

LEGO detectors workshop

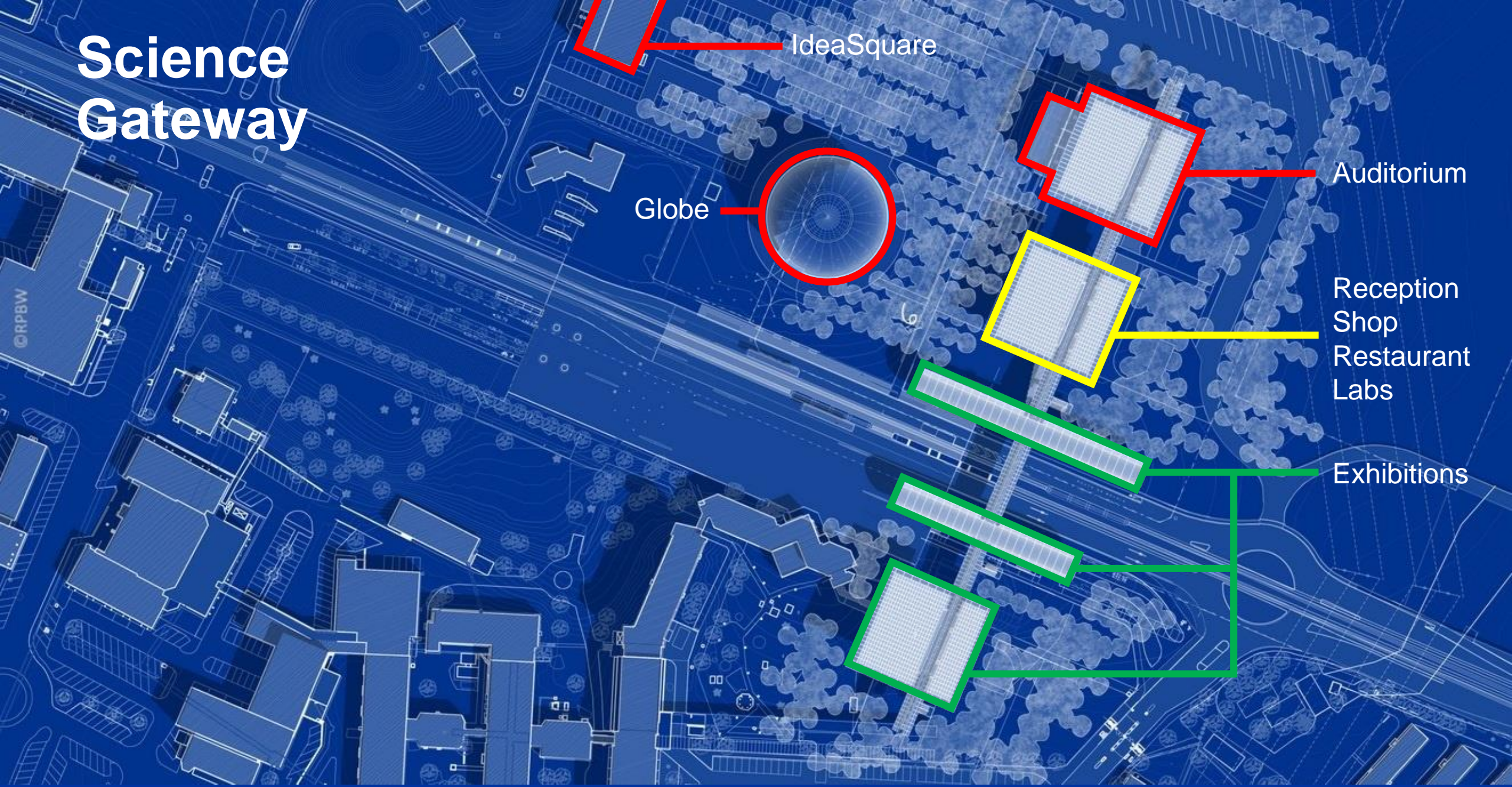
Baltic Teacher Programme 2023

Julia Woithe

Science Gateway Education



Science Gateway



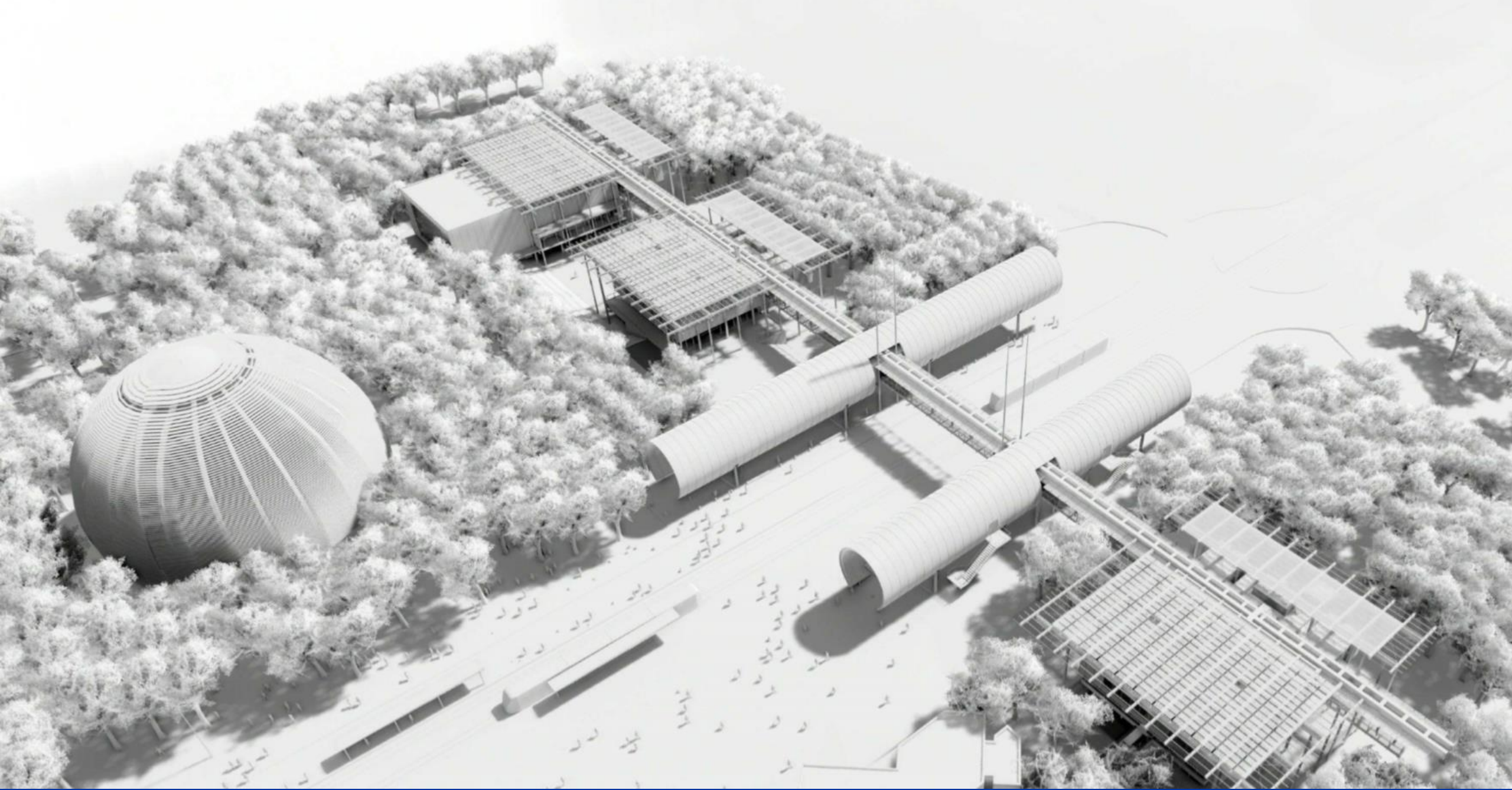
IdeaSquare

Globe

Auditorium

Reception
Shop
Restaurant
Labs

Exhibitions

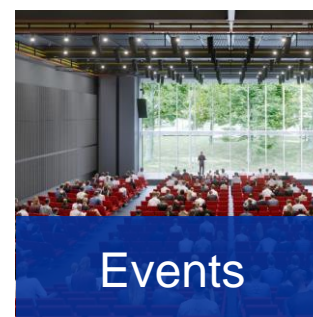
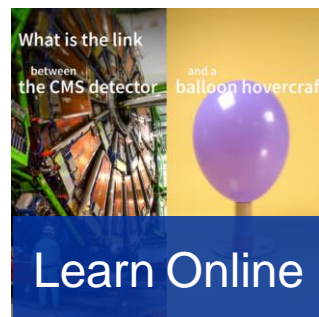
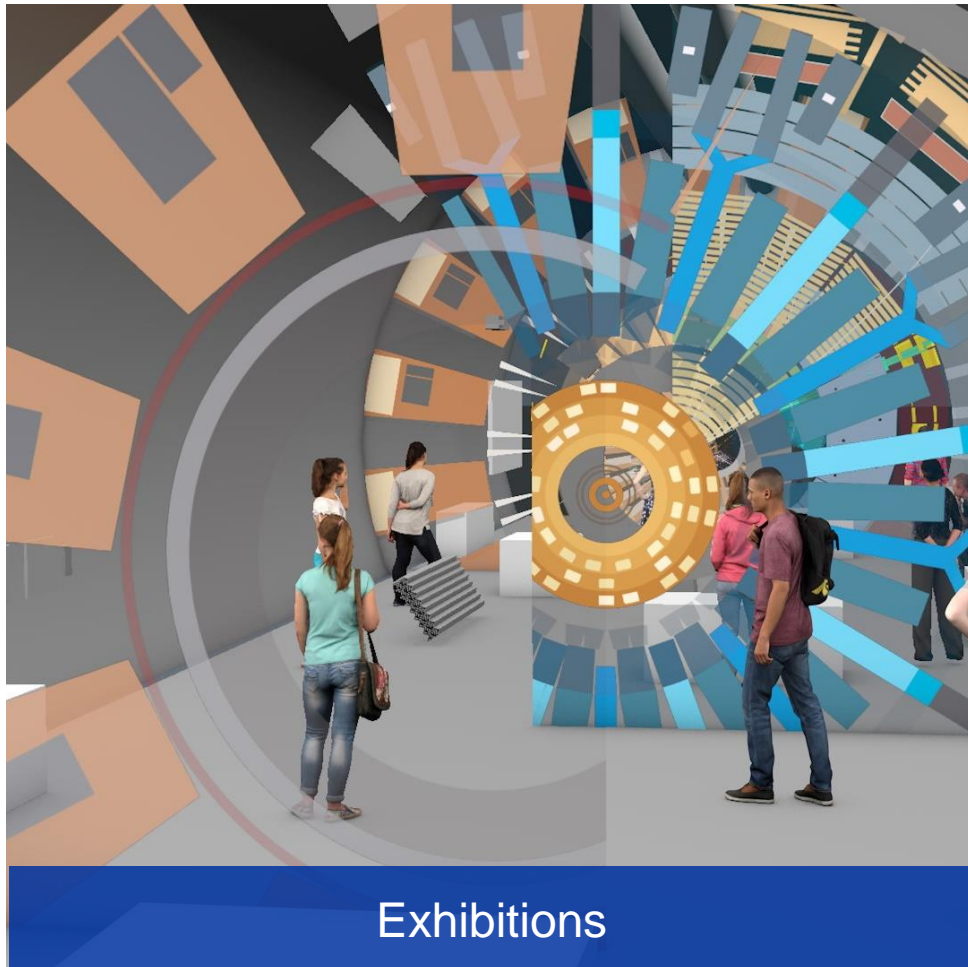






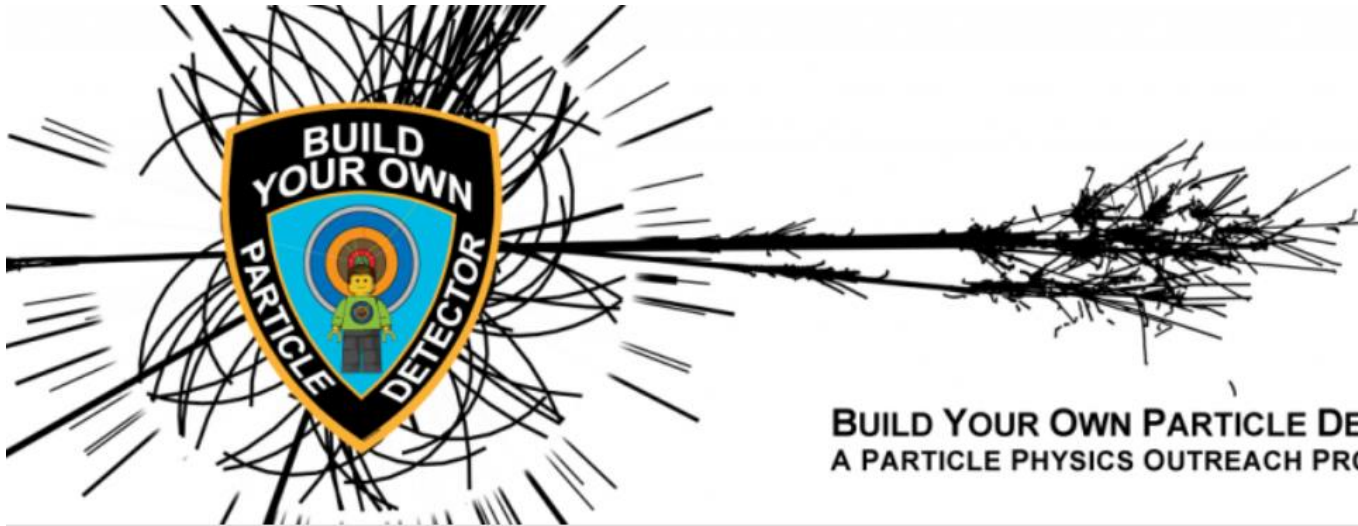


Science Gateway programme



Labs





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

BUILD YOUR OWN PARTICLE DETECTOR
A PARTICLE PHYSICS OUTREACH PROGRAMME

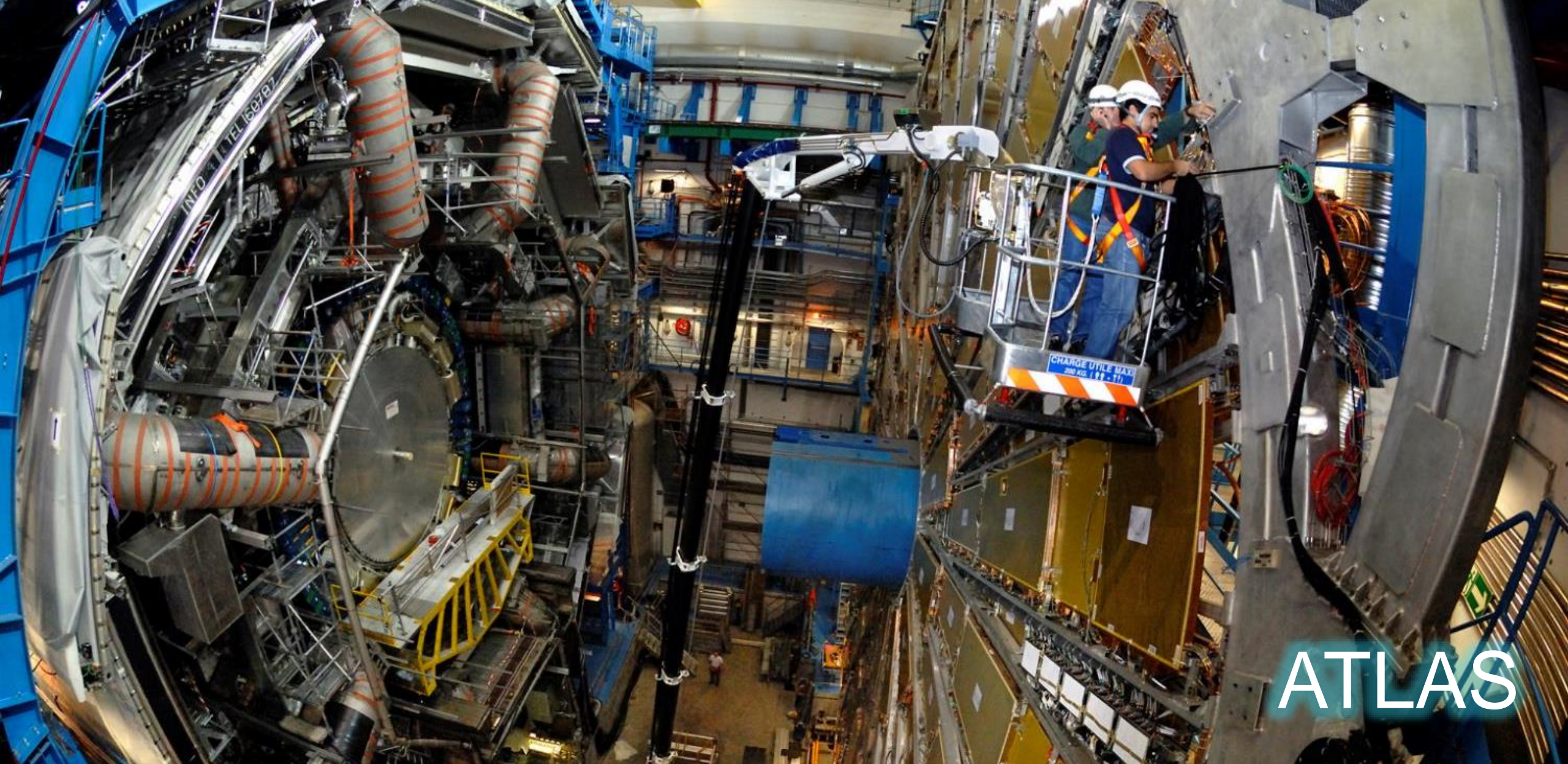
News Future events Past events *Models* Particle physics Contact Support

Models > LHC micro models

LHC micro models



The latest addition to the particle physics brick detector universe is a micro-scale model of the Large Hadron Collider, and its four main detectors, done by Nathan Radioff, a PhD student at the University of Liverpool.



ATLAS

Muon Spectrometer

Hadronic Calorimeter (TileCal)

Electromagnetic Calorimeter (Liquid Argon)

Solenoid Magnet

Tracking Transition Radiation Tracker

Pixel & Silicon-Strip Detectors

Beampipe

muon

neutron

proton

neutrino

electron

photon



ATLAS

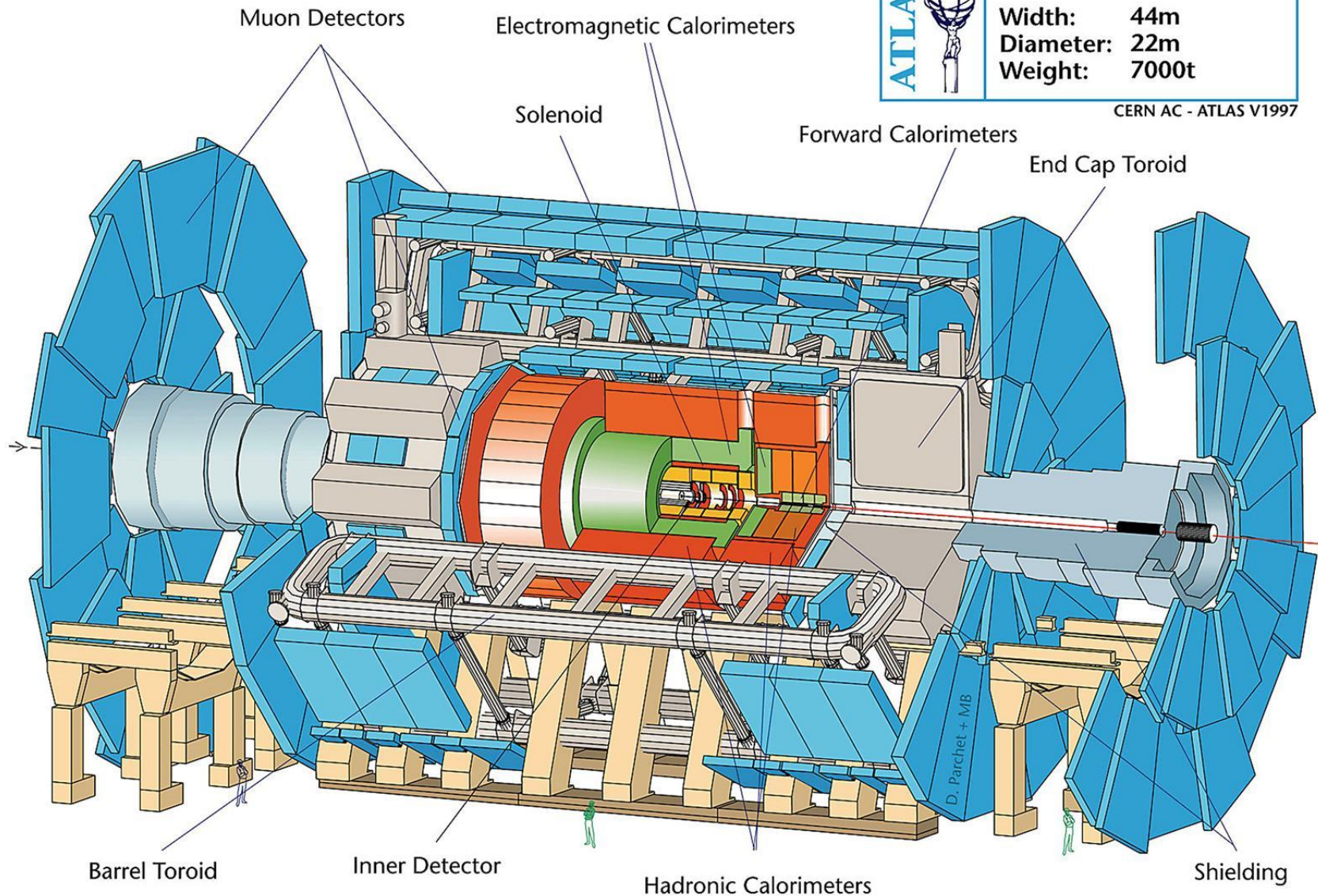
EXPERIMENT



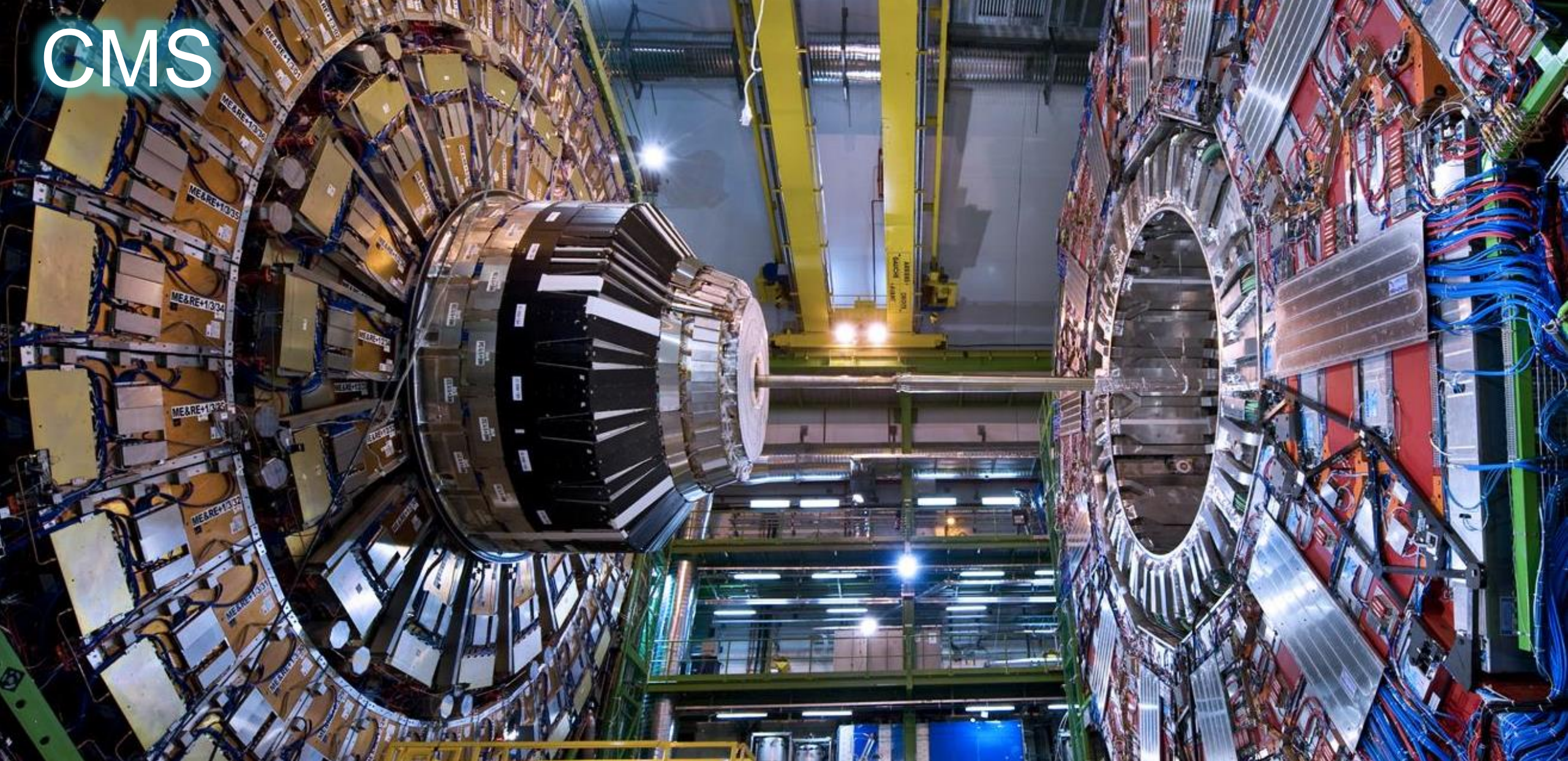


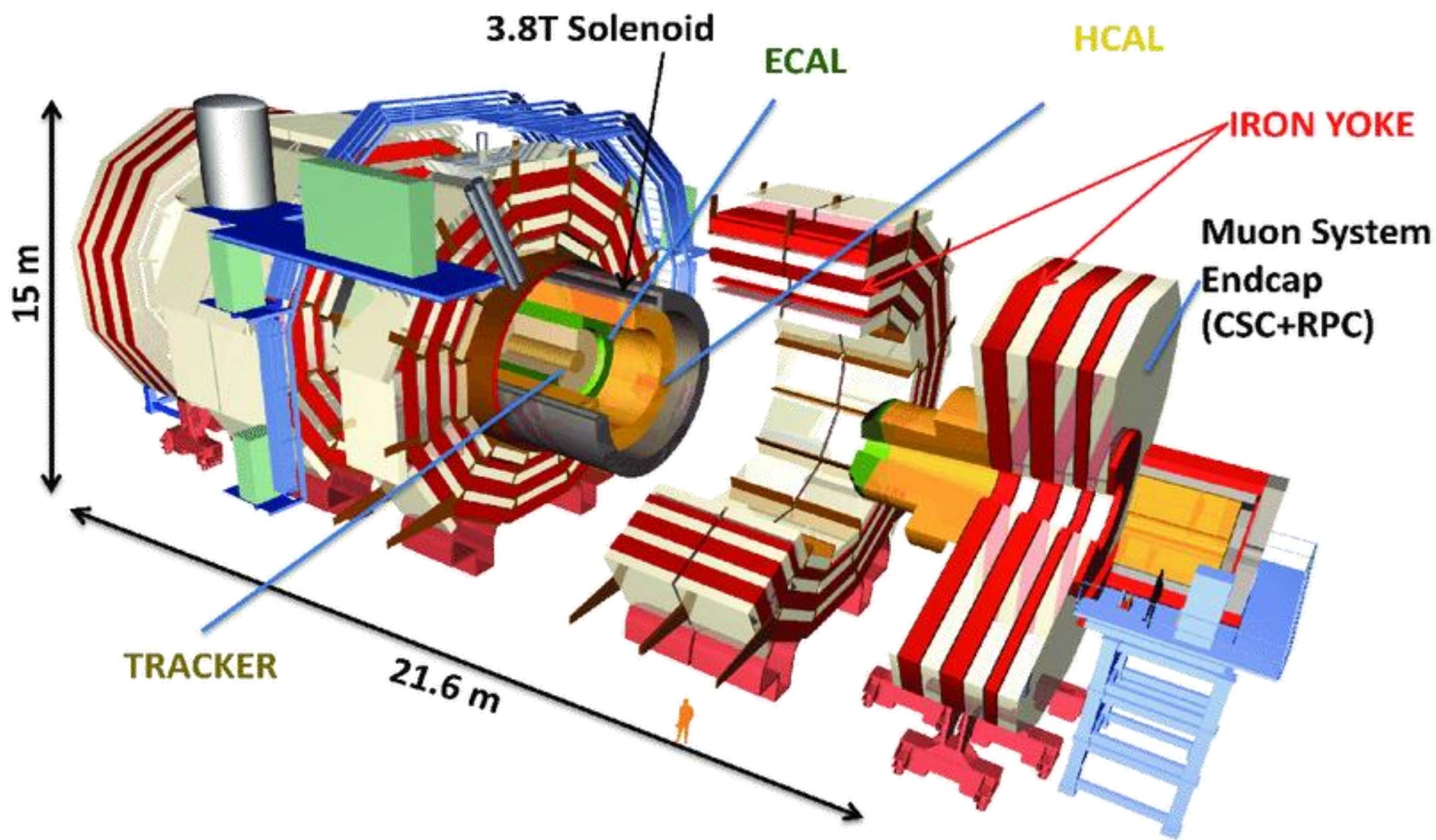
Detector characteristics
Width: 44m
Diameter: 22m
Weight: 7000t

CERN AC - ATLAS V1997

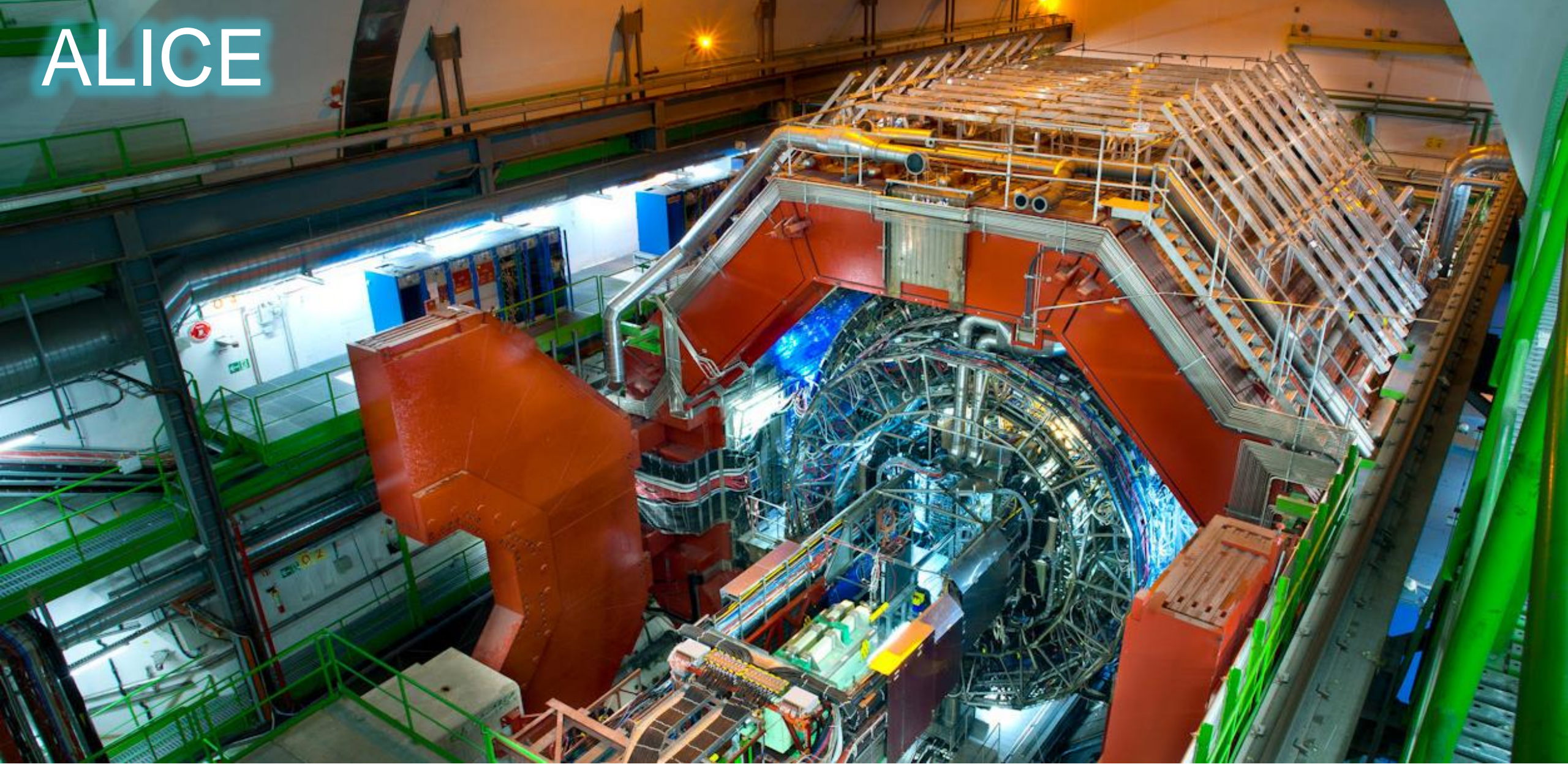


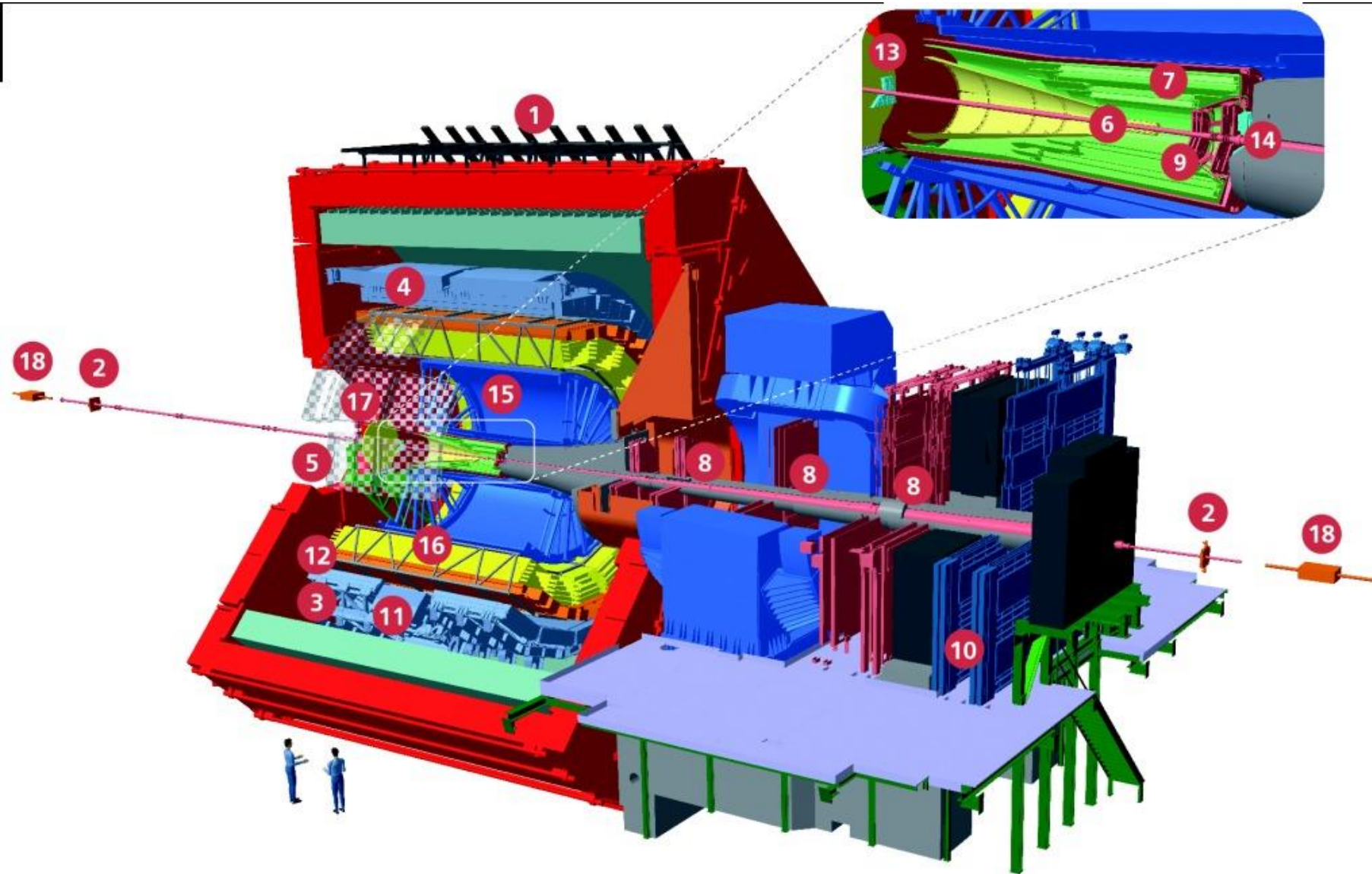
CMS





ALICE





- 1 ACORDE | ALICE Cosmic Rays Detector
- 2 AD | ALICE Diffractive Detector
- 3 DCal | Di-jet Calorimeter
- 4 EMCal | Electromagnetic Calorimeter
- 5 HMPID | High Momentum Particle Identification Detector
- 6 ITS-IB | Inner Tracking System - Inner Barrel
- 7 ITS-OB | Inner Tracking System - Outer Barrel
- 8 MCH | Muon Tracking Chambers
- 9 MFT | Muon Forward Tracker
- 10 MID | Muon Identifier
- 11 PHOS / CPV | Photon Spectrometer
- 12 TOF | Time Of Flight
- 13 T0+A | Tzero + A
- 14 T0+C | Tzero + C
- 15 TPC | Time Projection Chamber
- 16 TRD | Transition Radiation Detector
- 17 V0+ | Vzero + Detector
- 18 ZDC | Zero Degree Calorimeter



LHCb