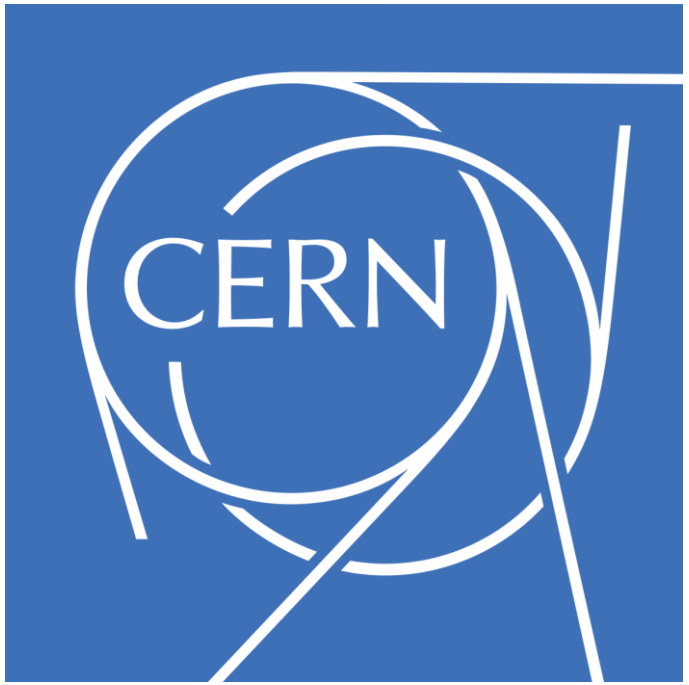
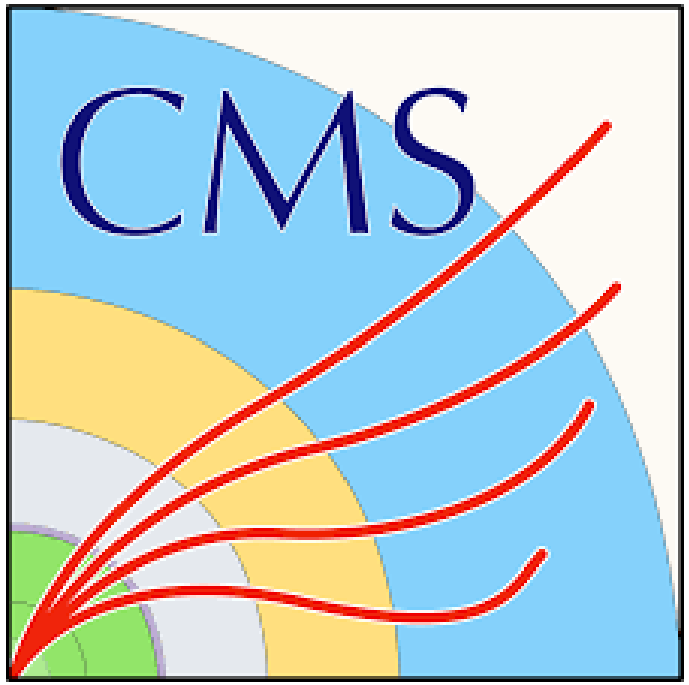
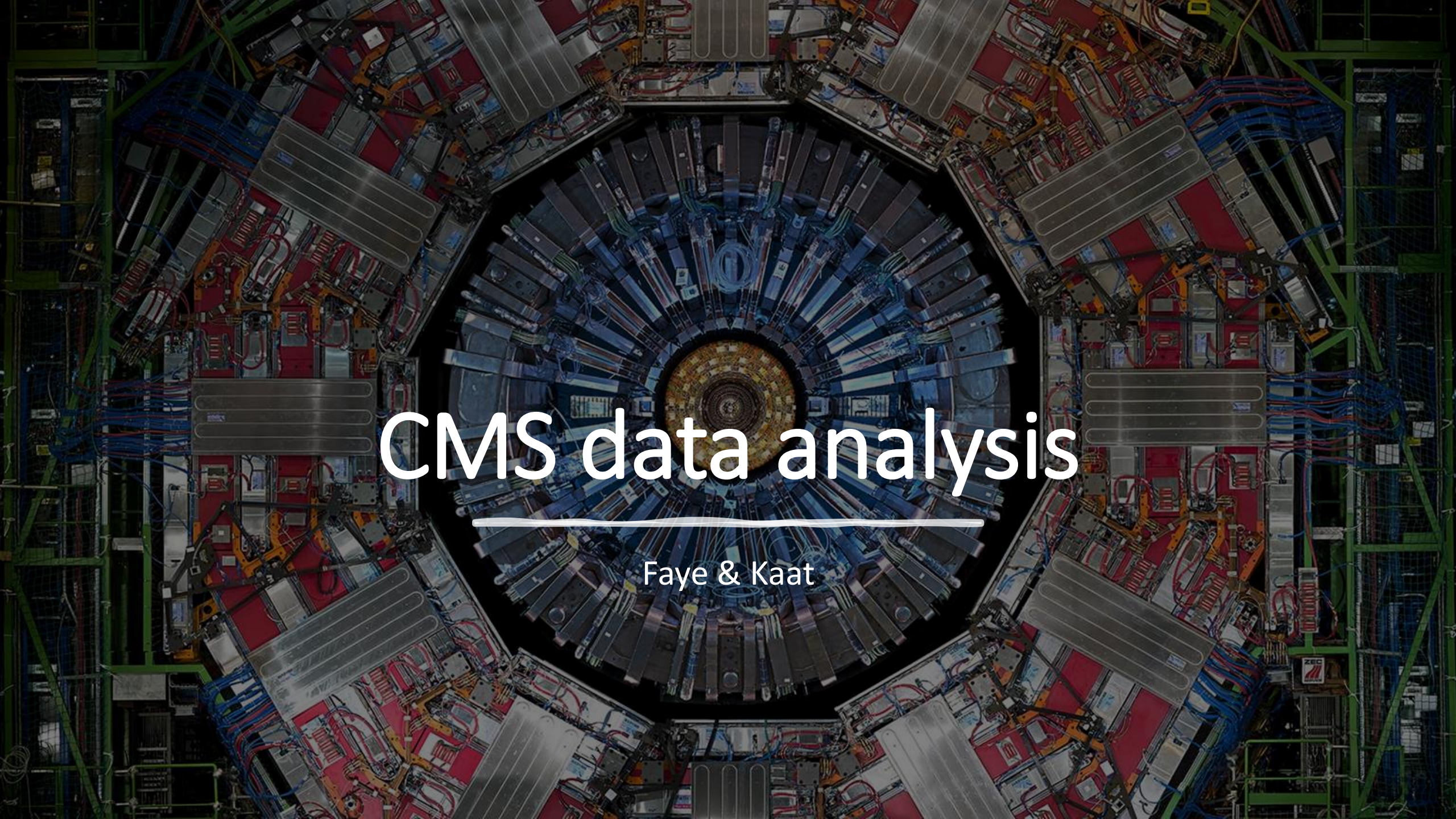
Our experience at CERN

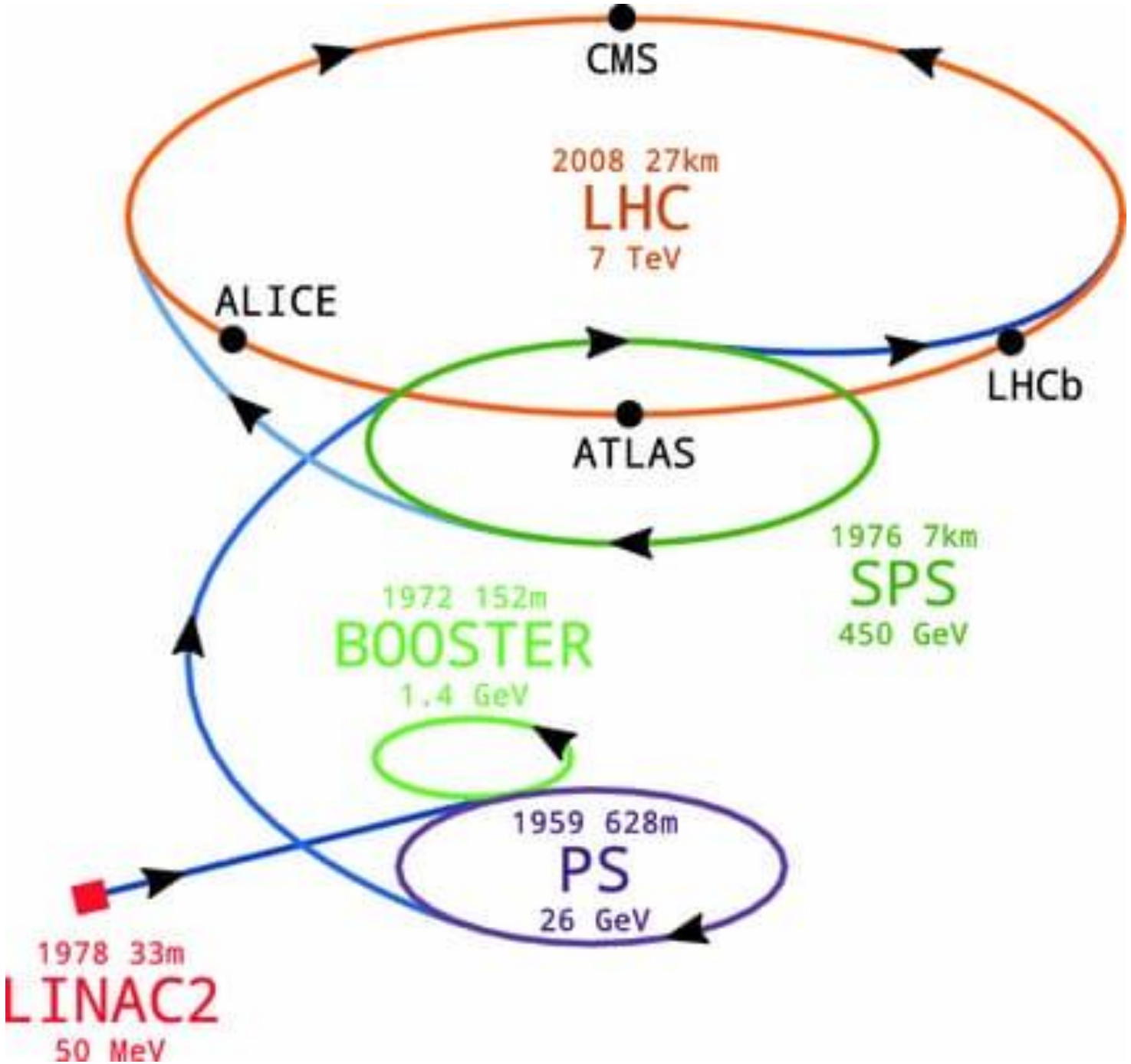






CMS data analysis

Faye & Kaat

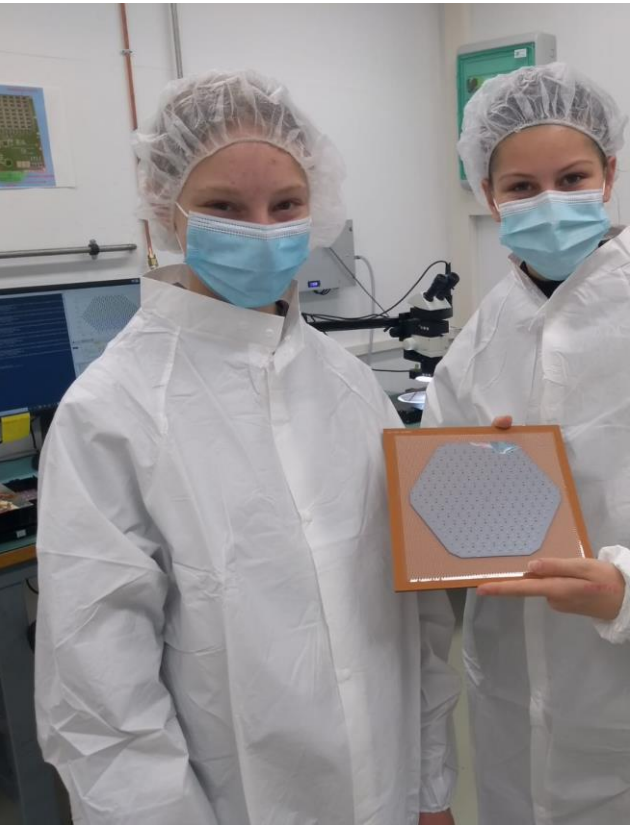

CMS
2008 27km
LHC
7 TeV
ALICE
LHCb
ATLAS
1976 7km
SPS
450 GeV
1972 152m
BOOSTER
1.4 GeV
1959 628m
PS
26 GeV
1978 33m
LINAC2
50 MeV

Supervisors

- Pieter Everaerts
- Filip Moortgat

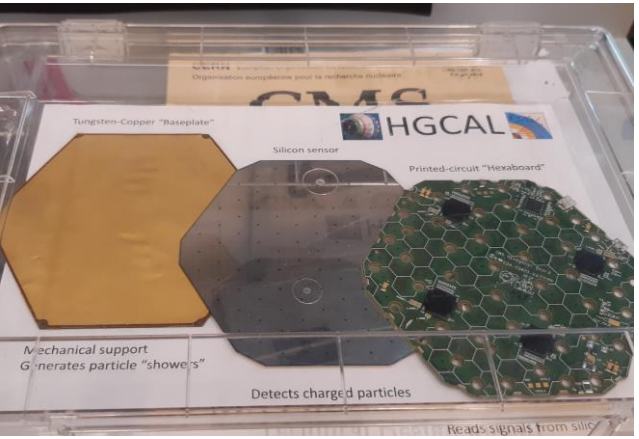
What did we do?

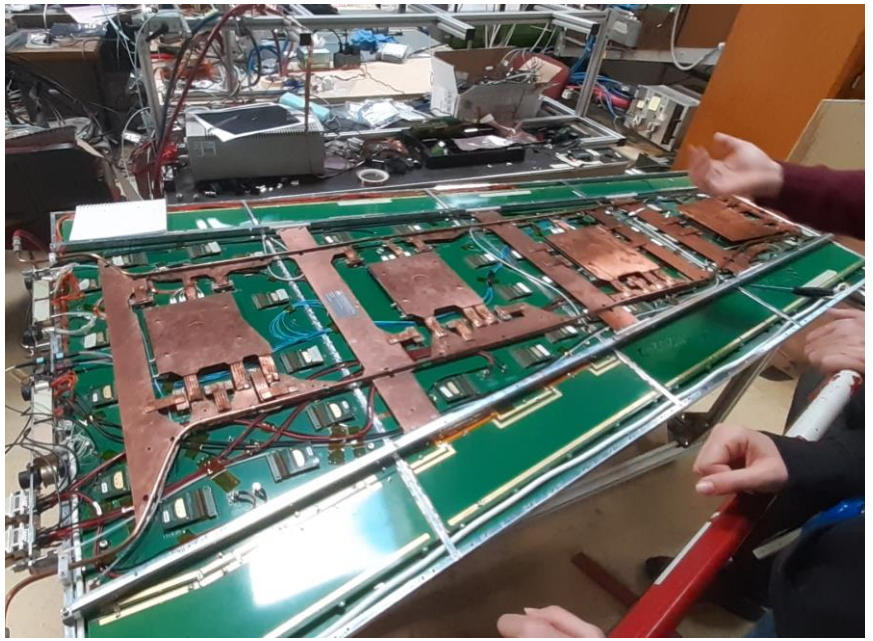
- Supervisors and their work
- CMS:
  - New parts
  - Test beam
  - Data

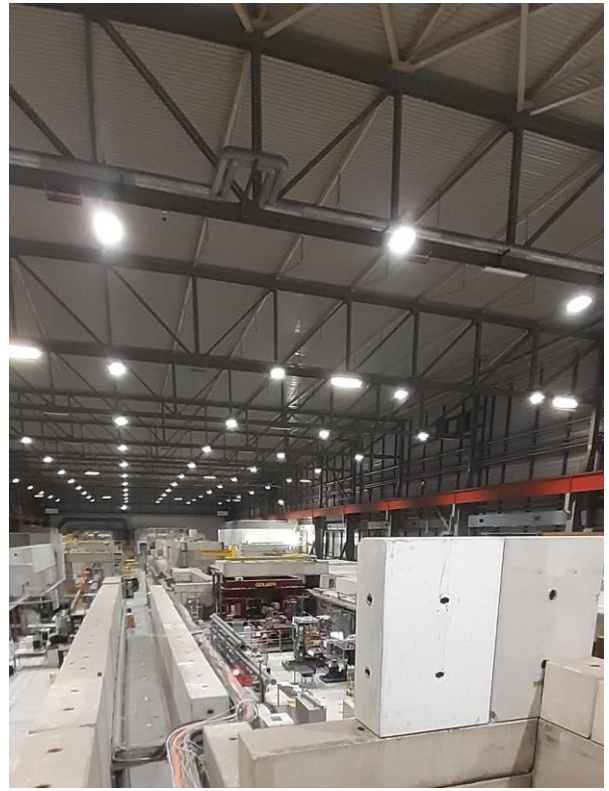


New parts

- Clean room
- Workshop





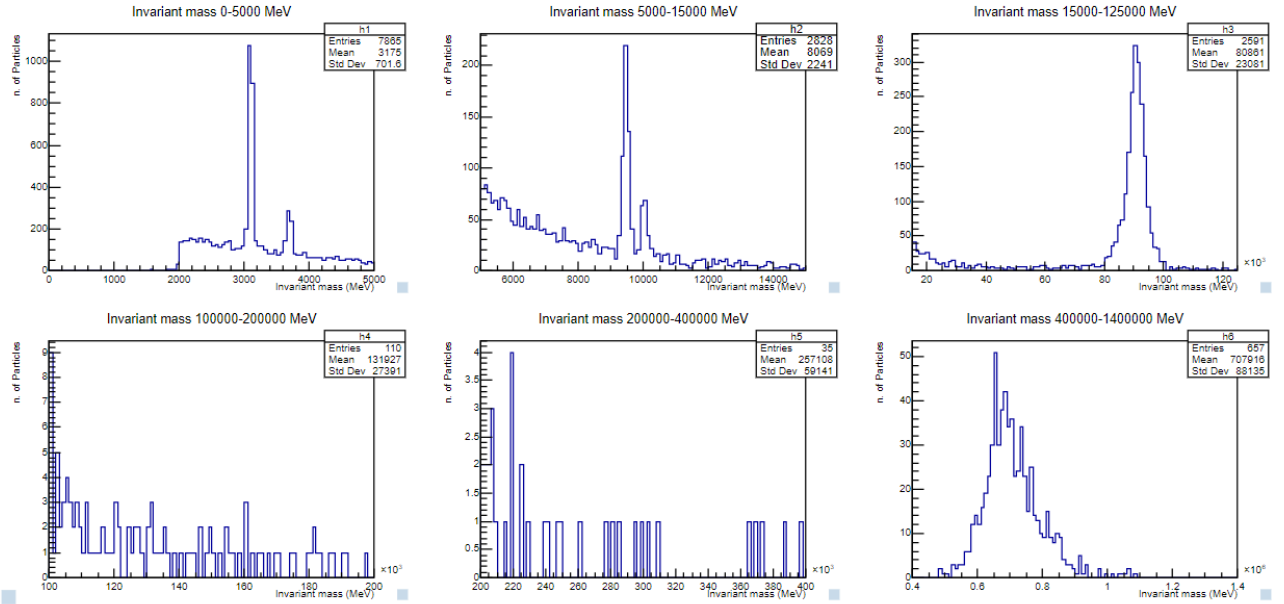


Test beam

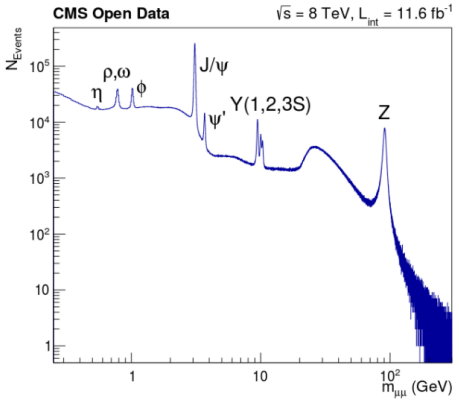
More…

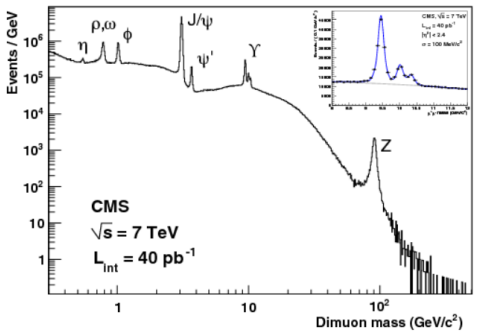
```
def draw_all_m(h1, h2, h3, h4, h5, h6, c):

    c.cd(1)
    h1.GetXaxis().SetTitle("Invariant mass (MeV)")
    h1.GetYaxis().SetTitle("n. of Particles")
    h1.Draw()
    c.Update()

    c.cd(2)
    h2.GetXaxis().SetTitle("Invariant mass (MeV)")
    h2.GetYaxis().SetTitle("n. of Particles")
    h2.Draw()
    c.Update()

    c.cd(3)
    h3.GetXaxis().SetTitle("Invariant mass (MeV)")
    h3.GetYaxis().SetTitle("n. of Particles")
    h3.Draw()
    c.Update()

    c.cd(4)
    h4.GetXaxis().SetTitle("Invariant mass (MeV)")
    h4.GetYaxis().SetTitle("n. of Particles")
    h4.Draw()
    c.Update()

    c.cd(5)
    h5.GetXaxis().SetTitle("Invariant mass (MeV)")
    h5.GetYaxis().SetTitle("n. of Particles")
    h5.Draw()
    c.Update()

    c.cd(6)
    h6.GetXaxis().SetTitle("Invariant mass (MeV)")
    h6.GetYaxis().SetTitle("n. of Particles")
    h6.Draw()
    c.Update()

    c.cd()
    c.Update()
    c.Draw()
```

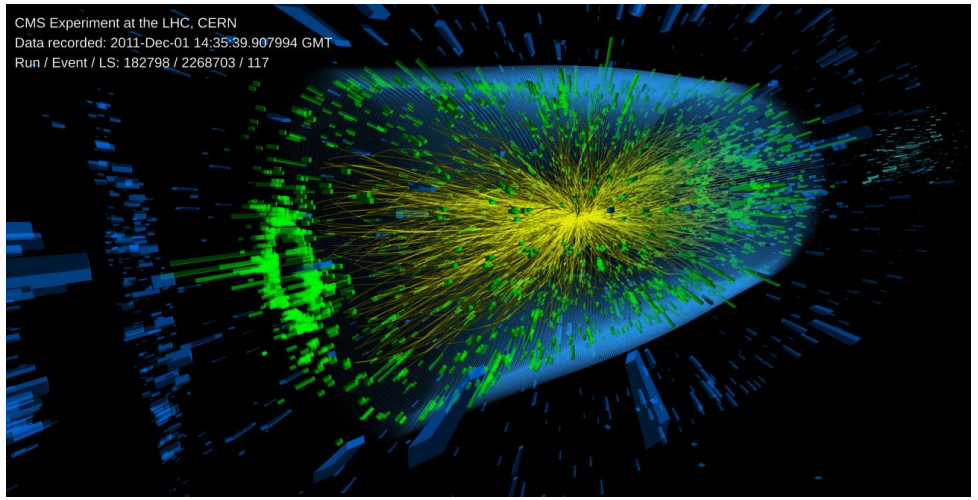
```
Info in <TCanvas::Print>: png file dimuon_inv_mass.png has been created
```



There appear to be peaks around 3.1 GeV, 3.7, 9.5, 10, 90, and 680 GeV







Actions after the internship

- Talk to friends and family
- Inform teachers and school
- Meet up with friends from CERN
- Investigate more about the topic and science in general

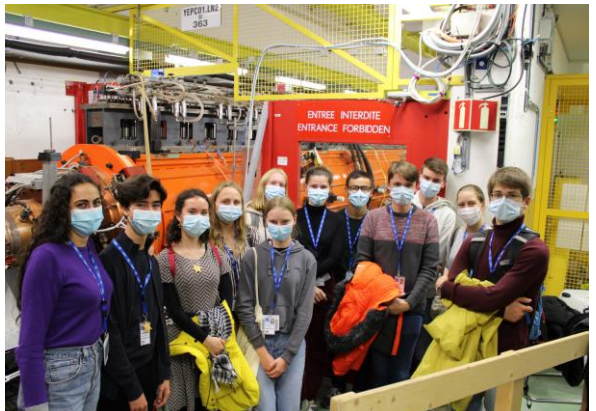
Interesting experience?

Of cource!!!









THE END