

## THE CMS EXPERIMENT

The CMS experiment is one of the largest international scientific collaborations in history, involving 4300 particle physicists, engineers, technicians, students and support staff from 182 institutes in 42 countries (2014). It is one of the LHC's two multipurpose experiments, with the same goals as the ATLAS experiment. Having two polyvalent experiments employing different designs, technologies and construction techniques is important when exploring new energy regimes like at the LHC.

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The CMS detector is built around a huge solenoid magnet, in the form of a cylindrical coil of superconducting cable that generates a field of 4 Tesla, about 100,000 times the magnetic field of the Earth. The field is confined by a steel "yoke" that forms the bulk of the detector's 12 500-tonne weight. The complete detector is 21 metres long, 15 metres wide and 15 metres high.