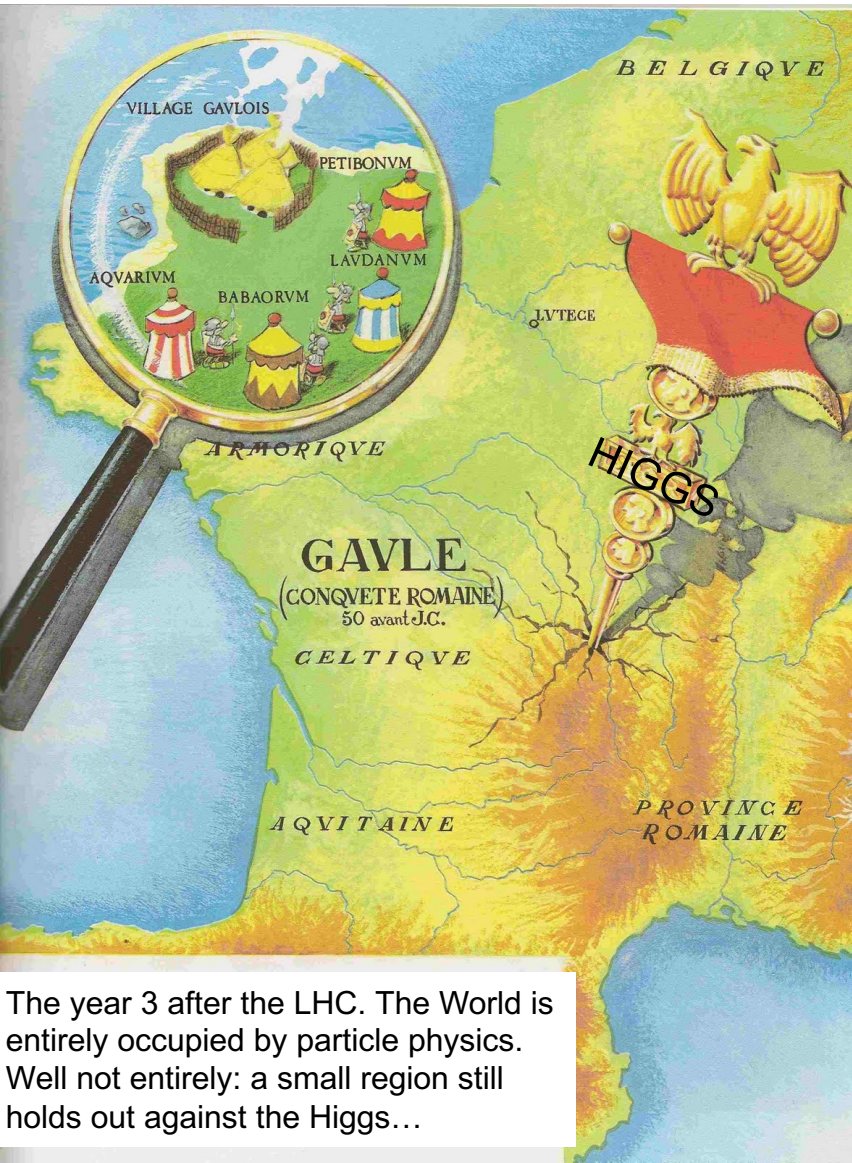


Detectors for colliders: to the future and beyond

Antoine Laudrain (he/him)

FH-Fellows meeting - 28 April 2023

Who am I?

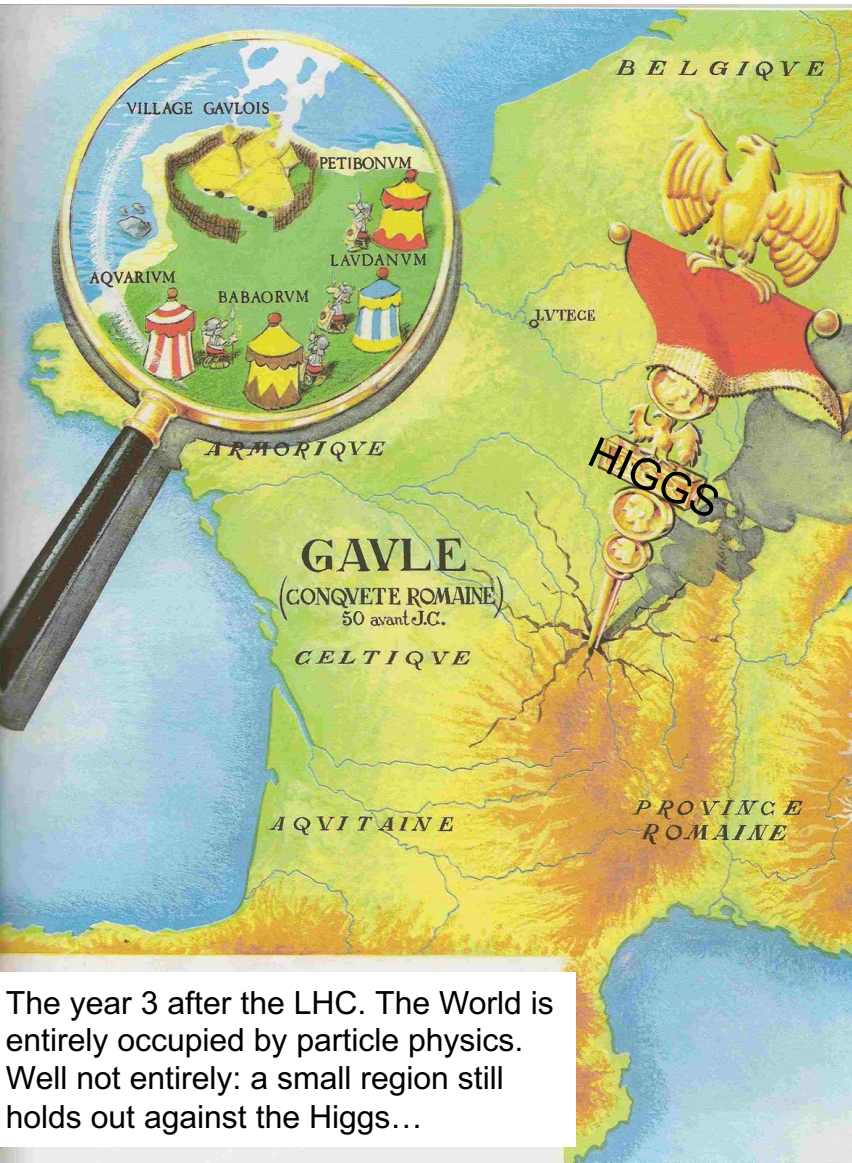


The year 3 after the LHC. The World is entirely occupied by particle physics. Well not entirely: a small region still holds out against the Higgs...



I let you guess
which one I am...

Who am I?

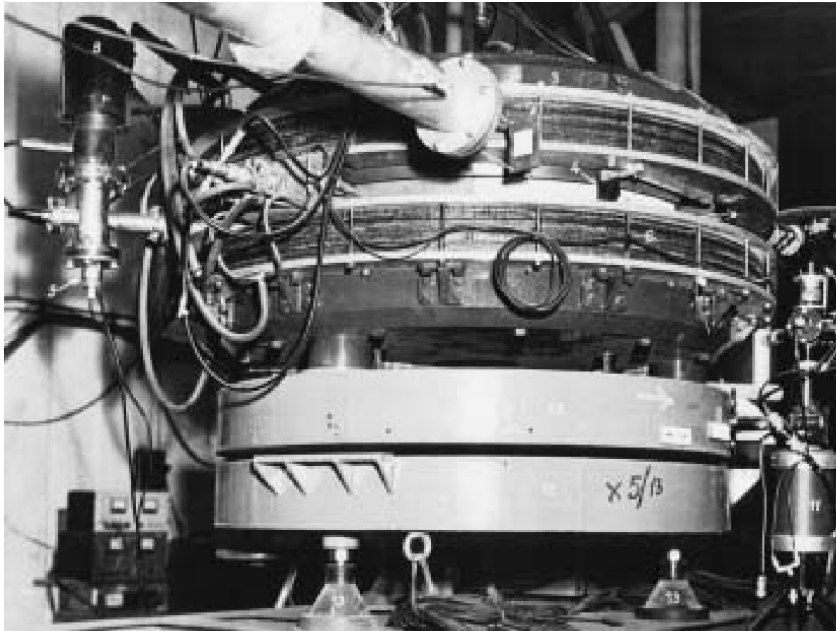


The year 3 after the LHC. The World is entirely occupied by particle physics. Well not entirely: a small region still holds out against the Higgs...

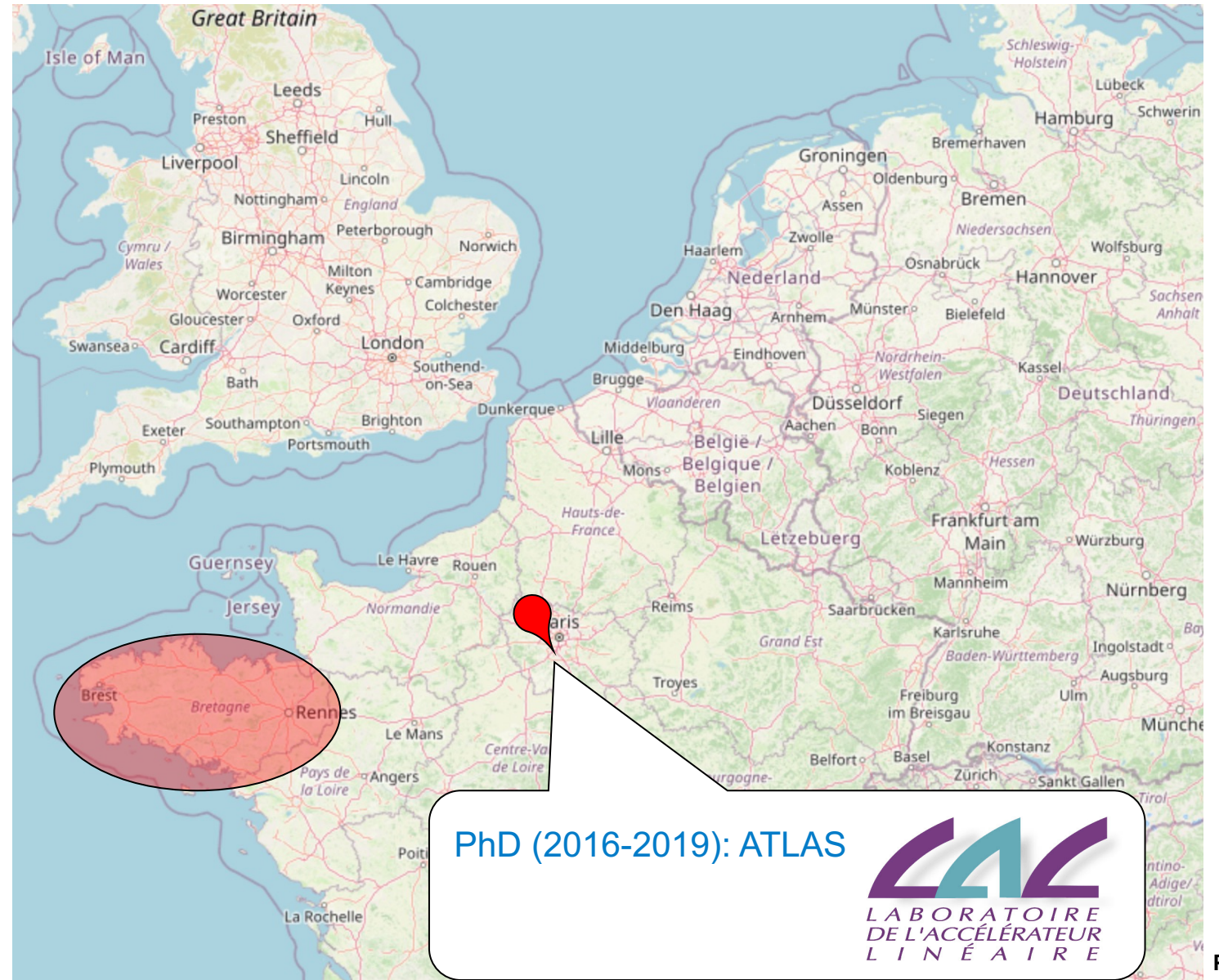
July 4th, 2012:



PhD (Orsay): 2016-2019



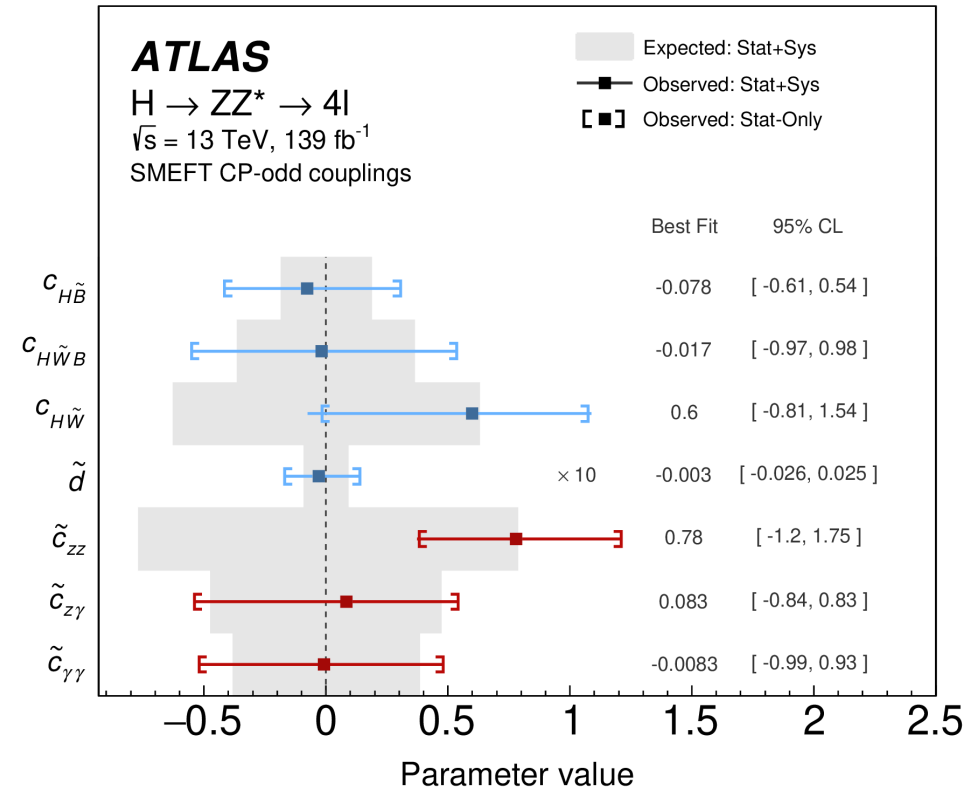
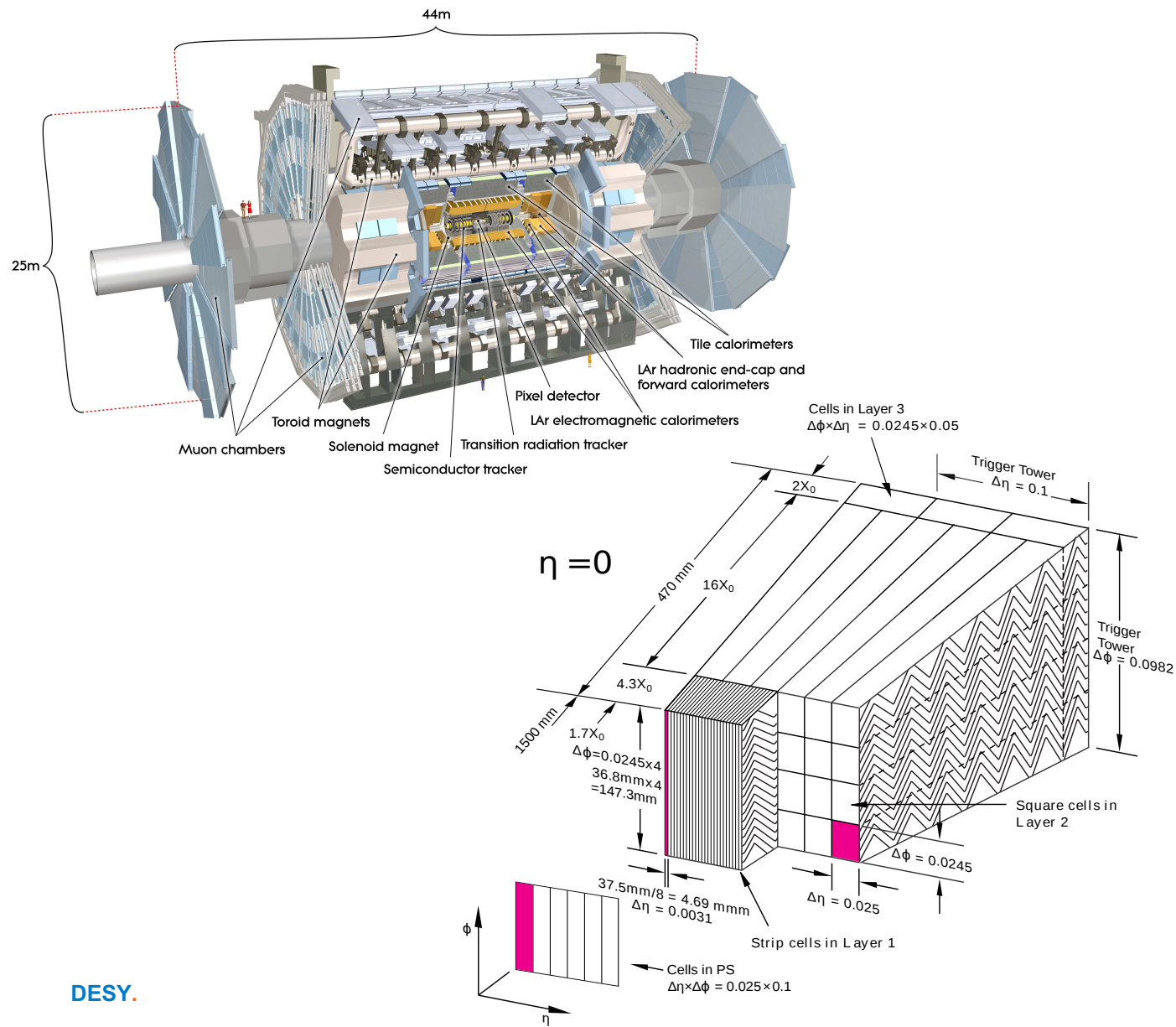
AdA: first e^+/e^- collisions (1964)



PhD (2016-2019): ATLAS



PhD (Orsay): 2016-2019



3 years later...

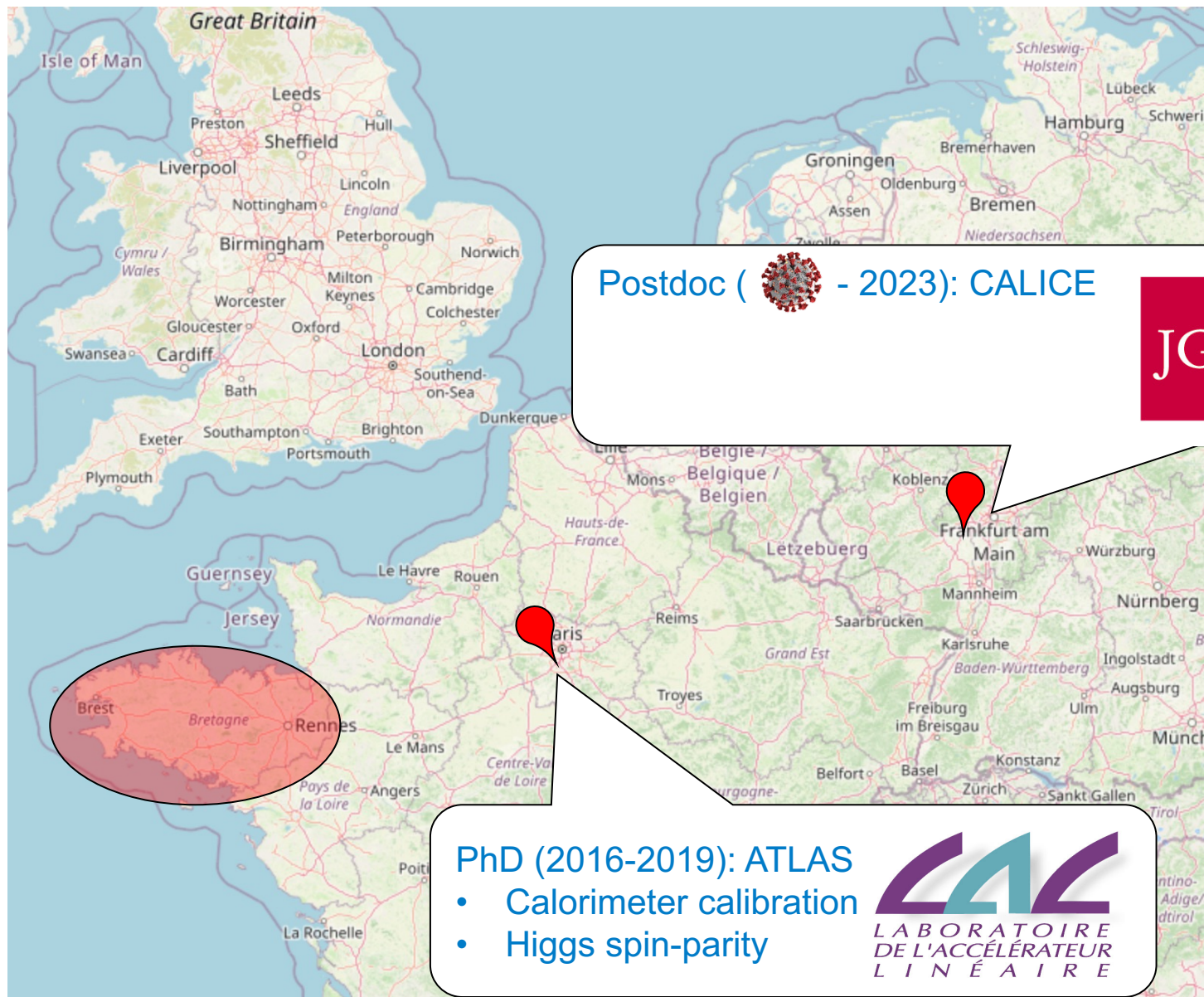
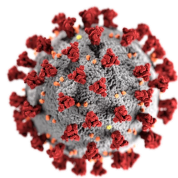
PhD (Orsay): 2016-2019



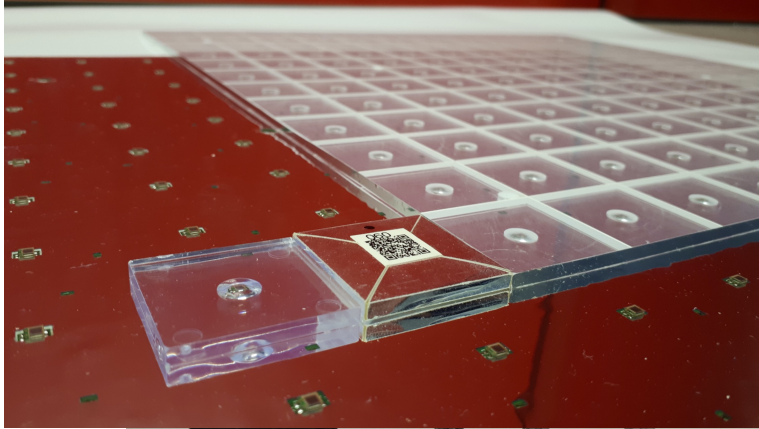
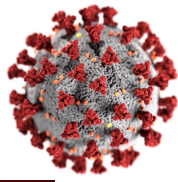
© Palais de la découverte / C. Rousselin



Postdoc (Mainz): - 2023

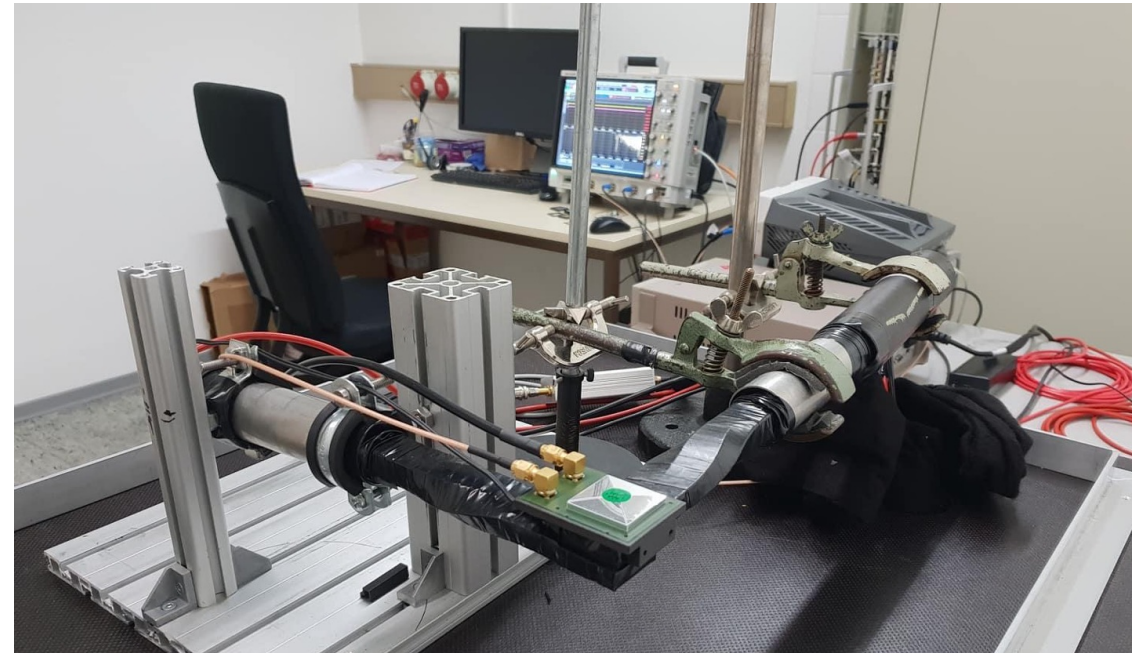


Postdoc (Mainz): - 2023

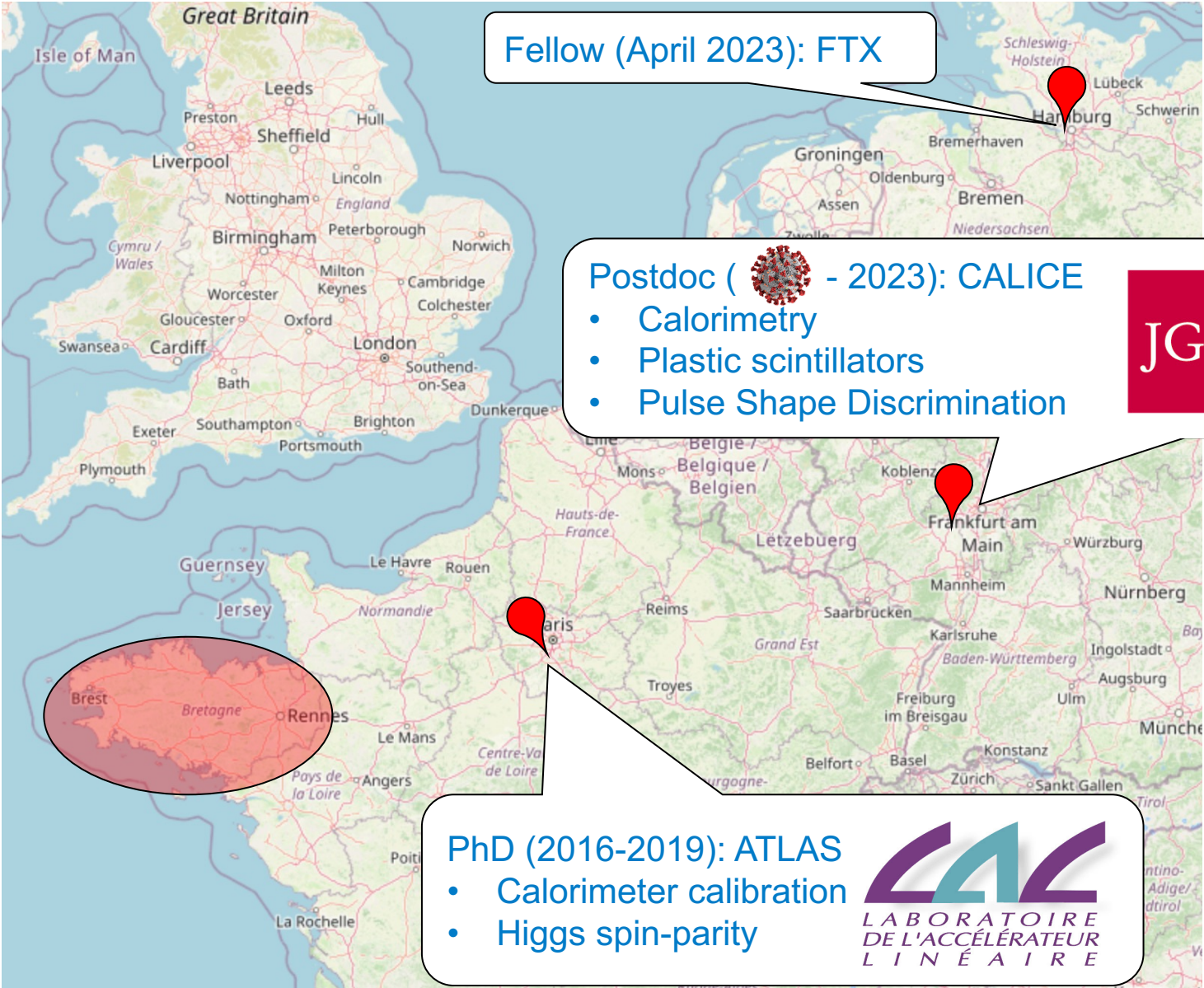


Development of segmented scintillators for the CALICE AHCal (high-granularity calorimeter).

Investigating Pulse Shape Discrimination with plastic scintillators and SiPM



Fellow (DESY-FTX): April 2023 - ?



Since April 2023: DESY / FTX



Since April 2023: DESY / FTX

Construction of the CMS HGCal



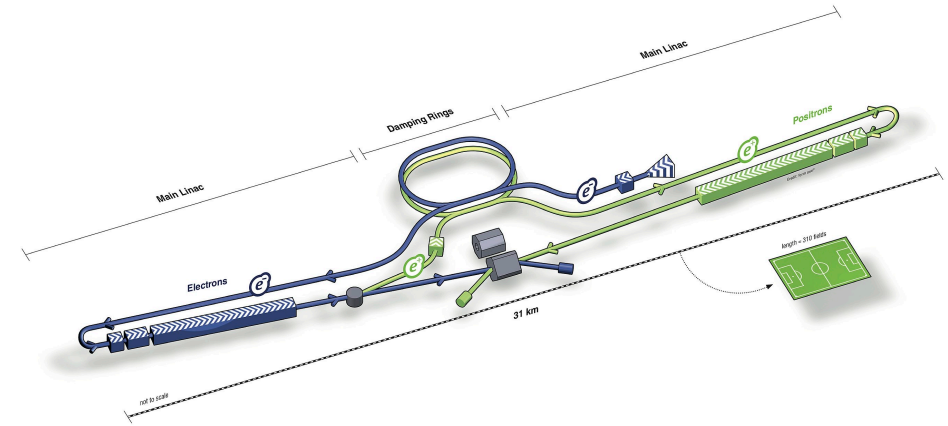
x 2000 within ~2 years

Since April 2023: DESY / FTX

Construction of the CMS HGCal

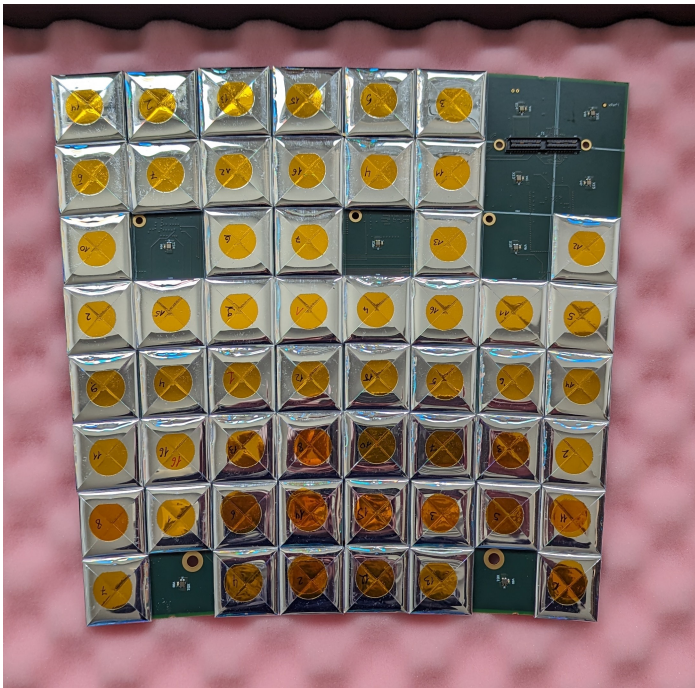


x 2000 within ~2 years



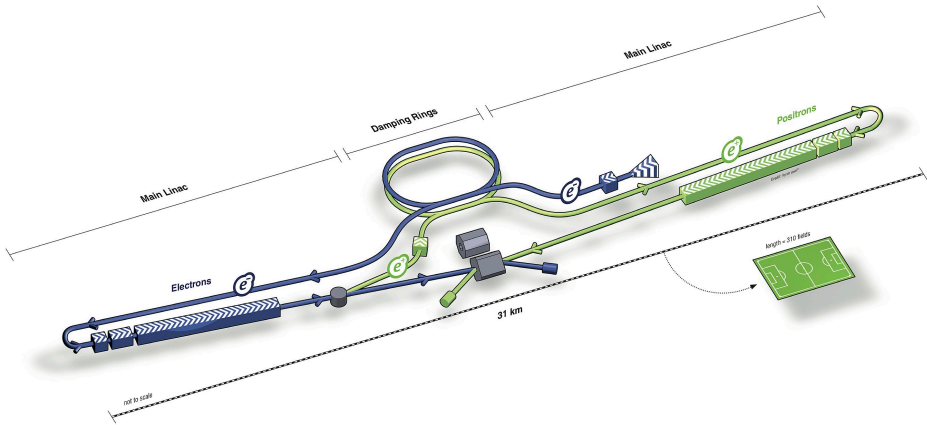
Since April 2023: DESY / FTX

Construction of the CMS HGCal

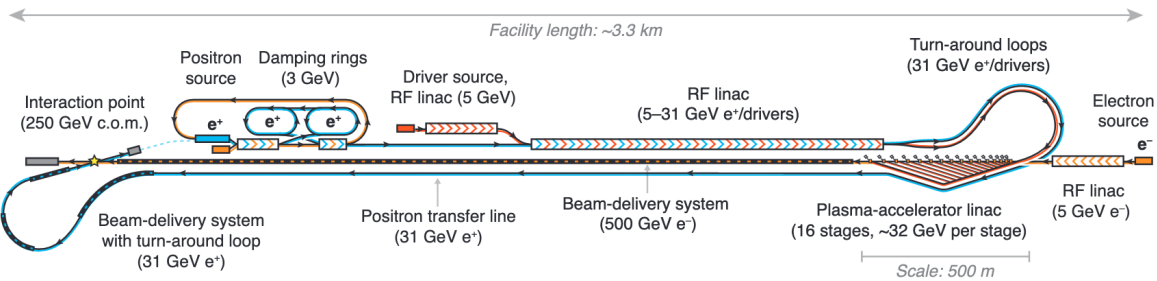


x 2000 within ~2 years

Simulations for Future Higgs Factories



ILC: 20 km => HALHF: 3.5 km



But: boost of ~2.1.
Can we build a detector with acceptable performance?

My favorite plot

One of...

“Earth rise”, Apollo 8



THE question

Is string theory right?

Is it just fantasy?

Caught in the Landscape

Out of touch with reality?

Thank you