

# Geometries for tracking, calorimeter and muon systems

## Tracking

1. solenoid CMS-like
2. toroid ATLAS-like
3. “spherical detector”

## Calorimeter

1. projective (p.71)
2. 6-8 tons/m<sup>3</sup>
3. ~100 m<sup>3</sup>
4. CMS solenoid has rails for supporting the calorimeter
5. forward region a problem, too.

## Muon

1. CMS
2. ATLAS
3. “Iron Ball” detector

## A talk by Franco Grancagnolo on a new tracking chamber

1. Drift Chamber (DC) - wires, HV, gas, drift of e- in gas under E-field
2. Count electron ionization clusters -  $dN/dx$
3. Clock individual clusters to improve spatial resolution
4. Ultra-low mass

## A detector in R&D looking for an experiment

1. first, in 4th proposal
2. second, in Mu2e proposal at Fermilab
3. third, now chosen chamber for MEG at PSI
4. fourth, in design for FCCee at CERN