

The LHC complex

The underground tunnel (-100 m) circumference is 27 km.



Inside ALICE a plasma bubble is generated at about 5 trillion degrees, over a hundred thousand the temperature of the Sun's core.



ALICE dimensions The detector is 16 m high and 25 m long, and it weighs 10000 tons.



ALICE is a LHC experiment in which **lead nuclei collisions** are studied. Using the nuclei of atoms with many protons and neutrons, **the collision energy is such to create a plasma of quarks and gluons**: a state of matter that existed a few millionth of a second right **after the Big Bang**, in extreme density and temperature conditions.

Central Barrel

It identifies the particles, reconstructing their path and measuring their velocity



ALICE's main components

SOLENOID MAGNET – CALORIMETERS – TRANSITION RADIATION DETECTOR – TIME OF FLIGHT – TIME PROJECTION CHAMBER – PIXEL INNER TRACKER – DIPOLE MAGNET – MUON CHAMBERS – MUON IDENTIFIER.