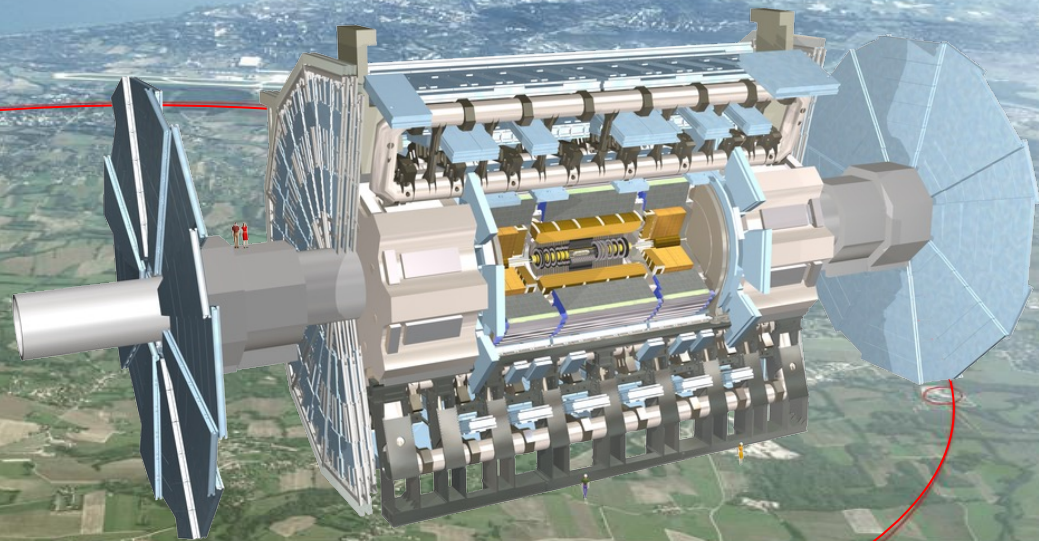


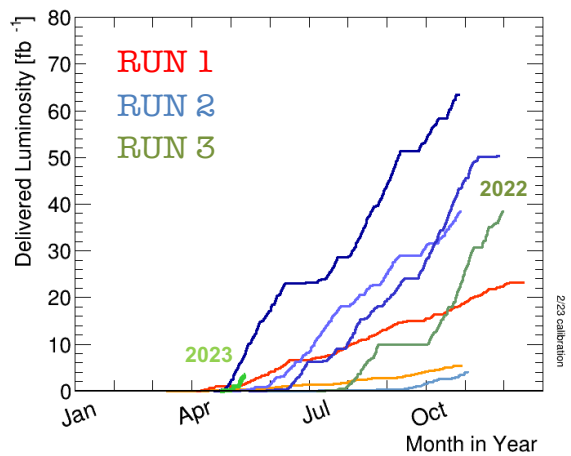


ATLAS experiment

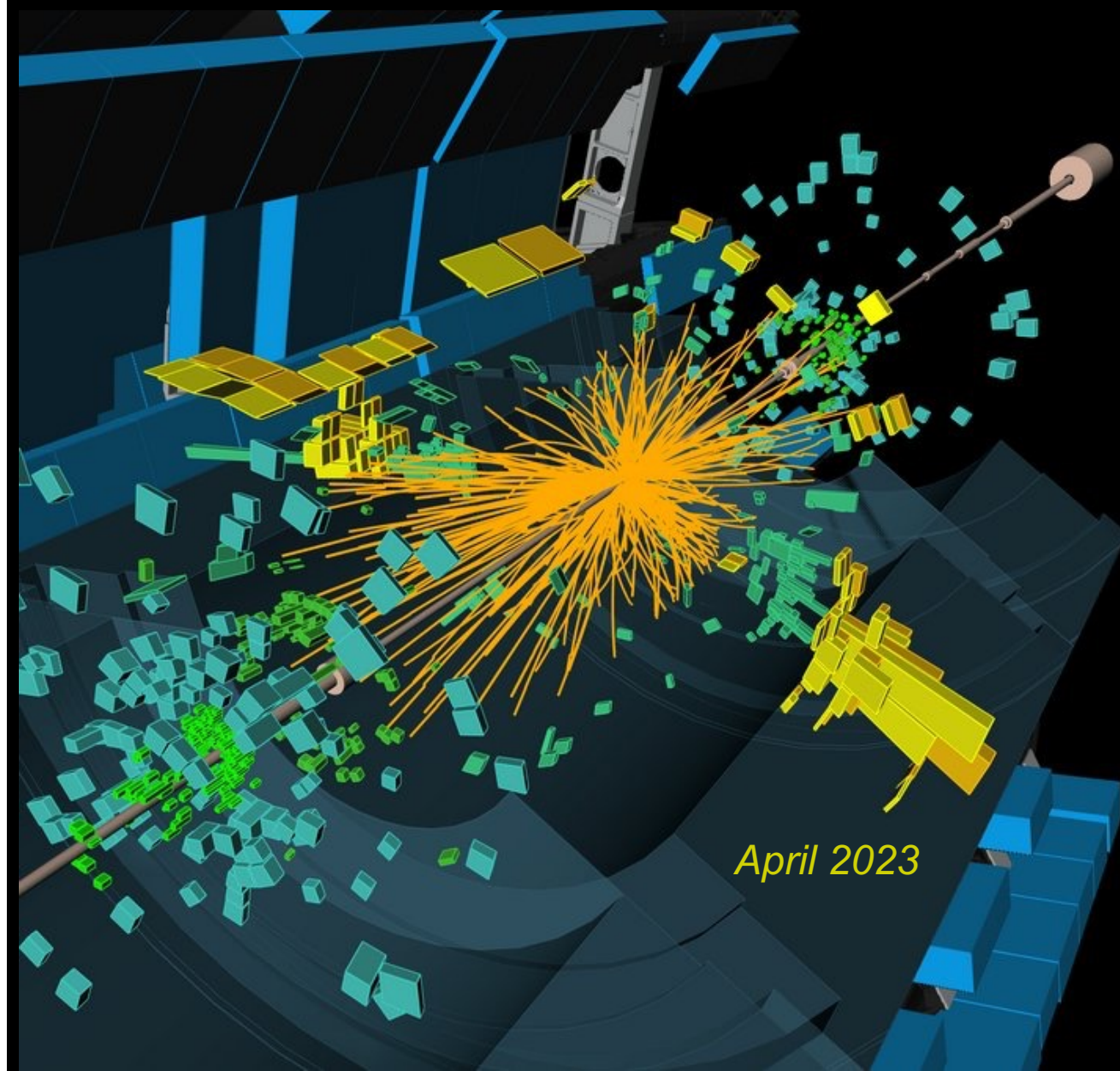
The ATLAS experiment at the LHC



Collecting data at 13.6 TeV



Precision measurements & searches
Explore new kinematic regimes

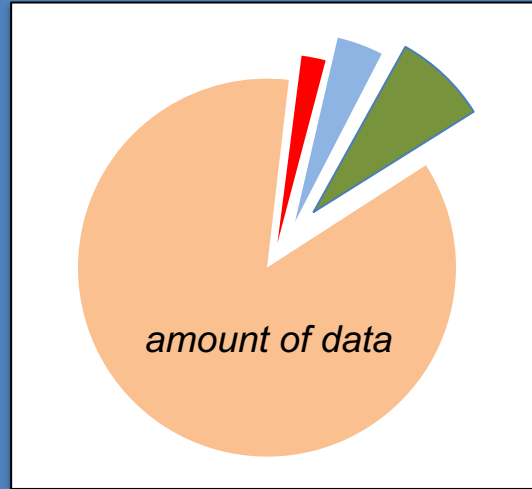


April 2023



ATLAS control room last week

Large Hadron Collider timeline



RUN 1

RUN 2

RUN 3

High Luminosity LHC

2010

2015

2020

2025

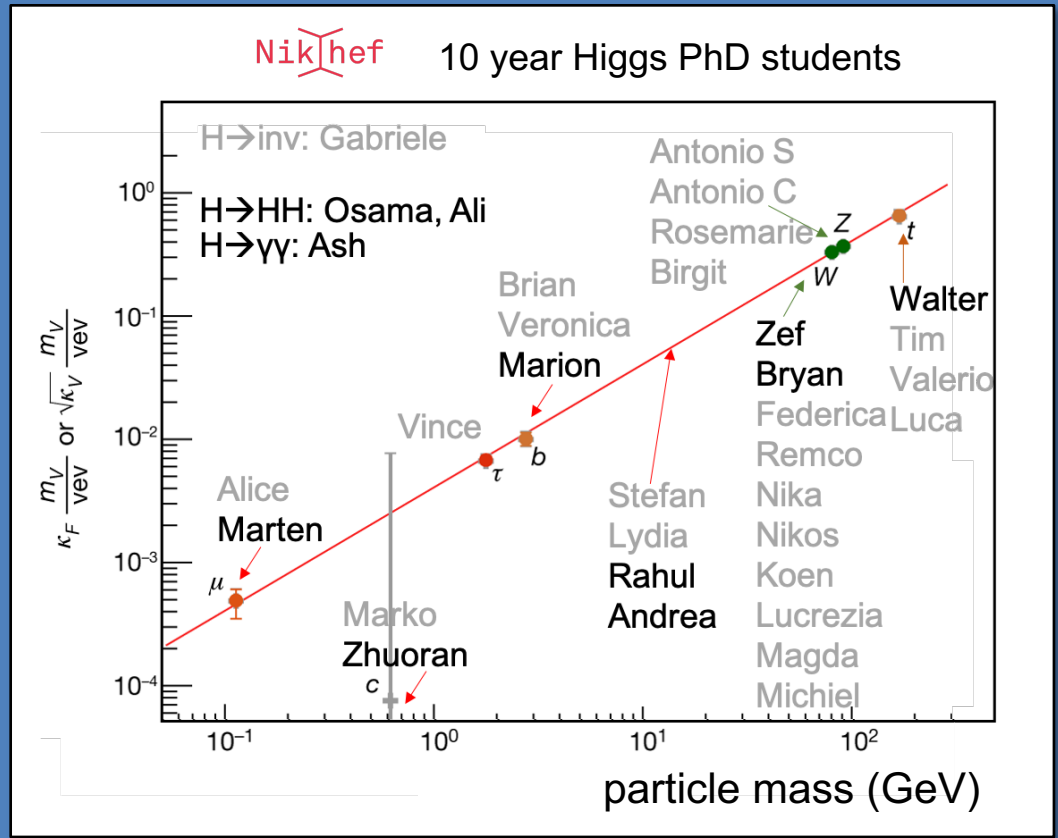
2030

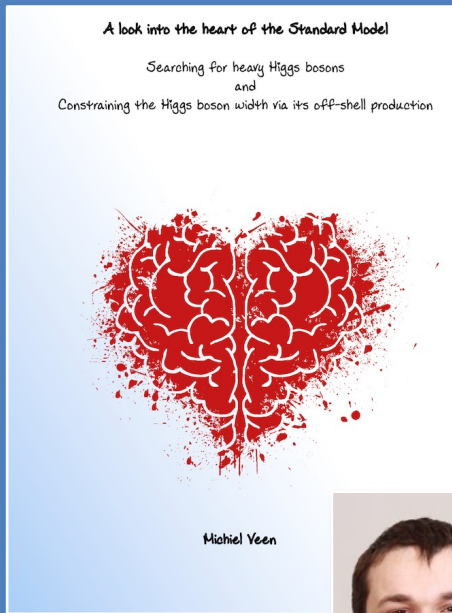
2035

2023

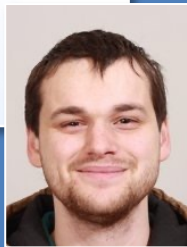


Ten years of Higgs boson research





Michiel Veen



$$\Gamma_h = 4.5^{+3.3}_{-2.5} \text{ MeV (SM: 4.1 MeV)}$$

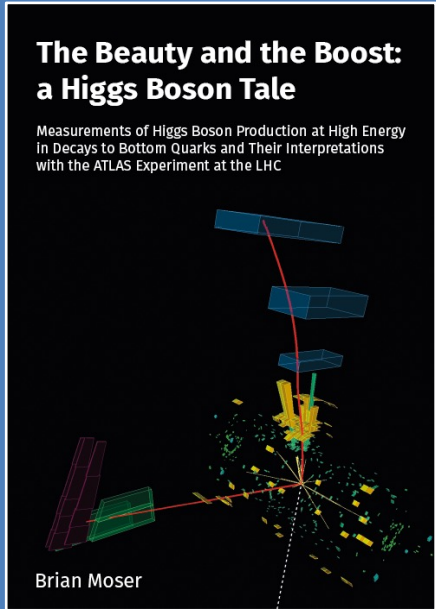
Higgs boson width (lifetime)

PhD theses



Brian Moser

- ATLAS & Springer thesis prize
- Honorable mention Ehrenfest-Afanassjewa award



The Dutch-Atlas group



New group member

Alexandra Sidley (PhD)

Dutch Atlas group

- 14 staff
- 9 post-docs
- 18 PhD
- 7 master students
- + bachelor students

A world map where the regions of the Nikhef ATLAS group are highlighted in blue. These regions include: the United States (including Alaska and Hawaii), Canada, Mexico, Brazil, South Africa, India, China, and Australia. All other countries on the map are shown in a light gray color.

Nikhef ATLAS group

physics coordinator



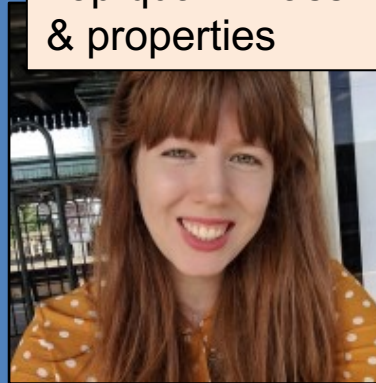
Pamela Ferrari

convenor $h \rightarrow WW$



Robin Hayes

Top quark mass
& properties



Clara Nellist

ITK systems engineer &
global structure coordinator



Marcel Vreeswijk

convenor $h \rightarrow qq$



Hannah Arnold

convenor exotics

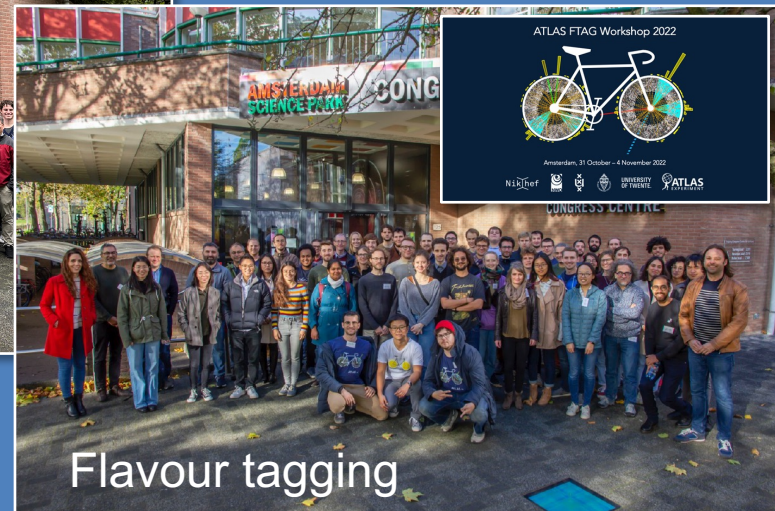


Flavia de Almeida Dias

Leadership positions in the Atlas experiment

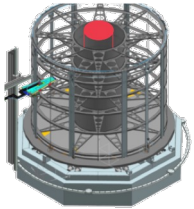
Committees: chair authorship committee, HGTD institute board (Frank Filthaut), Early Career Scientist Board (Flavia de Almeida Dias), HGTD TDAQ/Lumi/DCS coordinator (Menqing Wu), statistics committee (Wouter Verkerke, Lydia Brenner), Diversity & Inclusion contact (Clara Nellist), Felix firmware/software coordinator (Frans Schreuder, Mark Dönzelmann), CBCAG (Wouter Verkerke)

Workshops in Nijmegen & Amsterdam



Atlas session today

1



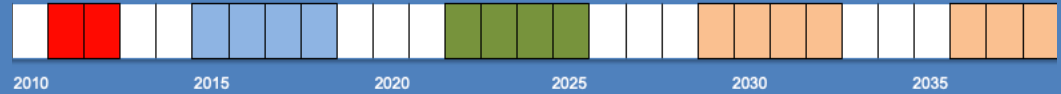
Andrea Garcia Alonso
(upgrade)

RUN 1

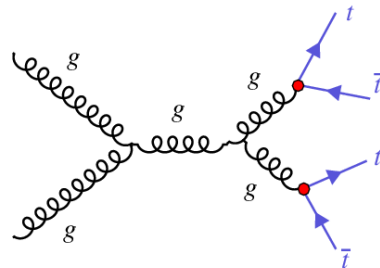
RUN 2

RUN 3

High Luminosity LHC

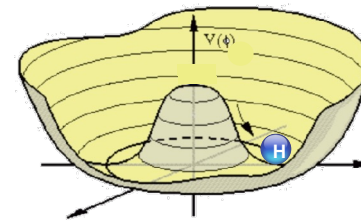


2



Polina Moskvitina
(4-tops)

3



Bryan Kortman
(off-shell Higgs \rightarrow WW*)