

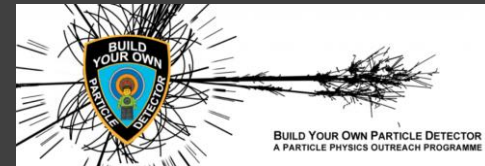
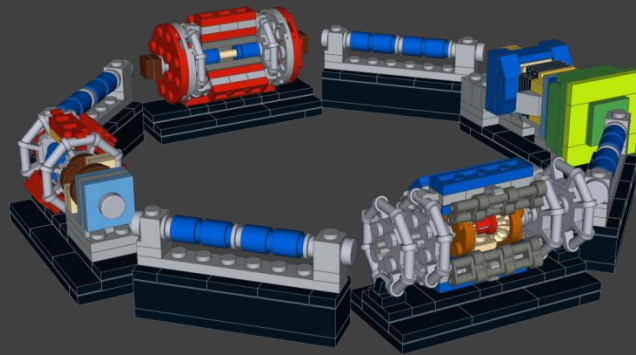
Science Gateway workshop

Julia WOITHE

09/07/2024

**LEGO Detectors &  
The Power of Air**

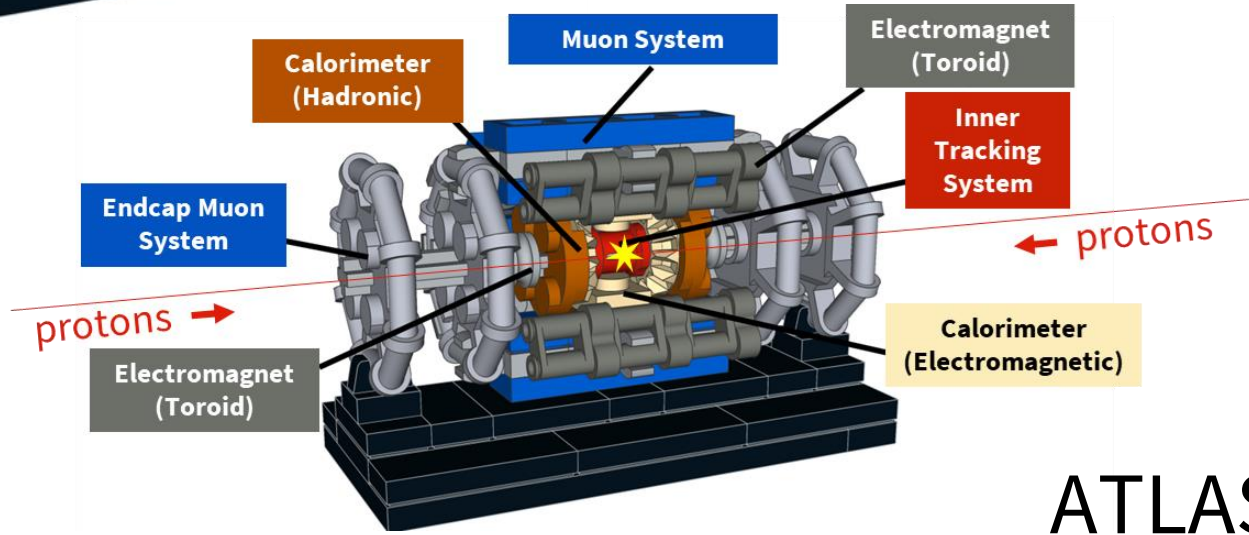
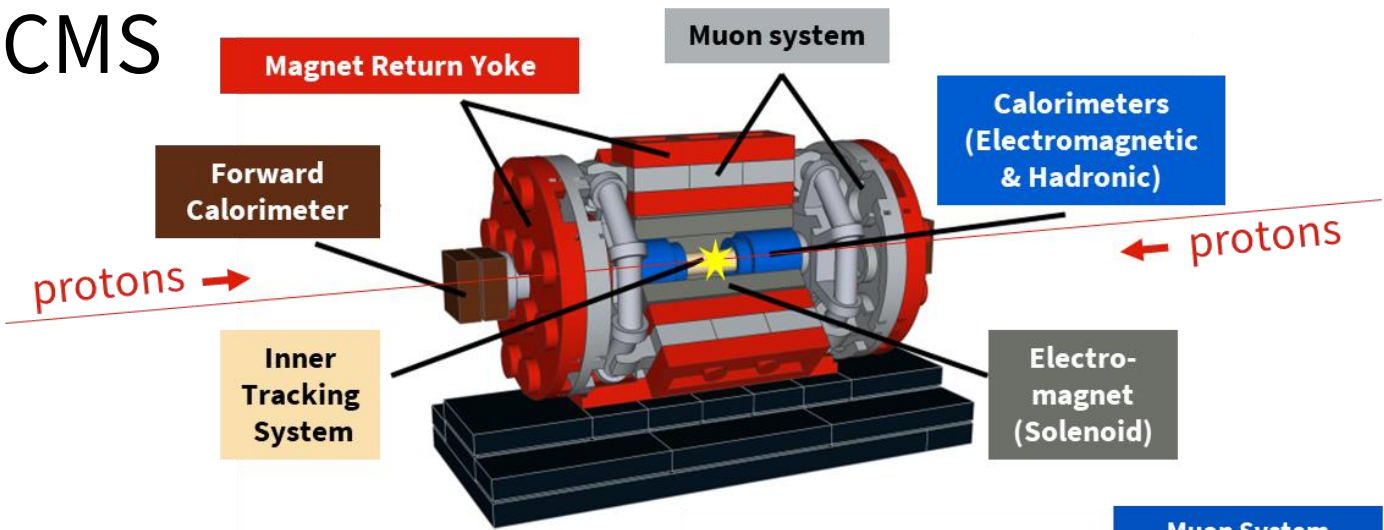
# Build your own particle detector



Idea, models and Images by Nathan Readloff

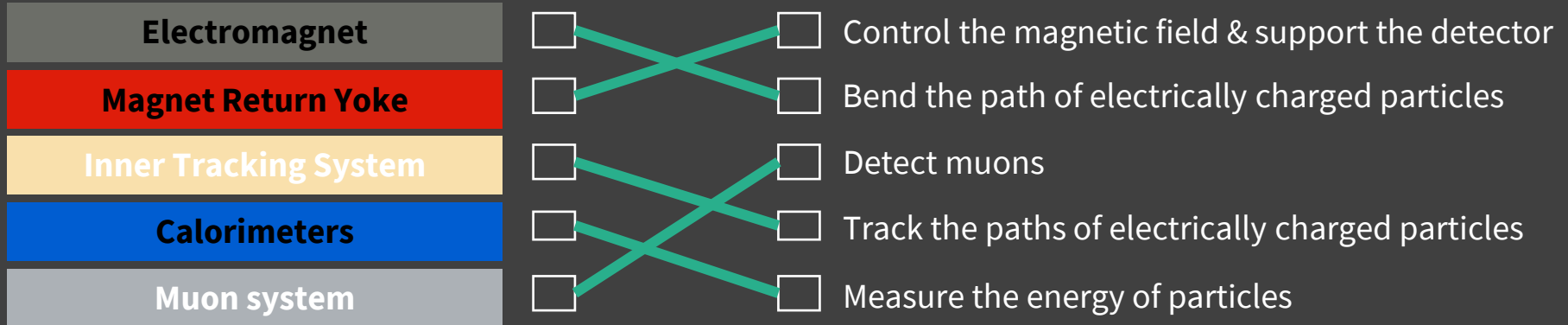
More information & files: <https://build-your-own-particle-detector.org>

# CMS



# ATLAS

# Time for a quiz! Which detector system is doing what?





**BUILD YOUR OWN PARTICLE DETECTOR**  
A PARTICLE PHYSICS OUTREACH PROGRAMME

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[Future events](#)

[Past events](#)

[Models](#)

[Particle physics](#)

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[Models](#) > [LHC micro models](#) > [LHC micro models – Parts lists](#)

# LHC micro models – Parts lists

*Be social*

[ALICE](#)

[ATLAS](#)

[CMS](#)

[LHCb](#)

[LHC dipole](#)

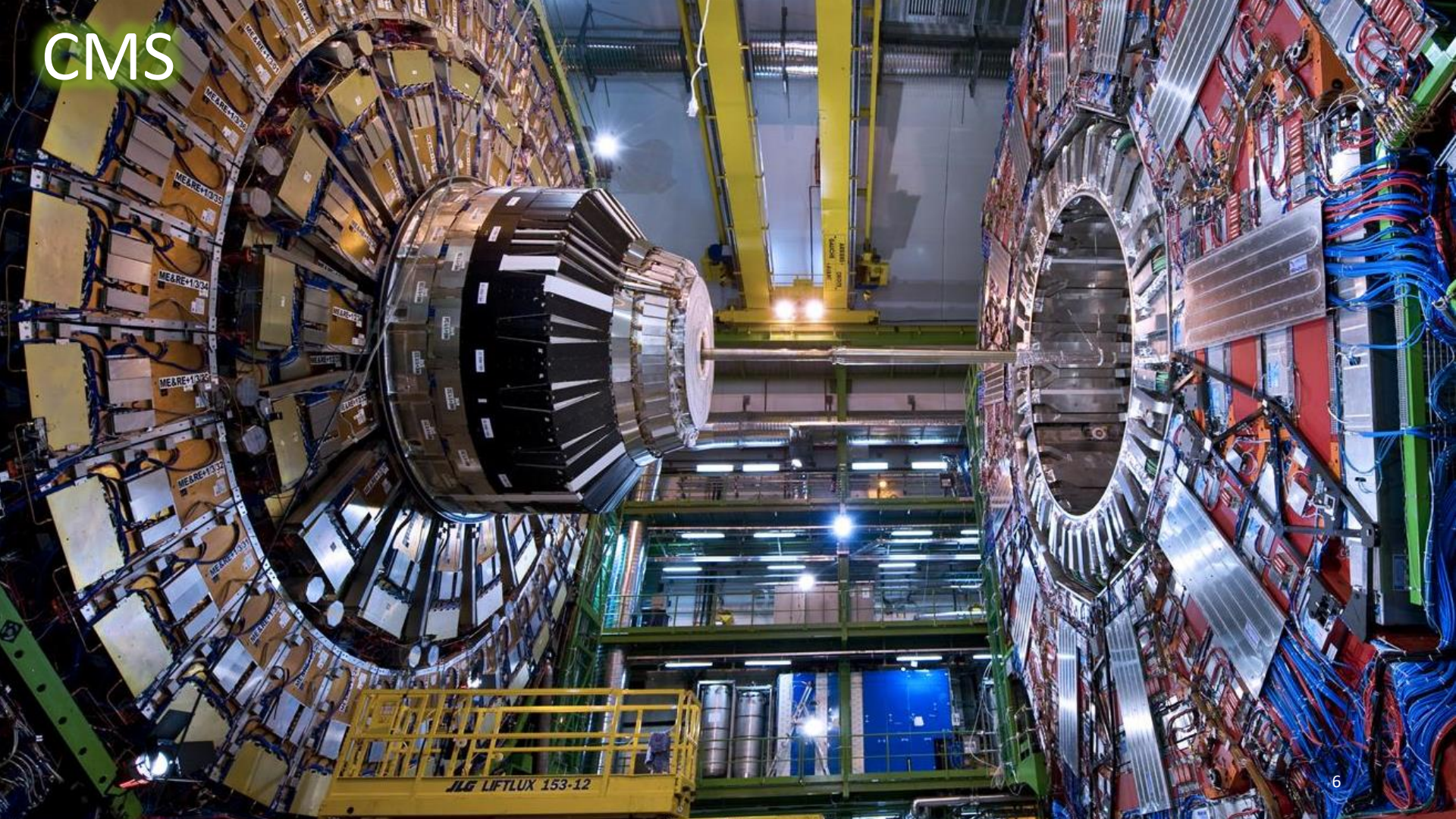
[all four experiments](#)

[full set](#)

[control room](#)

<https://build-your-own-particle-detector.org/models/lhc-micro-models/lhc-micro-models-parts-lists/>

CMS





# The closing of the CMS experiment

Engineering • CERN

# The Power of Air



- 1 ballon and 1 hovercraft per person (no exchanges)
- Try out your hovercraft on different surfaces
- Compare with your neighbours
- Work together in teams of 2 to move your detectors





# **A balloon hovercraft & the CMS detector?!**

Education • CERN

# DIY Balloon Hovercraft

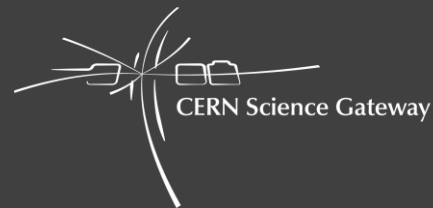
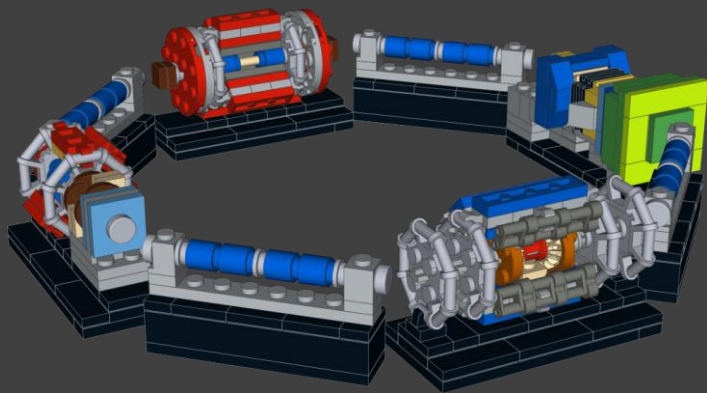
- A smooth surface
- A CD or DVD
- Super glue
- A sports bottle cap
- A cardboard tube
- A balloon

<https://solvay-education-programme.web.cern.ch/balloon-hovercraft-cms-particle-detector>



**A balloon hovercraft  
& the CMS detector?**





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**Thanks for exploring with us!**