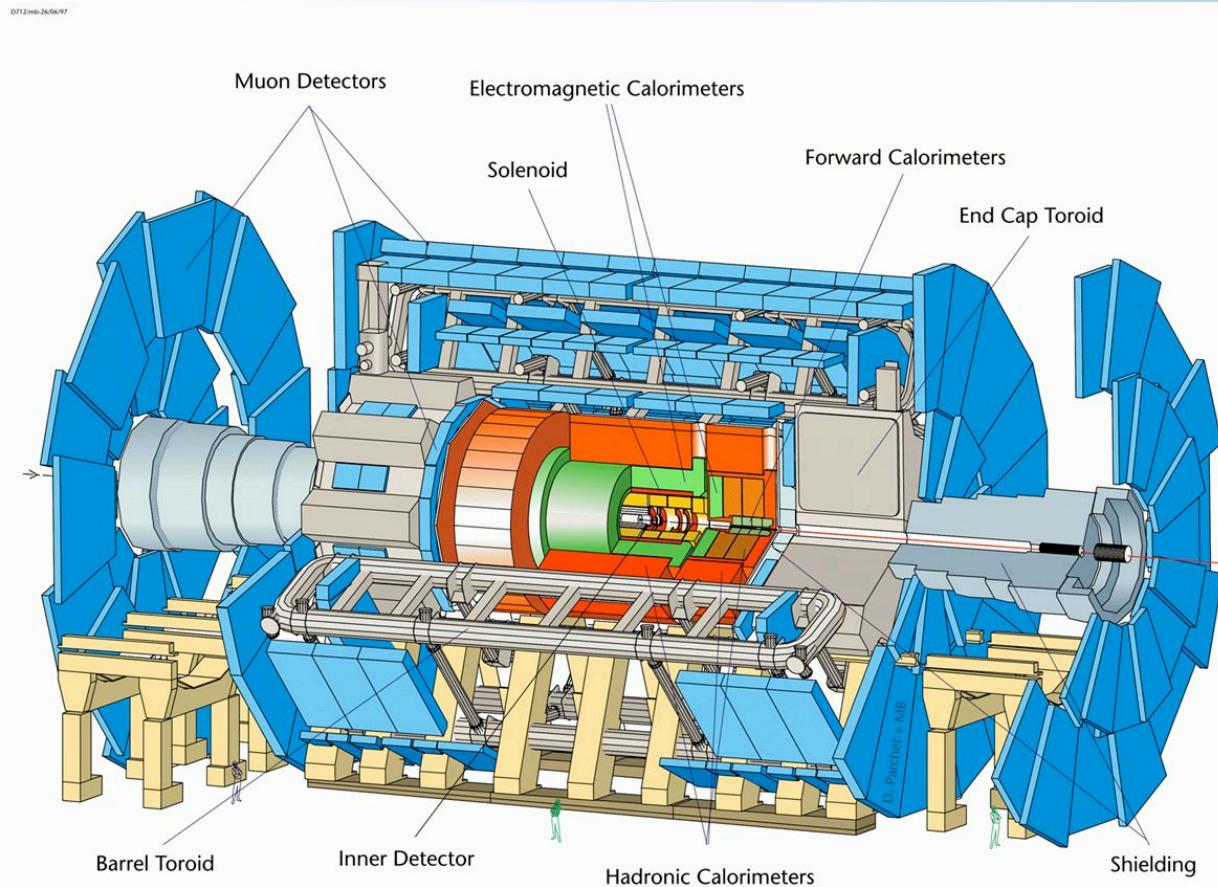




ATLAS

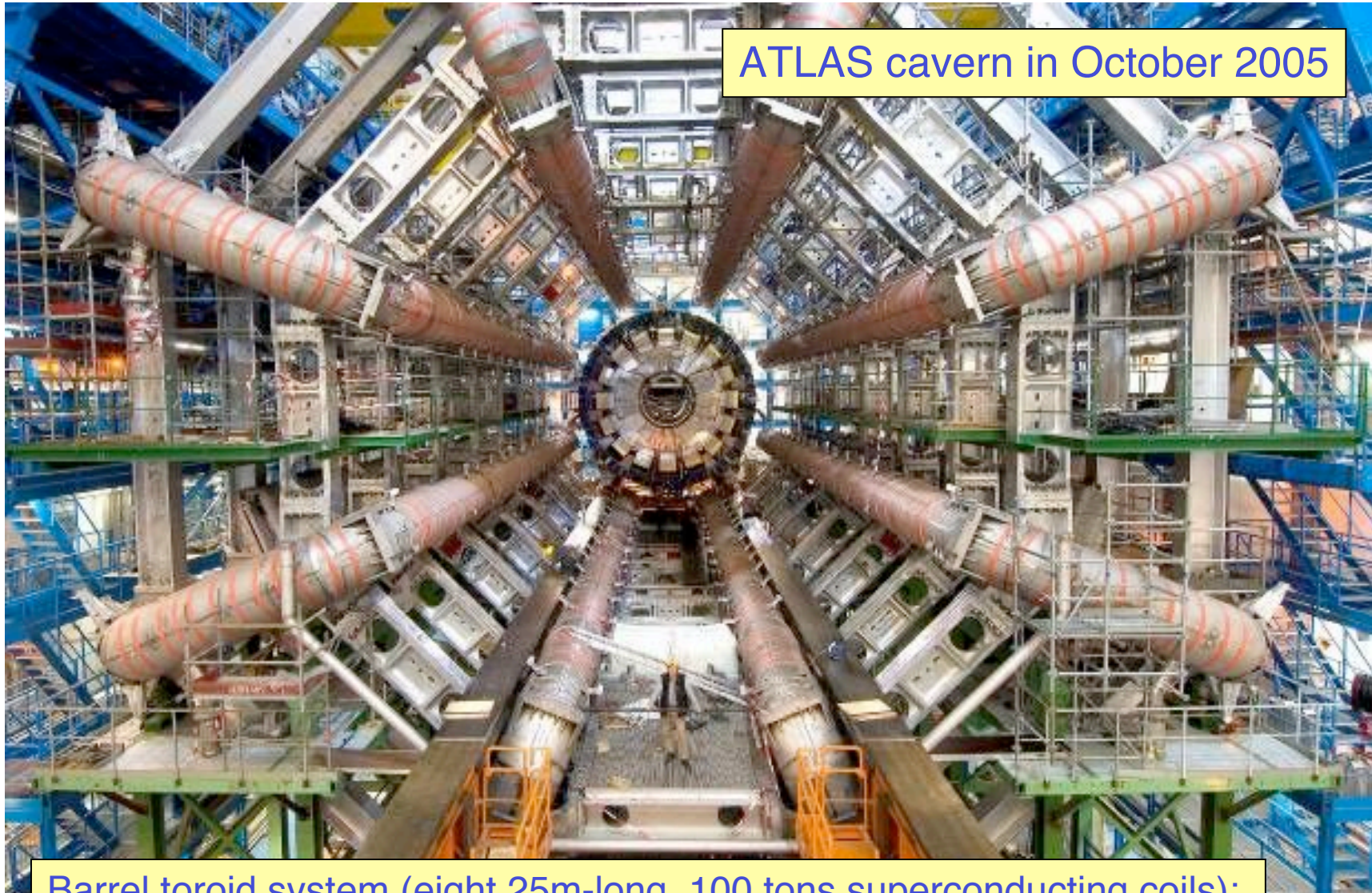


Diameter 25 m
Barrel toroid length 26 m
End-cap end-wall chamber span 46 m
Overall weight 7000 Tons

- **Tracking ($|\eta| < 2.5$, $B=2T$)**
 - Si pixels and strips
 - Transition Radiation Detector (e/π separation)
- **Calorimetry ($|\eta| < 5$)**
 - EM : Pb-LAr
 - HAD: Fe/scintillator (central), Cu/W-LAr (fwd)
- **Muon Spectrometer ($|\eta| < 2.7$)**
 - air-core toroids with muon chambers



ATLAS: Central Systems

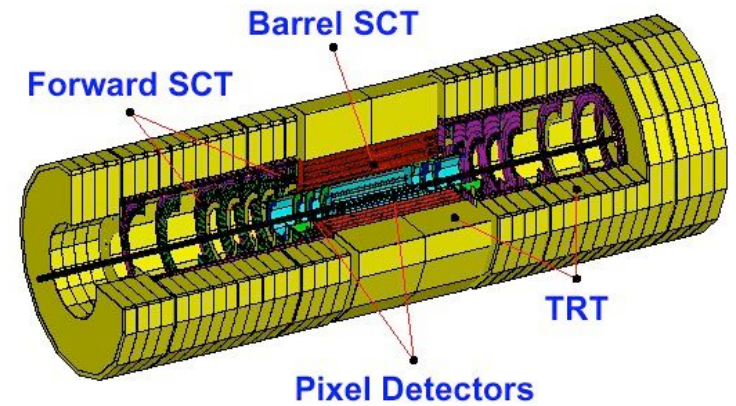


ATLAS cavern in October 2005

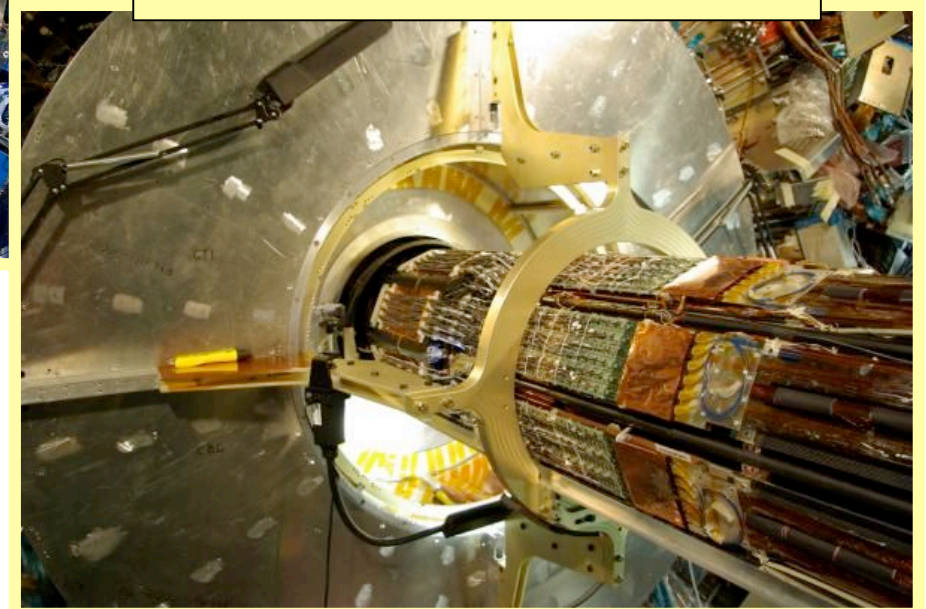
Barrel toroid system (eight 25m-long, 100 tons superconducting coils): tested at full field (20 kA current) in November 2006.



ATLAS: Inner Tracker



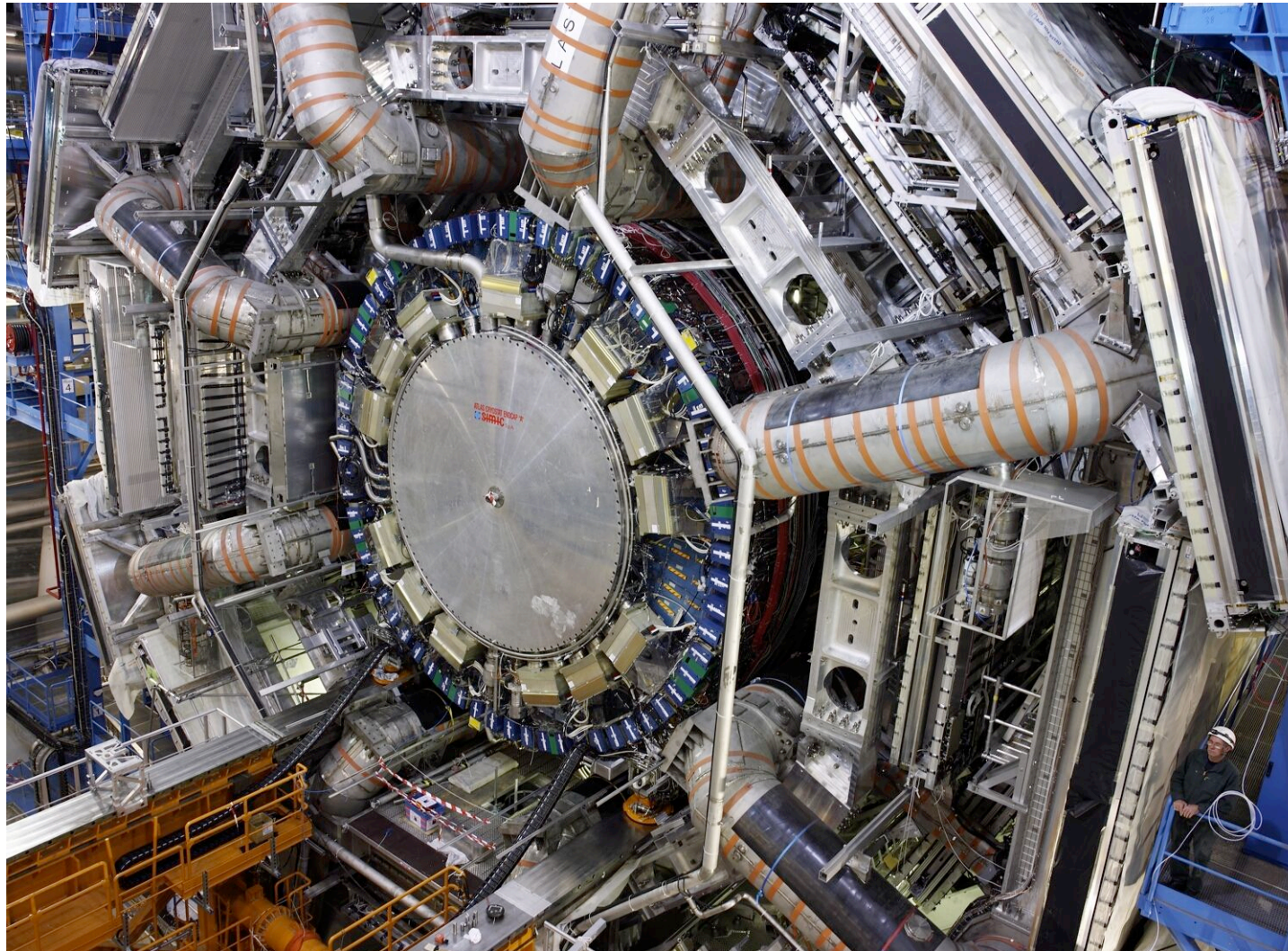
Pixels (+ beam pipe) insertion
June 2007



Inner Detector installation
in underground cavern completed



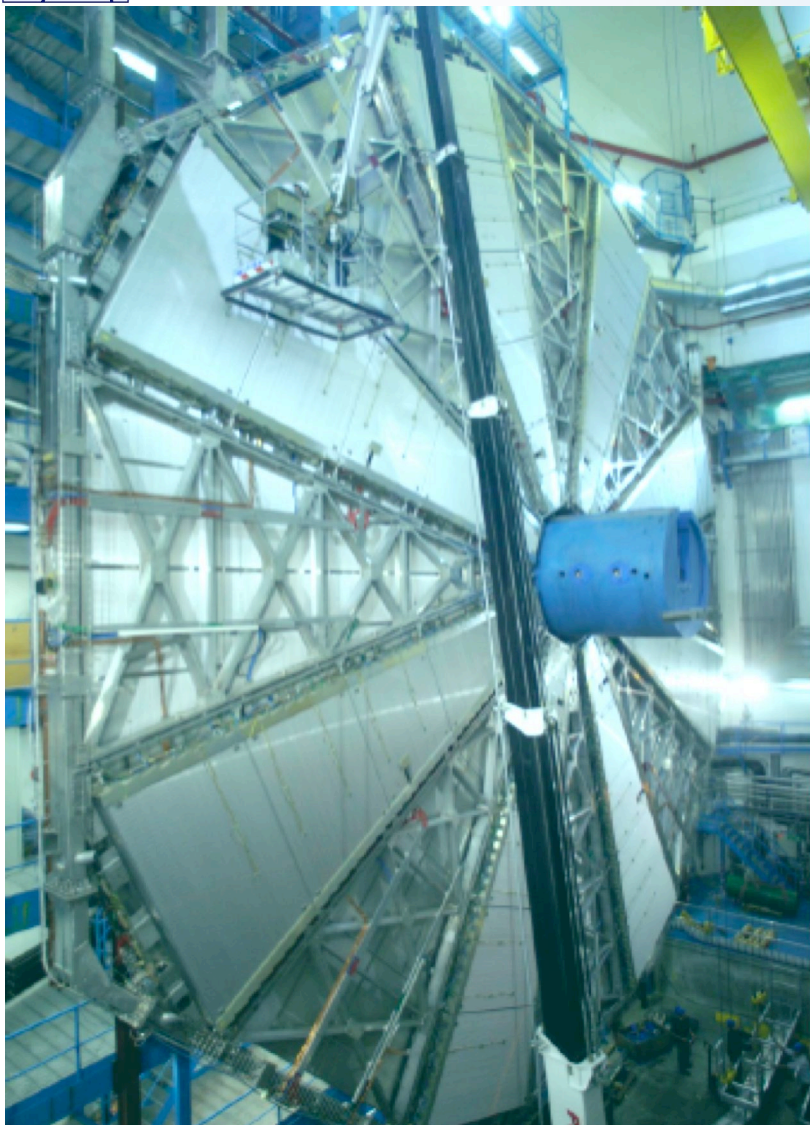
ATLAS: Calorimeters



The calorimeter end-cap partially inserted, the LAr end-cap is filled with LAr

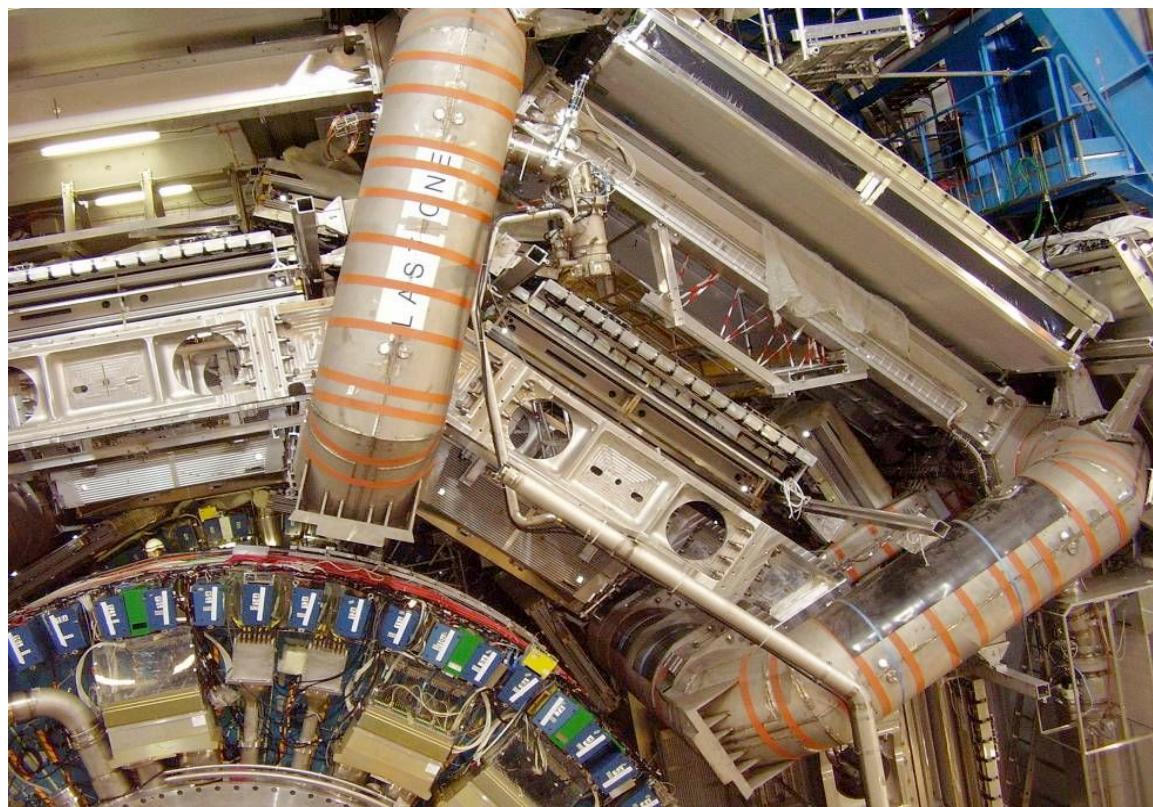


ATLAS: Muon System



First complete MDT Big Wheel

**Barrel chamber installation is ~ completed
End-cap muon installation has progressed in
parallel on both sides (6 of 8 Big Wheels done)**

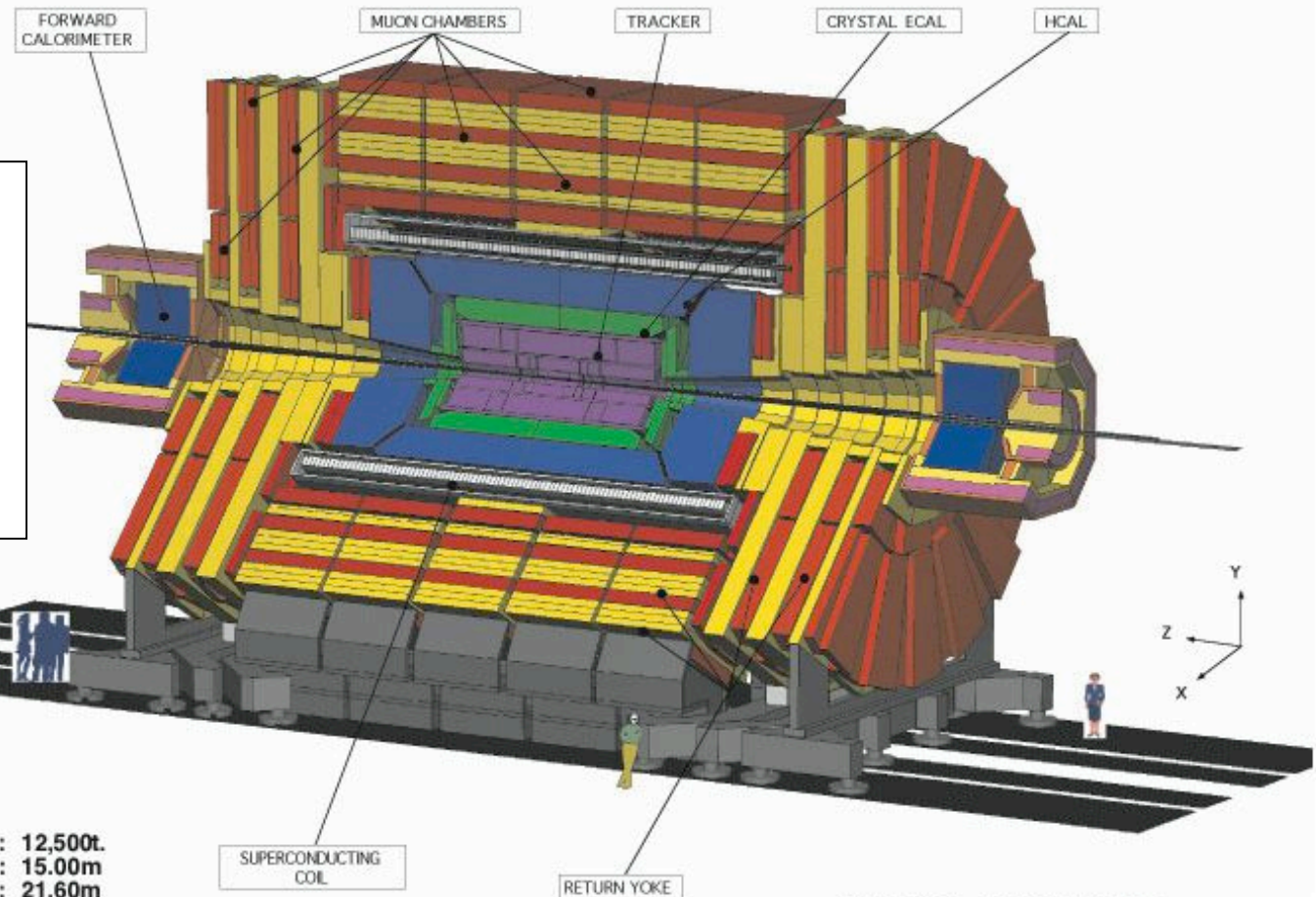


Barrel muon stations



CMS

CMS A Compact Solenoidal Detector for LHC



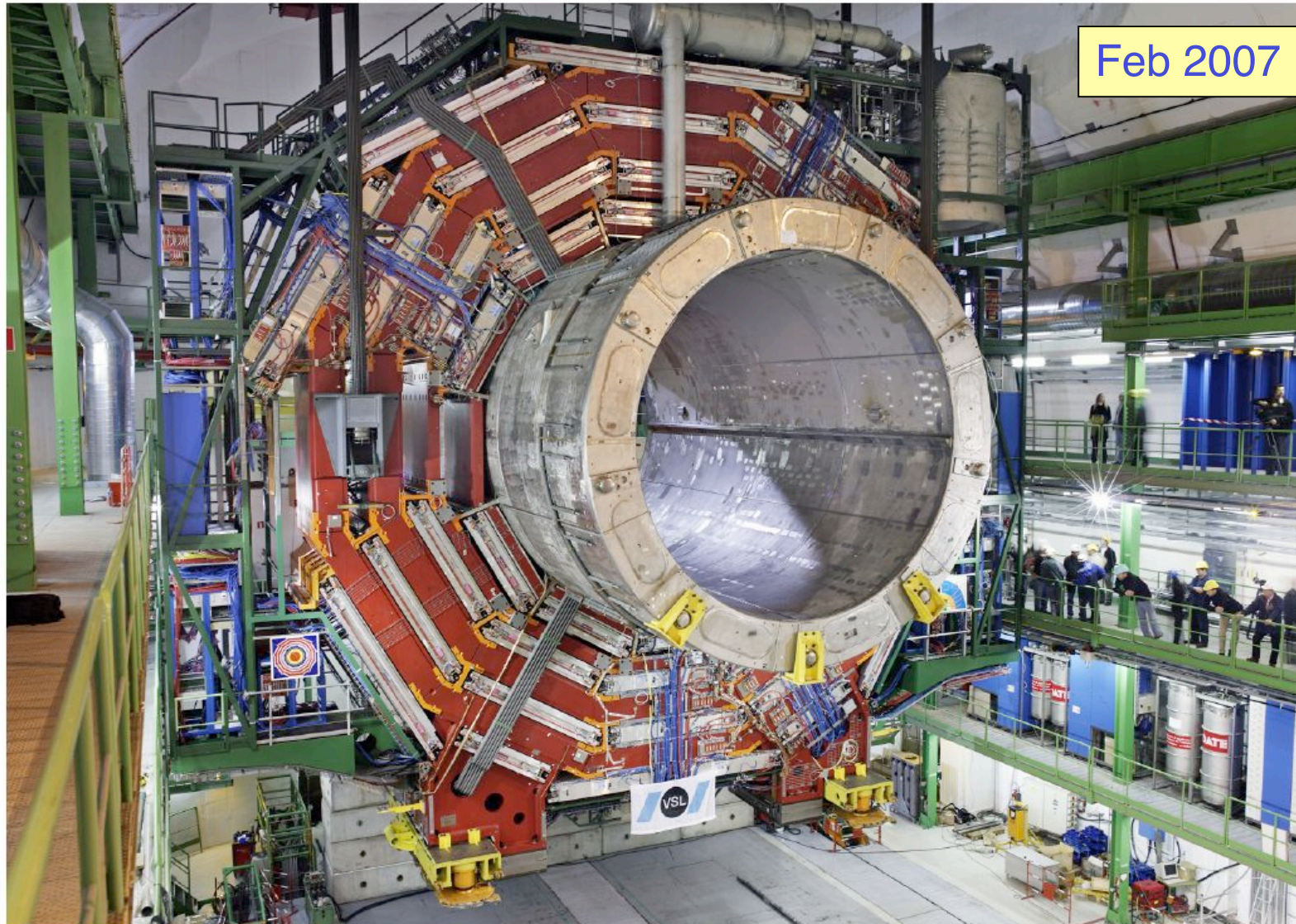
- **Tracking ($|\eta| < 2.5$, $B=4T$)**
 - Si pixels and strips
- **Calorimetry ($|\eta| < 5$)**
 - EM : PbWO₄ crystals
 - HAD: Brass/scintillator (central), Fe/Qfibres (fwd)
- **Muon Spectrometer ($|\eta| < 2.1$)**
 - DTs, CSCs, RPCs

Total weight : 12,500t.
Overall diameter : 15.00m
Overall length : 21.60m
Magnetic field : 4 Tesla

CMS-PARA-001-11/07/97 JLB.PP



CMS Heavy Lowering: YB0

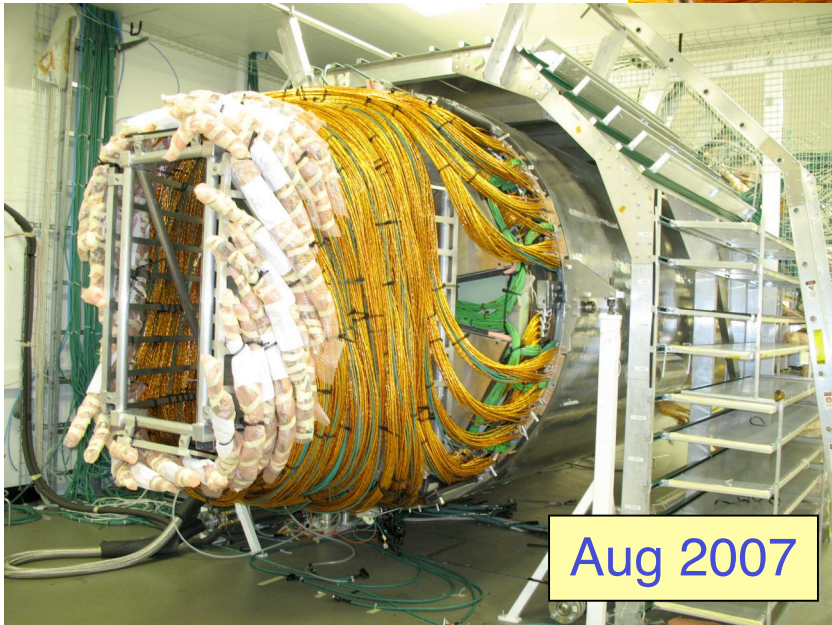
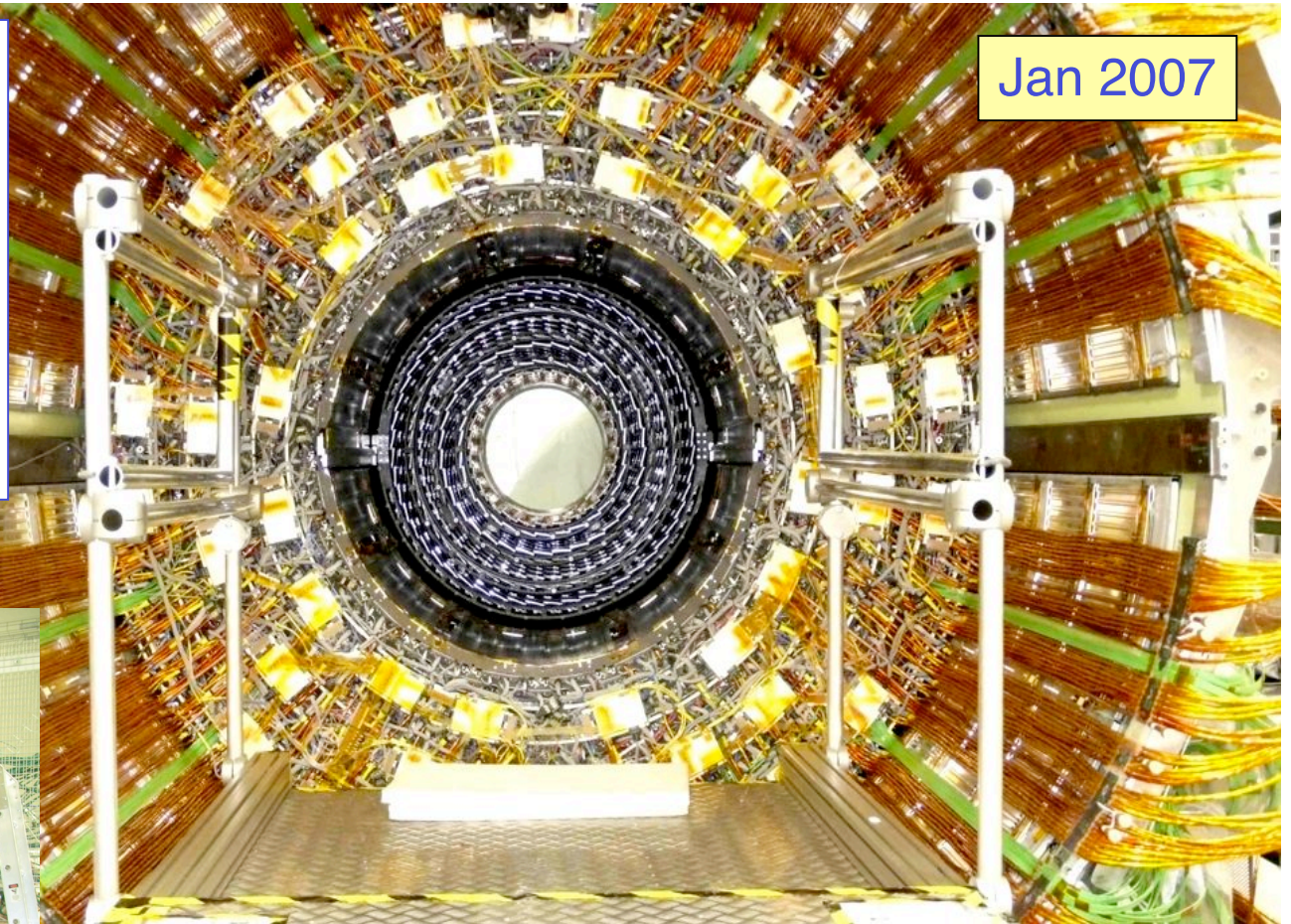


YB0 landing in the CMS experiment hall



CMS Tracker (Jan07)

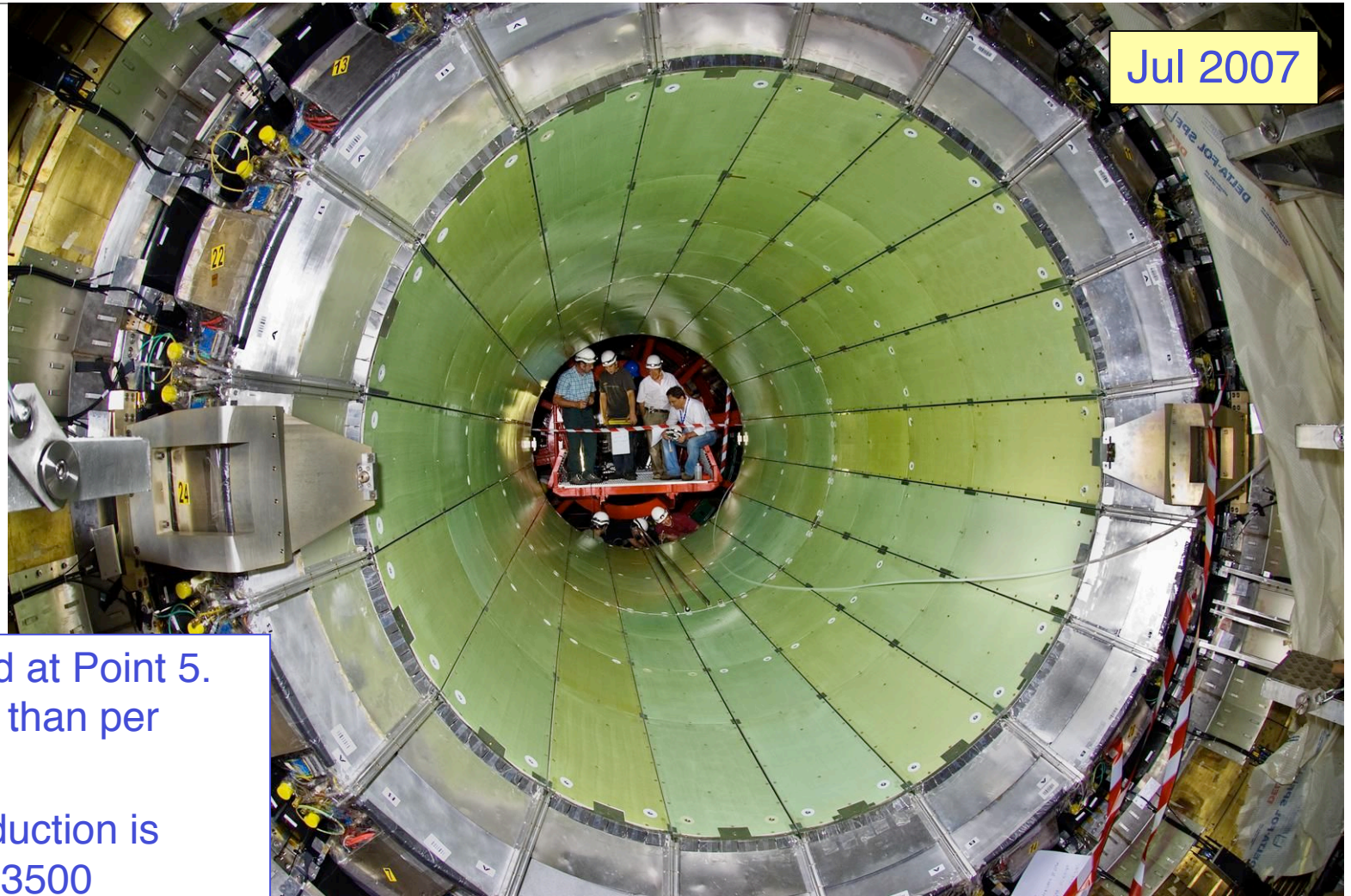
- The Silicon tracker (200m^2) was integrated into the support tube end-Mar. Been commissioned at several temperatures including operating temperature (-15°C).
- ~ 5 M cosmics recorded,
- Ready for transport to Pt. 5.
- Will be installed in UX in Oct.





CMS: Barrel ECAL

Jul 2007



- Barrel ECAL installed at Point 5. Excellent quality (less than per mille).
- Endcap crystals production is proceeding well: over 3500 crystals now delivered (out of 14750 needed). Last EE crystal will be delivered end-Mar'08.



CMS: Muon Chambers

All precision muons chambers installed and tested.
RPC chamber installation will finish in September.

Feb 2007

