

How a typical LHC detector identifies particles

Most interesting particles produced at the LHC (Higgs bosons, Z' bosons, super-symmetric particles ...) have very short lifetimes, so can't be observed directly. However, we can infer their presence by looking for longer-lived particles into which they decay: namely muons, electrons, charged hadrons, neutral hadrons and photons. As shown here, each of these give a unique signature in the detector, allowing them to be distinguished from each other.

