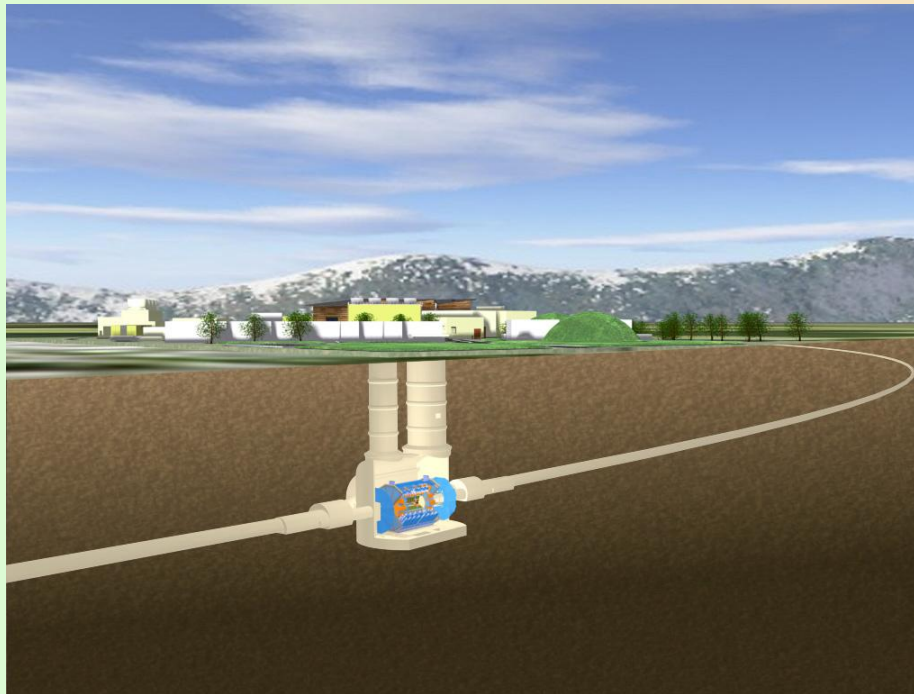


# The Large Hadron Collider (LHC)

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## Detection and Data Acquisition

ATLAS is about 45 meters long, more than 25 meters high, and weighs about 7,000 tons. It is about half as big as the Notre Dame Cathedral in Paris and weighs the same as the Eiffel Tower or a hundred 747 jets (empty).

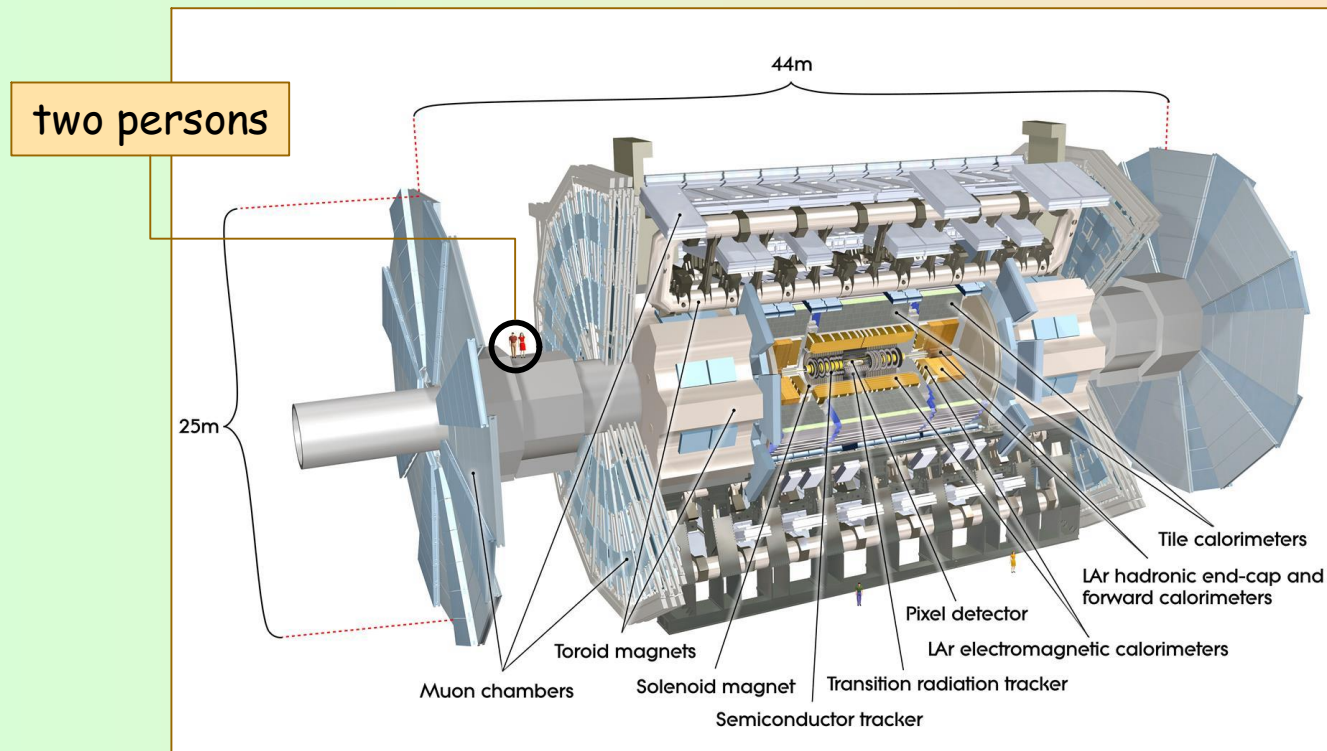


# The Large Hadron Collider (LHC)

## Detection and Data Acquisition

There are six detectors (experiments) with different objectives. ATLAS detector is one of them.

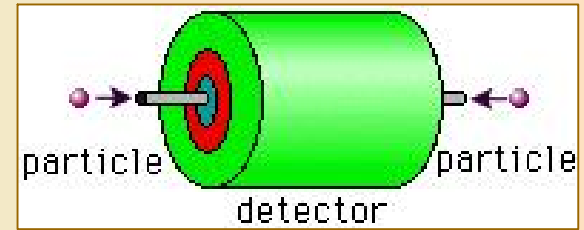
ATLAS records a fraction of the data (those that may show signs of new physics) and that rate is equivalent to 27 CDs per minute.



# The Large Hadron Collider (LHC)

## Detection and Data Acquisition

During a colliding-beam experiment, the particles radiate in all directions, so the detector is spherical or, more commonly, cylindrical.



[http://www.atlas.ch/etours\\_exper/experiment-04.html](http://www.atlas.ch/etours_exper/experiment-04.html)

The momenta of particles can be calculated since the paths of particles with greater momentum bend less than those of lesser momentum.



This is a computer reconstruction of a proton-proton collision event that produced an electron-positron pair as well as many other particles.

