

# CMS DETECTOR

Total weight : 14,000 tonnes  
Overall diameter : 15.0 m  
Overall length : 28.7 m  
Magnetic field : 3.8 T

## STEEL RETURN YOKE

12,500 tonnes

## SILICON TRACKERS

Pixel ( $100 \times 150 \mu\text{m}^2$ )  $\sim 1.9 \text{ m}^2 \sim 124\text{M}$  channels  
Microstrips ( $80-180 \mu\text{m}$ )  $\sim 200 \text{ m}^2 \sim 9.6\text{M}$  channels

## SUPERCONDUCTING SOLENOID

Niobium titanium coil carrying  $\sim 18,000 \text{ A}$

## MUON CHAMBERS

Barrel: 250 Drift Tube, 480 Resistive Plate Chambers  
Endcaps: 540 Cathode Strip, 576 Resistive Plate Chambers

## PRESHOWER

Silicon strips  $\sim 16 \text{ m}^2 \sim 137,000$  channels

## FORWARD CALORIMETER

Steel + Quartz fibres  $\sim 2,000$  Channels

CRYSTAL  
ELECTROMAGNETIC  
CALORIMETER (ECAL)  
 $\sim 76,000$  scintillating  $\text{PbWO}_4$  crystals

HADRON CALORIMETER (HCAL)  
Brass + Plastic scintillator  $\sim 7,000$  channels

