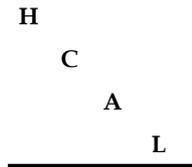




US CMS - HCAL

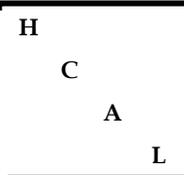


Status of US CMS and CMS HCAL

Theresa Shaw



Schedule and Initial detector



Pilot Run

First Beam in April 2007

Collisions in June 2007

Shutdown

Physics Run start in August/September 2007 @ $1-2 \cdot 10^{33}$

Run until $5-10 \text{ fb}^{-1}$

CMS Initial Detector for Physics Run (as already presented in CR02)

Staged items:

Muons: ME4, RE4, REs at small radius (RE1/1, RE2/1, RE3/1)

New: restore ME4/1.

Tracker: 3rd forward pixel disks

50% DAQ

Descoped items:

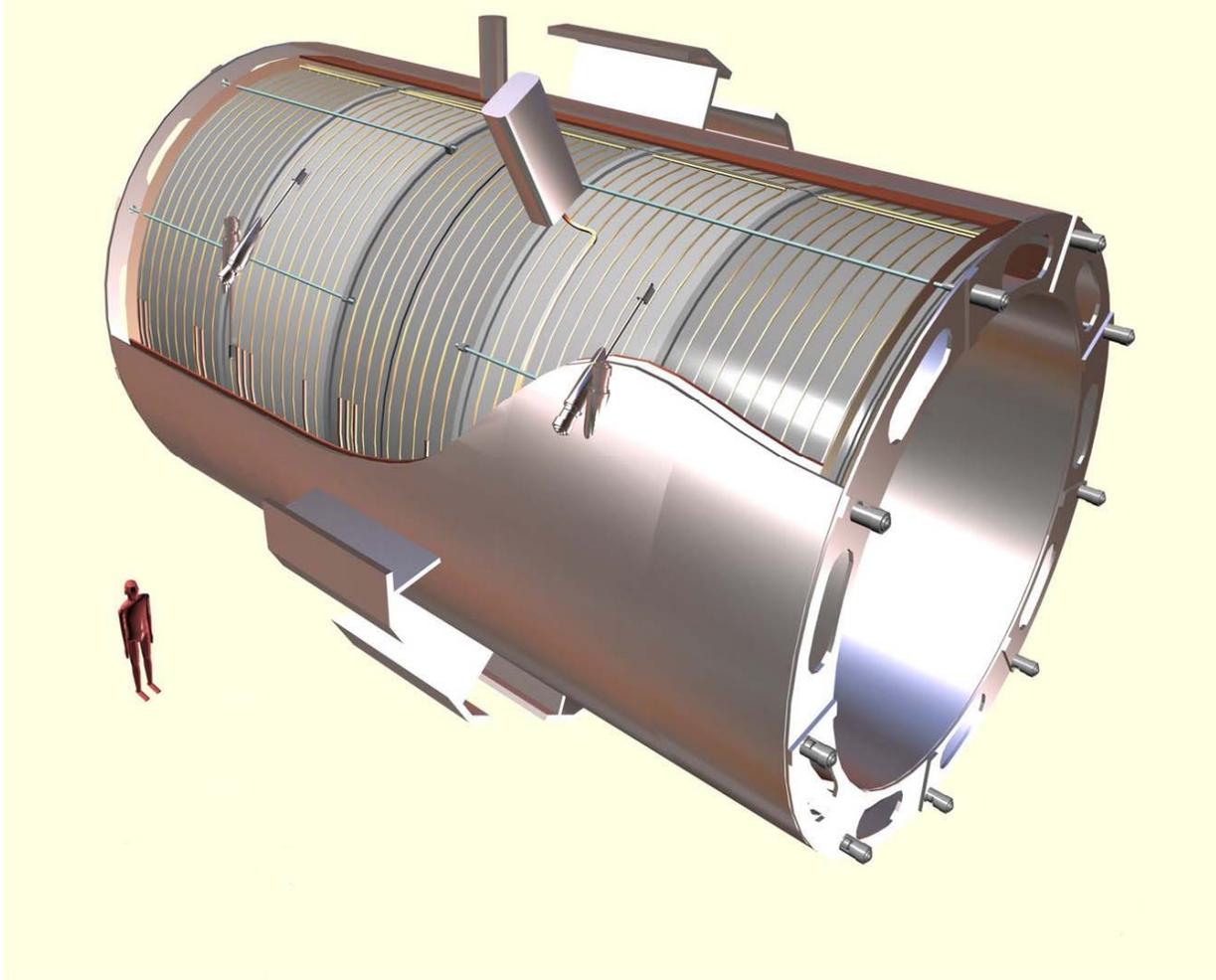
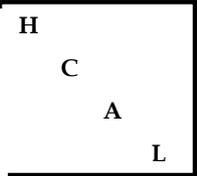
HCAL (reduced no. of longitudinal samplings), ME1/1a (3 channels in one, no muon trigger beyond $|\eta| = 2.1$)

Assembly schedule

For this review: v33.2 (compared to v33 used in CR02: 2 month delay in magnet test, 2 month delay in Civil Engineering USC)



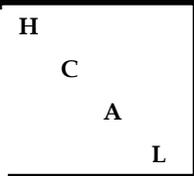
Status of Winding Project end of June 2003



CB-2	90%
CB-1	66%
CB0	44%
CB+1	15%
CB+2	3%
Total	43%



Magnet Coil Project ~ 50% complete



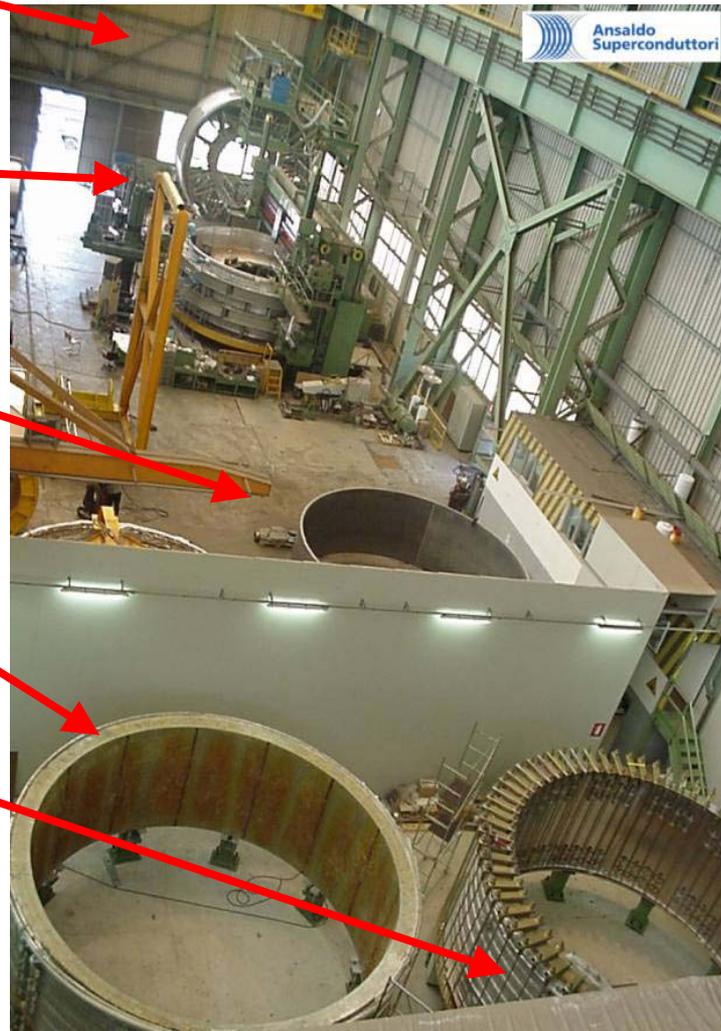
CB+1
23%

CB0
48%

CB+2
4%

CB-2
96%

CB-1
76%



CB-1, CB-2 delivered to CERN Dec 03. Last coil CB+2 delivered to CERN May 04 (3 mo delay).

Magnet test start delayed by only **2 months** (already reported to RRB and LHCC):

1 Jan 05→1 Mar 05

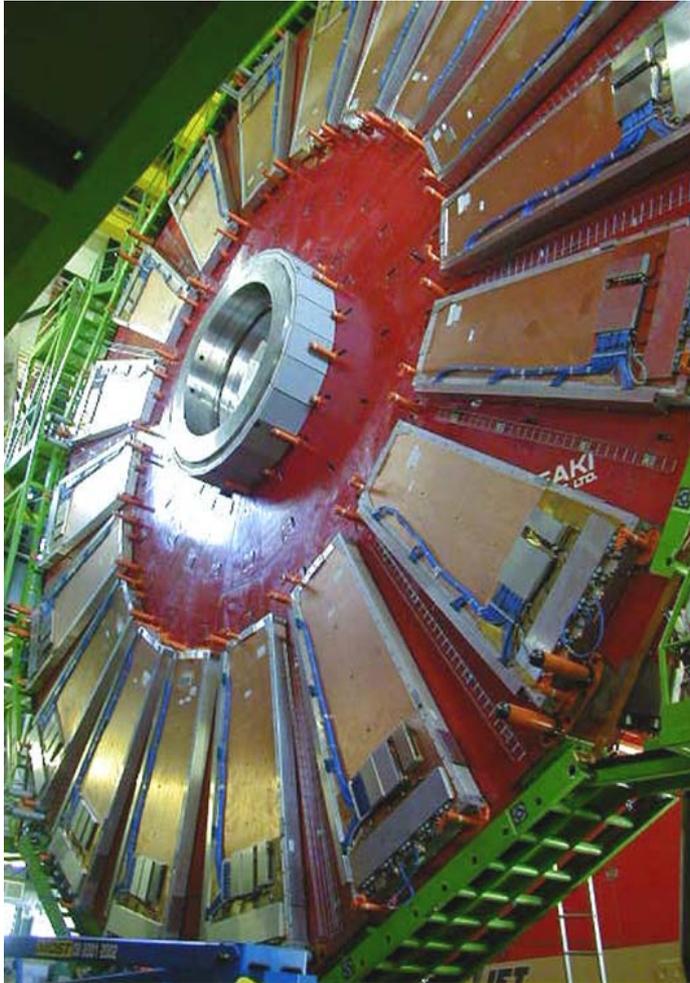
Compensated in v33.2 by reduced magnet test underground



Muon Cathode Strip Chambers Mounted on YE disks

H
C
A
L

CSC production ~ 90% complete (total 482 CSCs including spares)



YE+2, 36 CSCs mounted

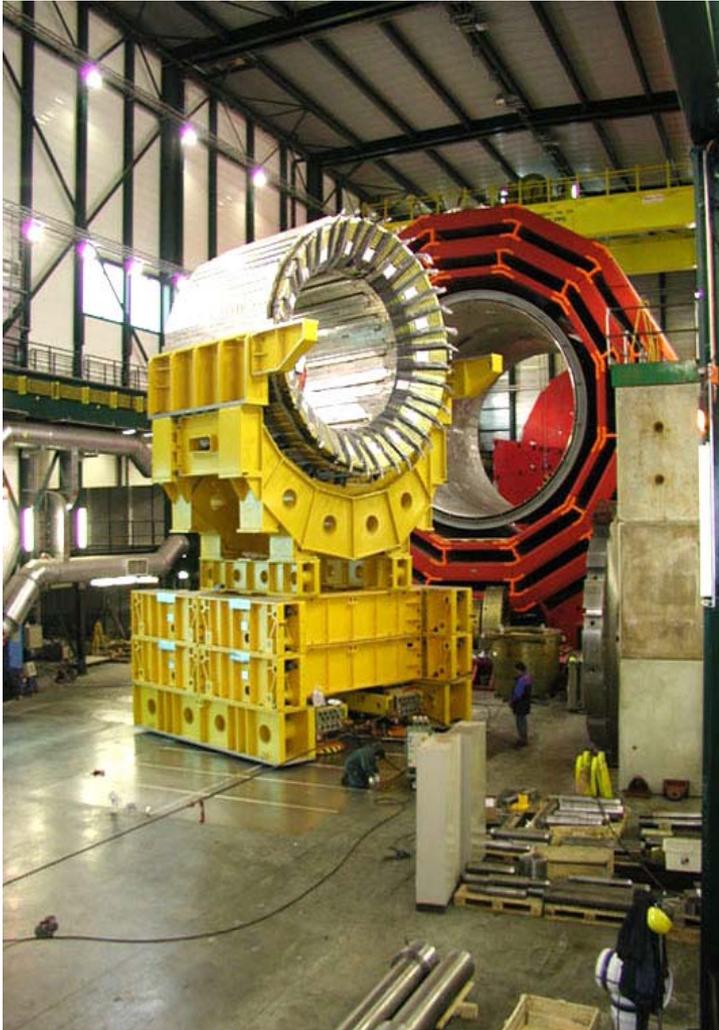


YE-2, 45 CSCs mounted



HCAL: The two HBs have been Completed

H
C
A
L



Ready for installation of readout boxes and burn in 2004.
Insertion in vacuum tank: Jan 2005.



HCAL: The two HEs have been Completed

H
C
A
L

HE+1

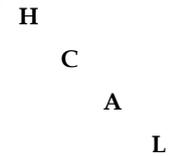


HE-1





HCAL :HF Fibre Insertion



31 HF wedges complete (out of 36).

Last 5 wedges are half finished, waiting for more fibres. Additional Fibres to come 30 Oct (including for one spare wedge).

All 36 wedges complete by 15 Nov 2003 (instead of Apr 2004 target).

Cylindrical support structure + table manufactured in Iran and on schedule.

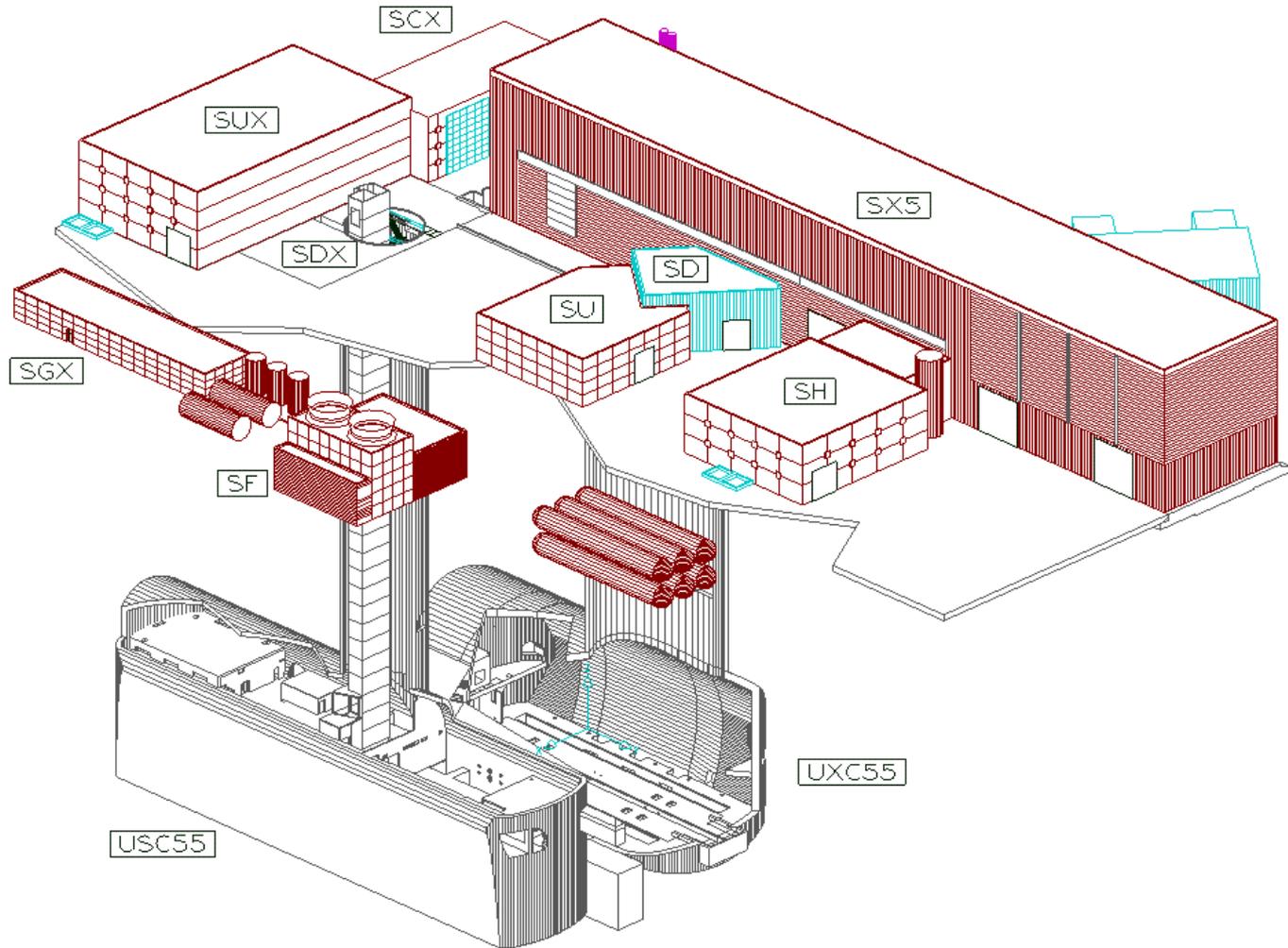
Mount HF wedges on final support structure in 2004.

2 wedges tested in beam (summer 2003).



Civil Engineering and Magnet

H
C
A
T





Outstanding Surface Works: SX5, SDX5 and SCX5

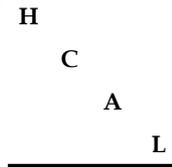
H
C
A
L



LHC POINT 5: Outstanding surface works



Construction of 2nd Phase SX5 has Started



Extension of SX slab has started

Crown of shaft is being removed



UXC5 Steel Reinforcement of Floor

H
C
A
L

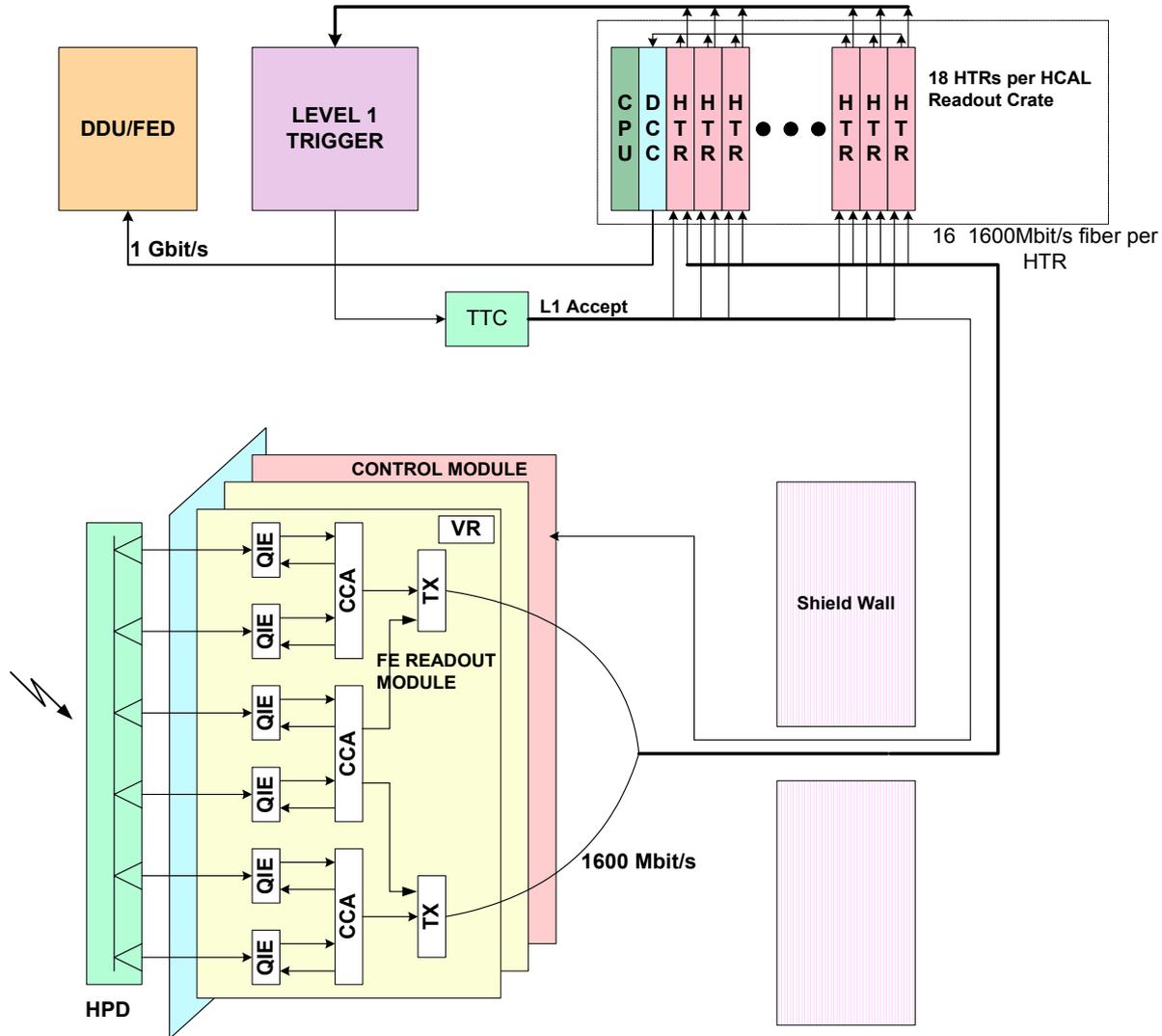


LHC - Point 5 - UXC 55 - concreting of second phase invert (central section) - 18-07-2003 - CERN ST/CE



HCAL FE/DAQ Electronics

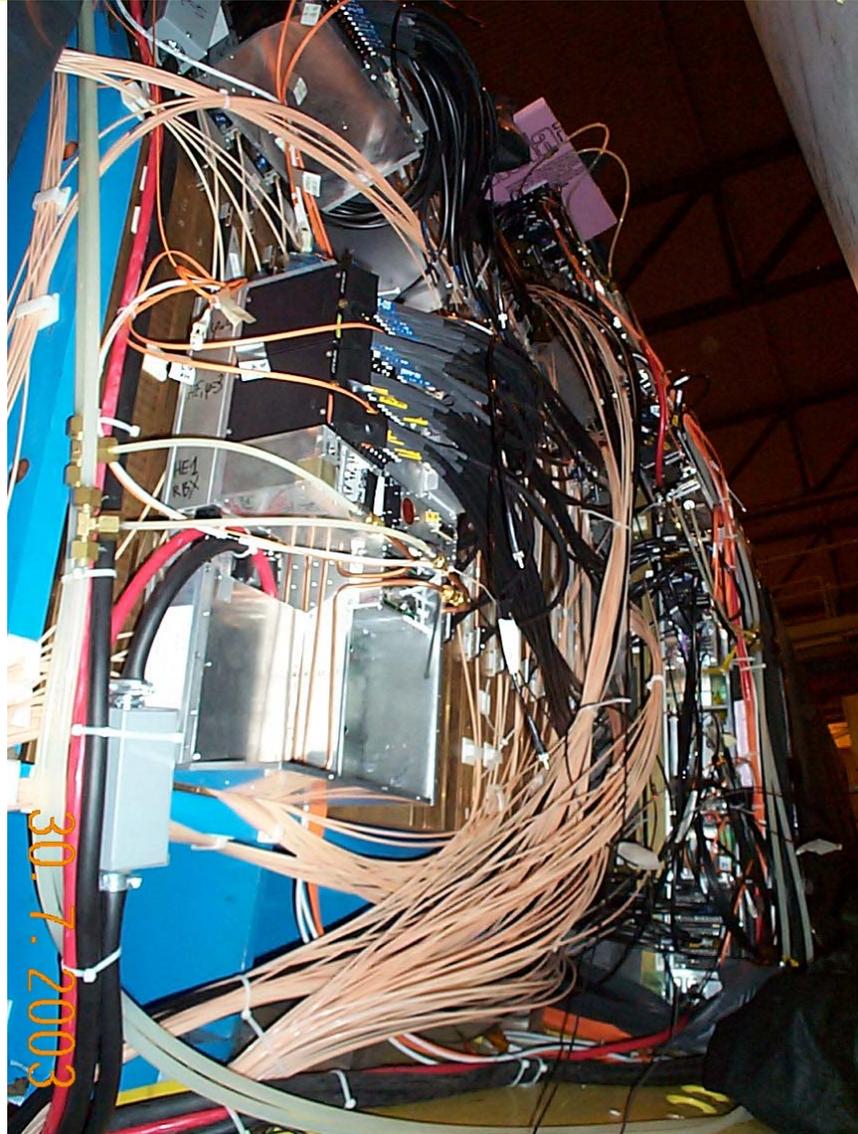
H
C
A
L





HE, HB RBXs at CERN Testbeam 03

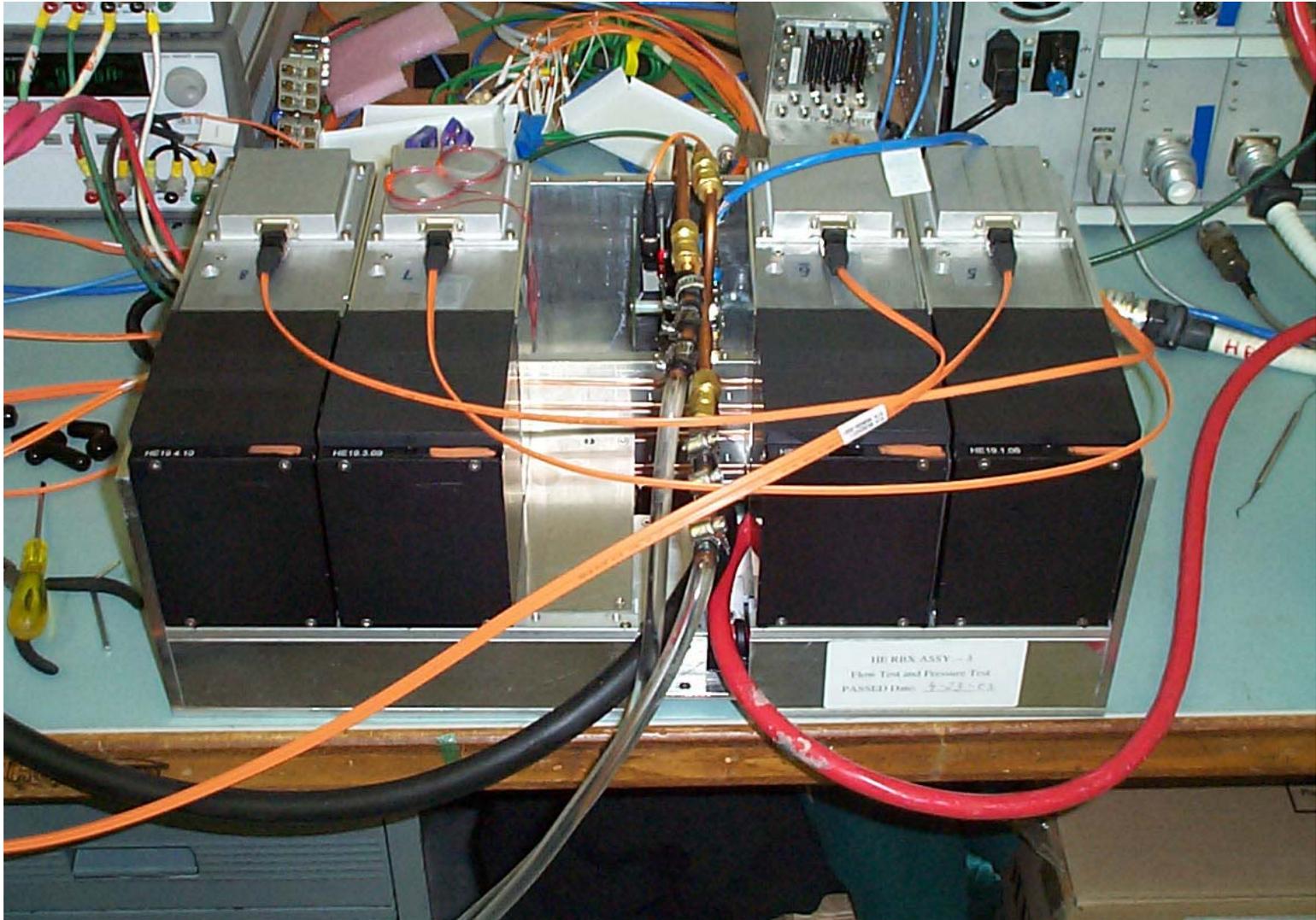
H
C
A
L





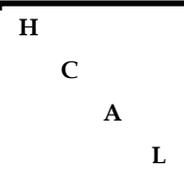
HCAL HE RBX with 4 RMs

H
C
A
L





US CMS Summary



Construction ~85% done

Electronic Status Reviews of Muon, HCAL and Trigger Electronics have okay'd production plans.

Reviews of Pixels and Silicon Strip electronics upcoming.