

Colossal new atom smasher unveiled

Scientists at the *Large Hadron Collider*, the world's biggest particle accelerator, have revealed plans for a much larger successor, the *Future Circular Collider*, which aims to solve the remaining enigmas of physics



Area enlarged

LARGE HADRON COLLIDER (LHC)

Circumference:
26.66km

■ Network of magnets in underground tunnel help to accelerate atoms (hadrons), crashing them together at almost speed of light

■ Sub-atomic particles left over from collisions help scientists determine what atoms are made of

FUTURE CIRCULAR COLLIDER (FCC)

Circumference:
90.7km

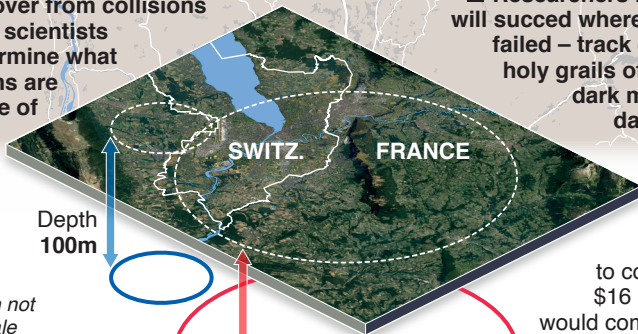
LAKE GENEVA

5km
3 miles

Artist's impression of FCC

■ Detection in 2012 of new particle called **Higgs Boson** is LHC's biggest achievement

■ Researchers hope FCC will succeed where LHC has failed – track down two holy grails of physics; dark matter and dark energy



Depth
100m

Depth not to scale

Depth
200m

■ FCC is projected to cost around \$16 billion and would commence in mid-2040s, pending approval from 24 member countries of CERN* in 2028

*European Organisation for Nuclear Research

Sources: CERN, AP, BBC

Pictures: PIXELRISE via CERN, Google Earth

© GRAPHIC NEWS