

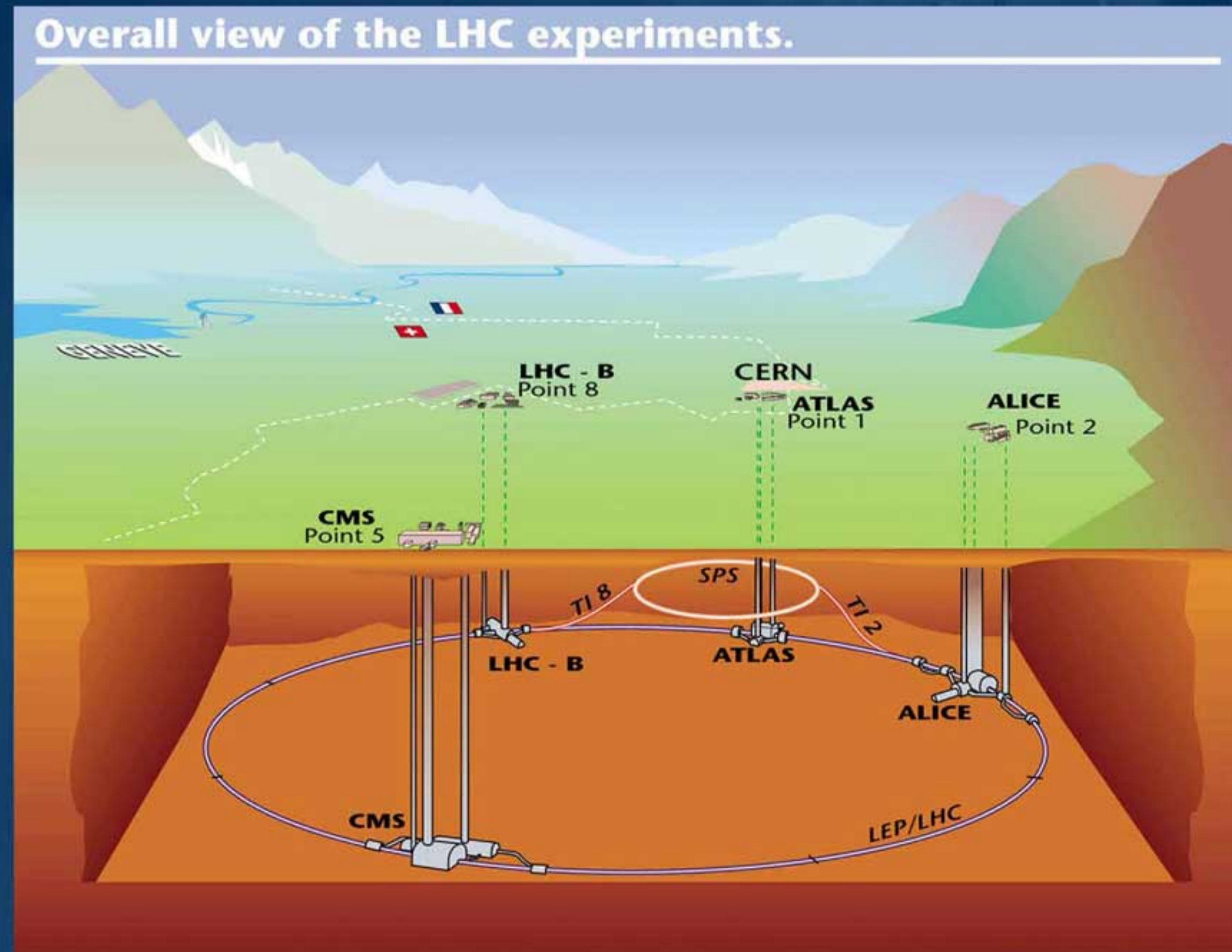
The Large Hadron Collider (LHC)

The LHC accelerates two beams of protons in opposite directions around a circular tunnel, 27km in circumference, which lies about 100m under the French-Swiss border, near Geneva.

It brings the beams into collision at several points around the ring, where the detectors ATLAS, CMS, LHCb & ALICE are situated to observe what happens.



A man inside the LHC tunnel, next to the accelerator



The LHC collides protons at a centre of mass energy of 13 TeV, which is the energy a proton acquires if it is accelerated through a voltage of 13,000,000,000,000 Volts!

Such high energy is sufficient to produce the Higgs boson, which was discovered at the LHC. With luck, it will soon lead to more exciting finds.

The LHC uses powerful magnets to keep the proton beams orbiting in a circle. These are 'superconducting', meaning that they conduct electricity without any loss, thanks to operating at an extremely low temperature.