Update on CMS
Installation and Commissioning

All Experimenters’ Meeting
February 17, 2008
Lenny Spiegel

Last AEM CMS update December 17, 2007 by Kaori Maeshima
Compact Muon Solenoid
Strip Tracker Installed in Solenoid on December 15
Tracker Service Connections

- Tracker has been aligned to ±1 mm
- Nose cones removed in Week 2
- Connection of Tracker to PP1 started in Week 3.
- Connection of cooling pipes started in Week 4
Tracker PP1
Tracker Connections

980 pipe connections
   Week 6: ~25%

3347 fiber connections
   Week 6: ~43%

2330 cable connections

Pipe insulation, barrel cables, TEC fibers, TEC cables.

34 technicians and 12 supervisors from Tracker institutes.
Barrel and Forward Pixel Systems

BPIX being commissioned at PSI. All modules have been mounted. +X side layers 1, 2, and 3 merged To be transported in Week 10.

Entire FPIX now at CERN. Last half cylinder arrived in December HC+Z1, HC-Z1 commissioned. HC±Z2 by second week in March
In November one of the two strip Tracker heat exchangers failed and some 300kg of ‘brine’ flooded into the C₆F₁₄ expansion tank and supply lines.

The Tracker was not connected at the time.

Clean-up largely done. Temporary fix to replace TYFOXIT with C₆F₁₄. Fully engineered replacement in 2 years?
Thermal Screen installed on +Z side
YE-1 lowered on January 22
Last of the 15 heavy pieces

YE-2 lowered on Jan. 12
S45: 3 training quenches, reached about 6 TeV  
S56 held at LN$_2$ temperature over Christmas break  
S78, S81 started cool down last week  

A failure in any sector could mean a several month delay.
CMS/LHC Countdown to Collisions

March
- Cool down of CMS solenoid, low current test
- Beginning of CMS beam pipe installation in week 10
- Cosmic run (0T) starting in week 11

April
- Beam pipe bake-out continues

May
- Pixel systems installed in week 19
- CMS closed at end of month

June
- Cosmic Run 4T (CRAFT)
- CMS Ready for beam mid June
  - Second Endcap ECAL ready for installation
- Approximately 30 days of beam to establish first collisions