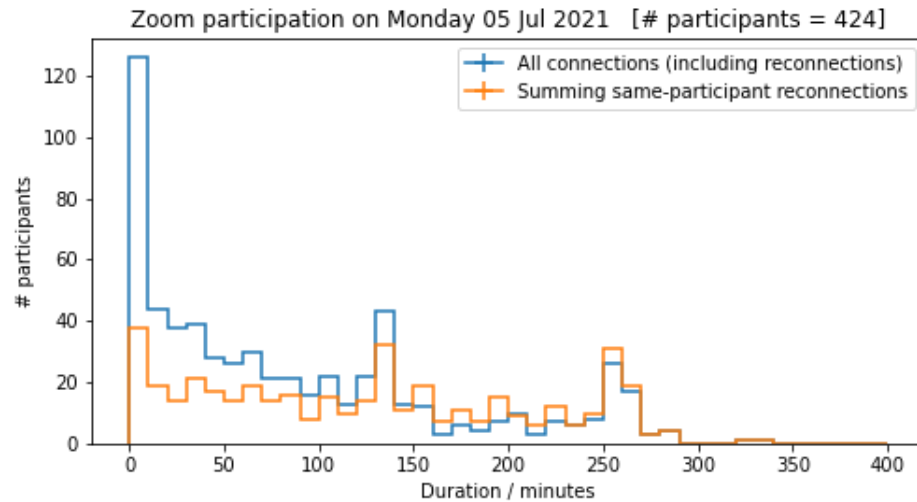


University / Research institute

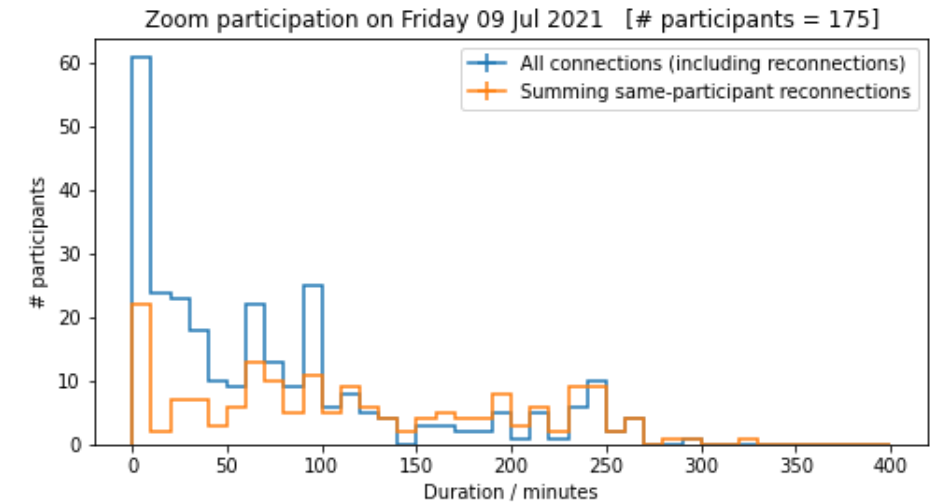


Participants attendance on Zoom

["Summing same-participants reconnections":
If I connect 10min / disconnect/ connect 20min / ... then histo entry is 10+20+...]



- Attendance “profile” very different from in-person
 - Most people only connect for 15-30 min, i.e. 1 talk
 - Still, some follow half or the full session
- Seems like people have adapted to working remotely and connecting only for what is of particular interest to them
 - In 2020 attendance was “smoother” over time



PyHEP 2021 organisational aspects – what went well, changed wrt 2020 ?

☐ Sessions

- 4-5 hour sessions each day nominally 14 – 16 h CEST (no “Atlantic”- and “Pacific”-friendly time zones as in 2020)

- $\frac{3}{4}$ of registrants from Europe and Americas
- Single session worked very well overall (reasonable compromise given non-negligible effort to organize 2 sessions in different time zones)

☐ Presentation types

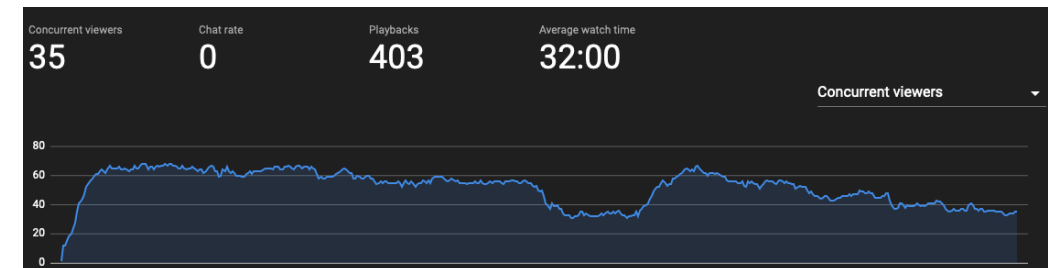
- Lightning talks: 10 minutes
- “Notebook talks”: 20 + 10 min
- Tutorials: 60 minutes

- All as ever except for introduction of lightning(-ish) talks
- Were very much welcomed
- Binder useful and popular as in 2020. Totally a +

☐ Zoom and YouTube streaming

- Most people familiar with Zoom these days
- YouTube makes it as easy as it gets to follow, though
- And allows anyone to catch up “minutes” after the sessions

Example – listeners on YouTube on Tuesday



☐ Communication with Slack and Slido

- Clearly less used than last year. Maybe Zoom/meeting/worldwide situation fatigue? Probably a bit of it all.

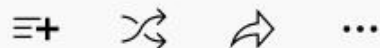
PyHEP 2021 organisational aspects – YouTube

- YouTube videos clearly popular and worth doing (true for all HSF material, not specifically to PyHEP)



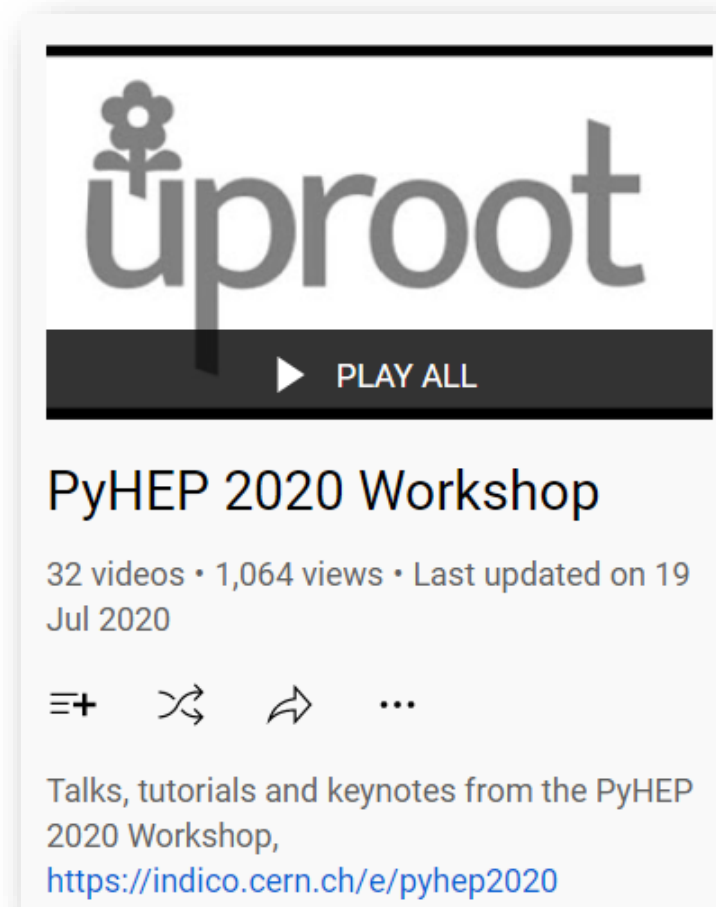
PyHEP 2021 Workshop

48 videos • 492 views • Updated today



Live streams and recordings from the PyHEP 2021 virtual workshop. See the indico page for details:

<https://indico.cern.ch/e/pyhep2021/>



PyHEP 2020 Workshop

32 videos • 1,064 views • Last updated on 19 Jul 2020



Talks, tutorials and keynotes from the PyHEP 2020 Workshop,

<https://indico.cern.ch/e/pyhep2020>

Post-workshop survey

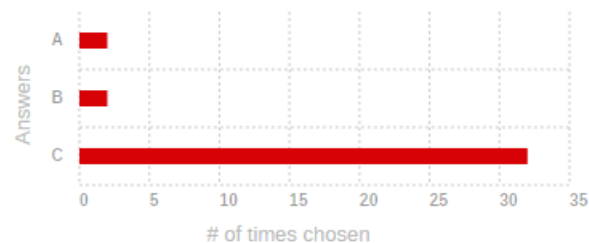
Which of the previous PyHEP workshops did you join, if any?

Answered: 90

A. 2018 - Sofia, Bulgaria: 2 (5.56%)

B. 2019 - Abingdon, UK: 2 (5.56%)

C. 2020 - Online: 32 (88.89%)



Would you attend a similar PyHEP workshop next year?

Answered: 90

A. Yes, in any case: 32 (35.56%)

B. Yes, but only in person: 2 (2.22%)

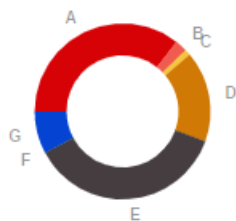
C. Yes, but only in-person and near me (travel constraints): 1 (1.11%)

D. Yes, regardless of whether they are in-person or virtual: 15 (16.67%)

E. Yes, but only if virtual: 33 (36.67%)

F. No, in any case: 0 (0.00%)

G. No selection: 7 (7.78%)



What best describes the stage of your professional career?

Answered: 90

A. Student: 49 (54.44%)

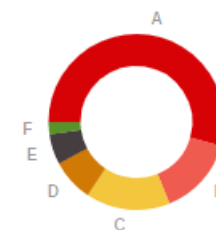
B. Postdoc/fellow/temporary research position: 13 (14.44%)

C. Professor at a college or university: 14 (15.56%)

D. Research software engineer: 7 (7.78%)

E. Other: 5 (5.56%)

F. No selection: 2 (2.22%)



Post-workshop survey

How would you rate the workshop overall, relative to your expectations?

Answered: 90

A. Much worse: 0 (0.00%)

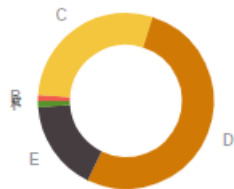
B. Worse: 1 (1.11%)

C. About the same: 26 (28.89%)

D. Better: 47 (52.22%)

E. Much better: 15 (16.67%)

F. No selection: 1 (1.11%)



Would you recommend the workshop to others?

Answered: 90

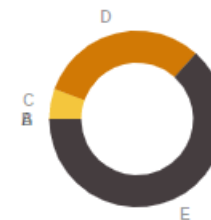
A. Definitely not: 0 (0.00%)

B. Probably not: 0 (0.00%)

C. Neutral: 5 (5.56%)

D. Probably: 28 (31.11%)

E. Definitely: 57 (63.33%)



How would you rate the level of the talks, relative to your expectations?

Answered: 90

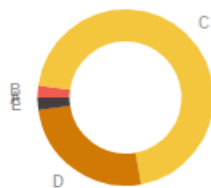
A. Too basic: 0 (0.00%)

B. A little basic: 2 (2.22%)

C. About right: 63 (70.00%)

D. A little advanced: 23 (25.56%)

E. Too advanced: 2 (2.22%)



How would you rate the variety of topics, relative to your expectations?

Answered: 90

A. Too specialized: 4 (4.44%)

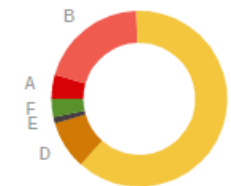
B. A little specialized: 18 (20.00%)

C. About right: 56 (62.22%)

D. A little broad: 8 (8.89%)

E. Too broad: 1 (1.11%)

F. No selection: 3 (3.33%)



It was (again) fun! Feel free to ask me for more details ...

