

CSC Track-Finder Plans for Commissioning at Bat.904 and Point 5

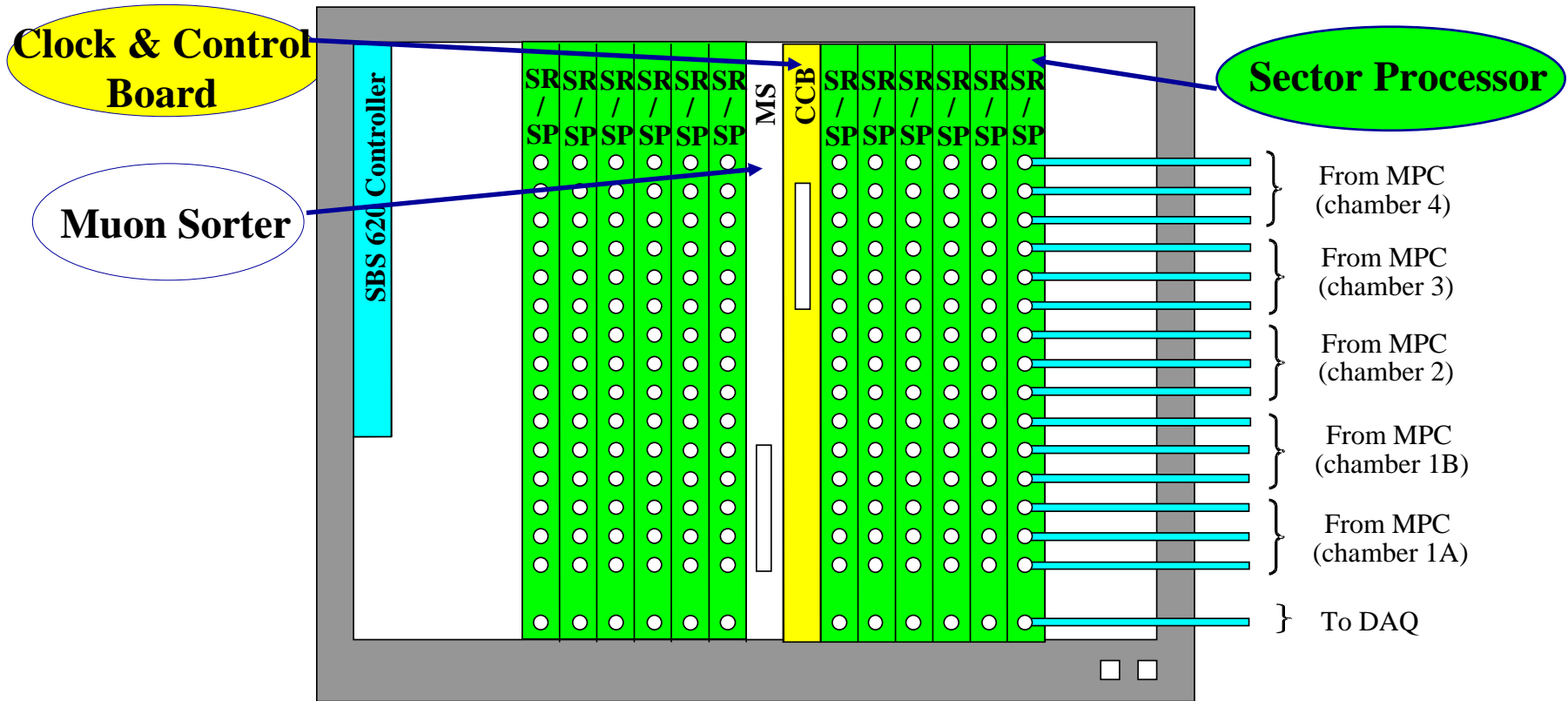
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University of Florida



CSC Track-Finder Crate

Single crate system, in production now



Interfaces:

180 optical links from 60 EMU peripheral crates (3 fibers/crate)

72 SCSI cables to/from DTF crates



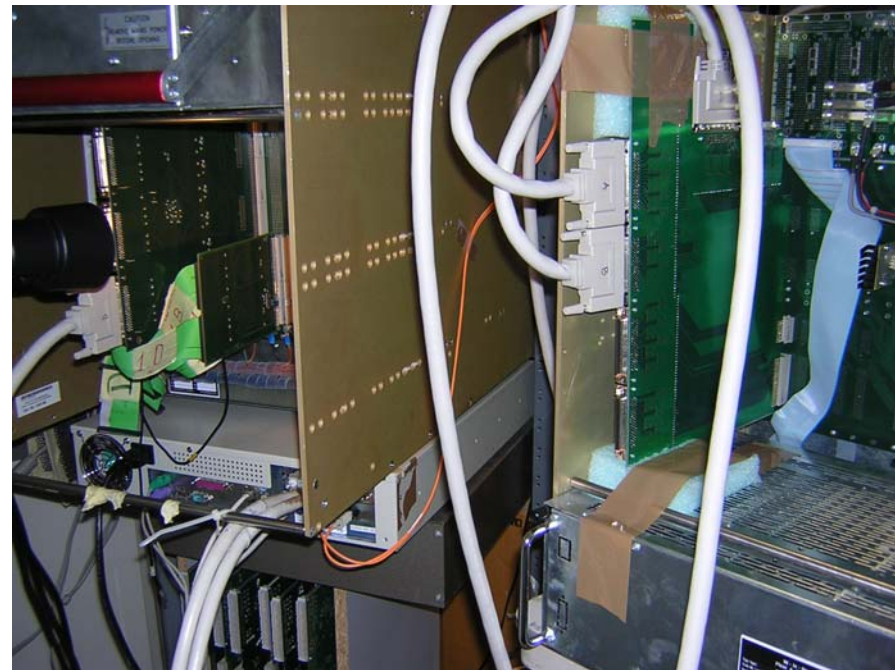
Status of Track-Finder

- **Second-generation Sector Processor prototype has been fully tested, along with a prototype CCB (TTC interface) and Muon Sorter**
- **SP production launched with two pre-production samples**
 - ◆ **Board manufacture complete and inspected**
 - ◆ **Will be thoroughly tested once successfully assembled**
- **Production & single board tests complete by May '05**
- **Additional 2 months of testing in U.S. for full Track-Finder crate tests with Muon Sorter**
- **Ready for tests at CERN with full production system by Aug. '05**
- **But, the existing 3 prototypes are available for testing at CERN now**
 - ◆ **Prototype is nearly identical to final design**



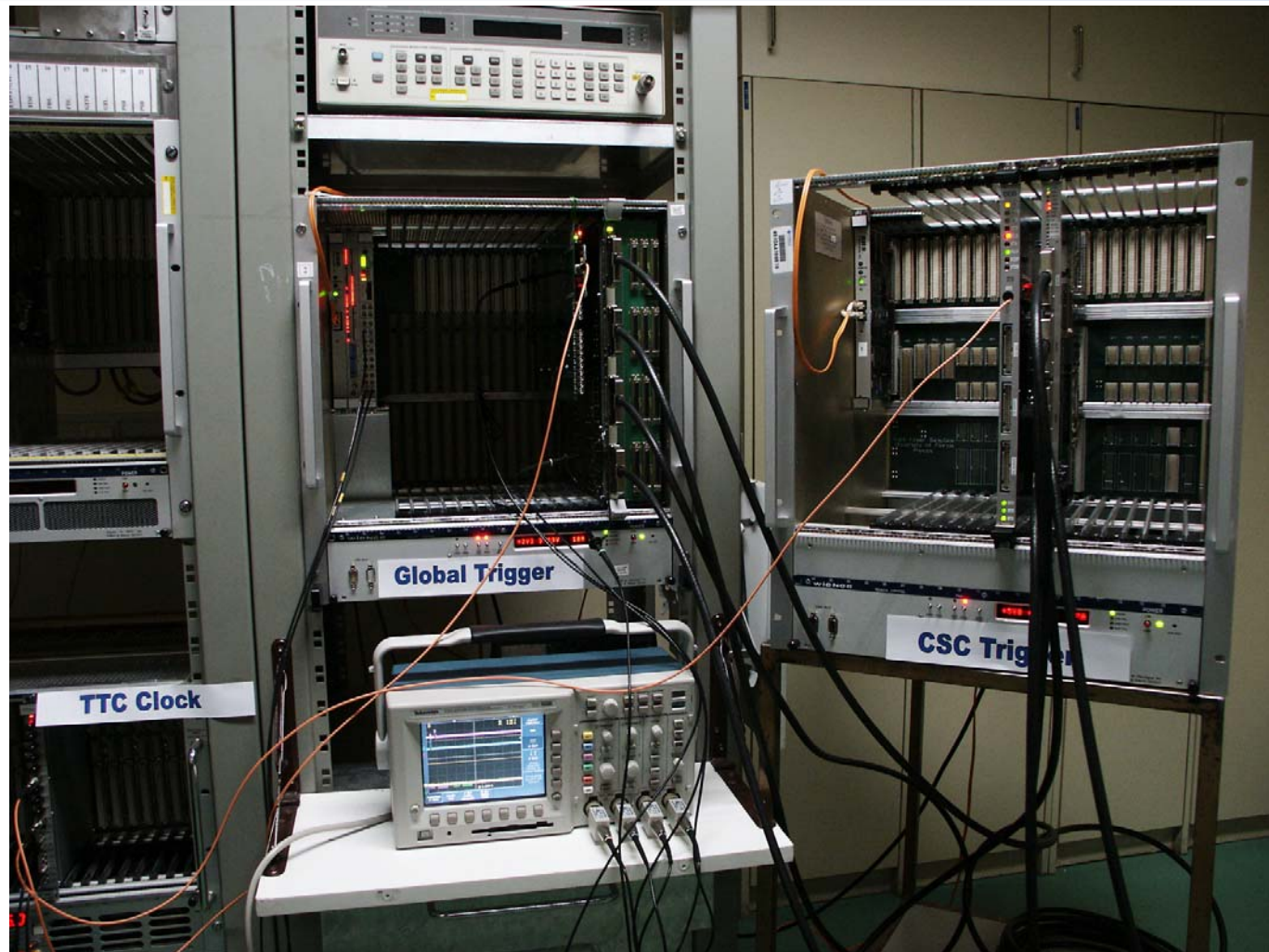
DT/CSC Integration Tests

- Two tests have taken place in last 15 months
- Tested data communication from each Track-Finder to the other through separate transition cards and cables
- More sophisticated tests will need to take place in the future (Bat.904) to test our synchronization procedure, combined Track-Finding, and software integration





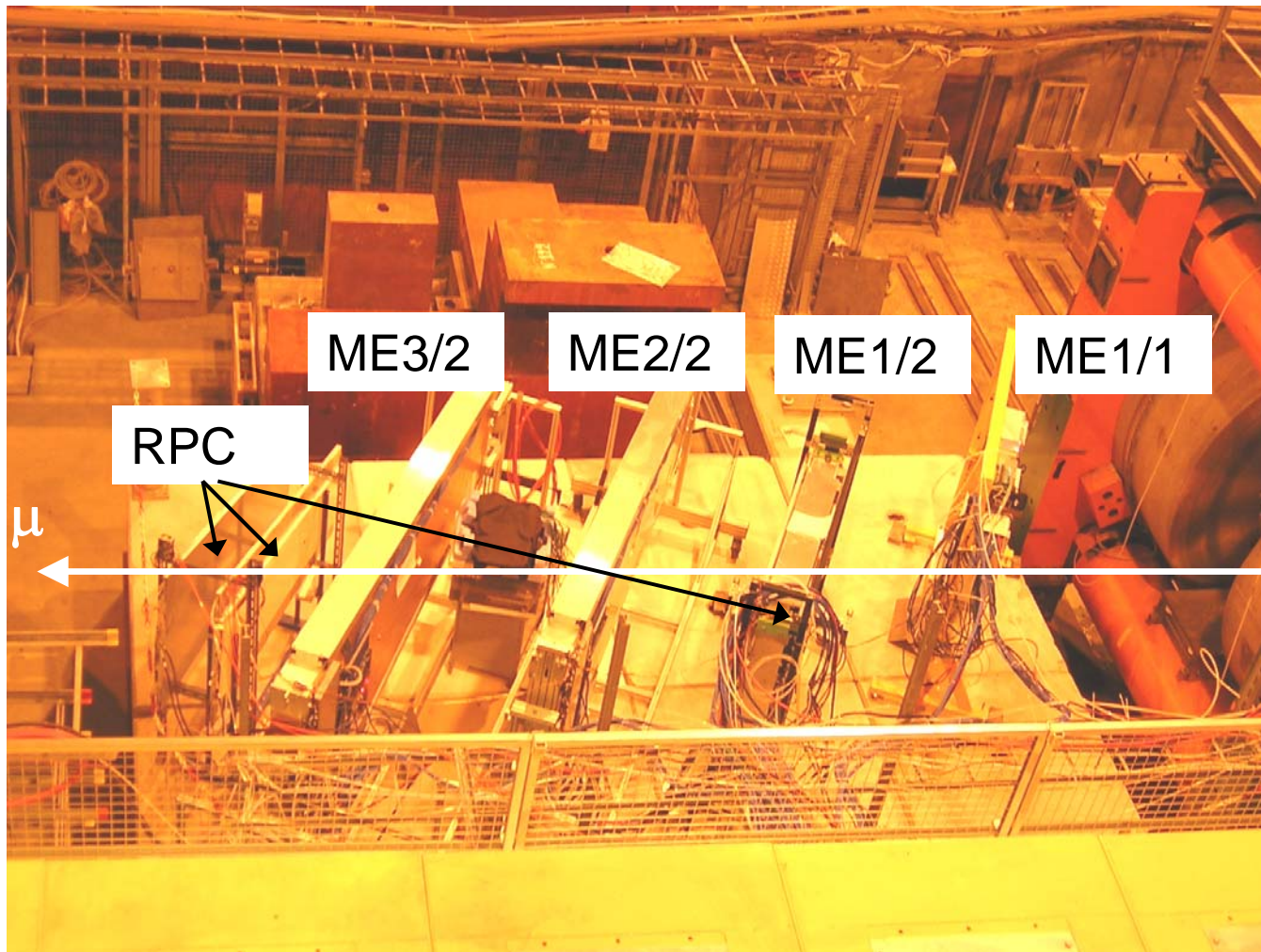
Initial CSC TF to GMT Tests



Initial tests took place in January. Expect ever more detailed tests to follow in future



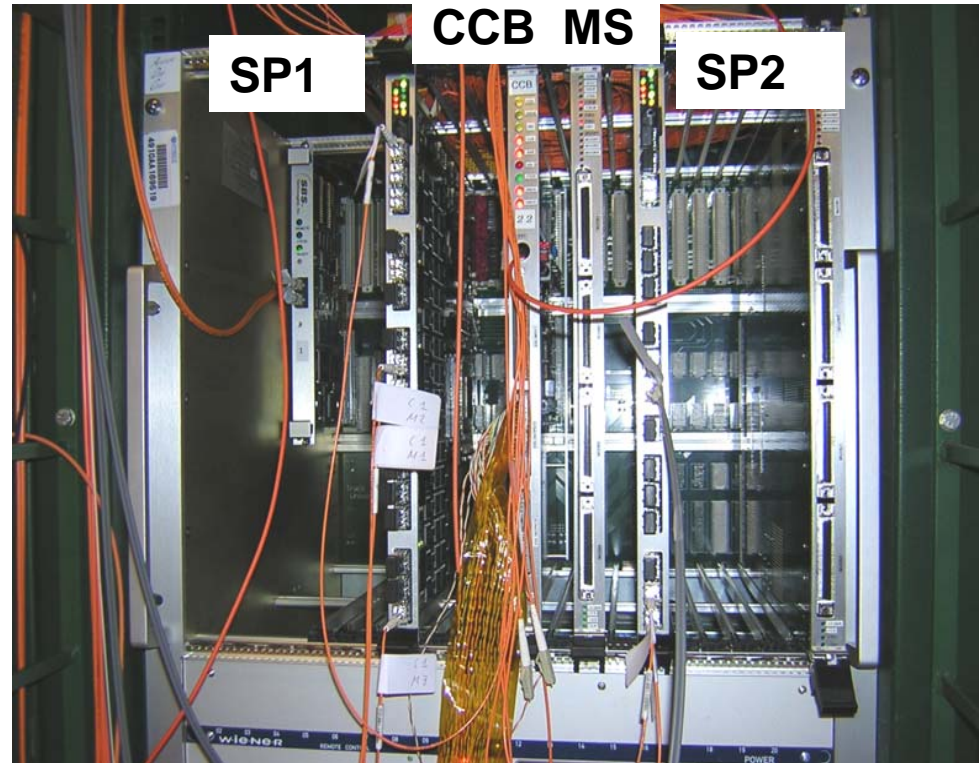
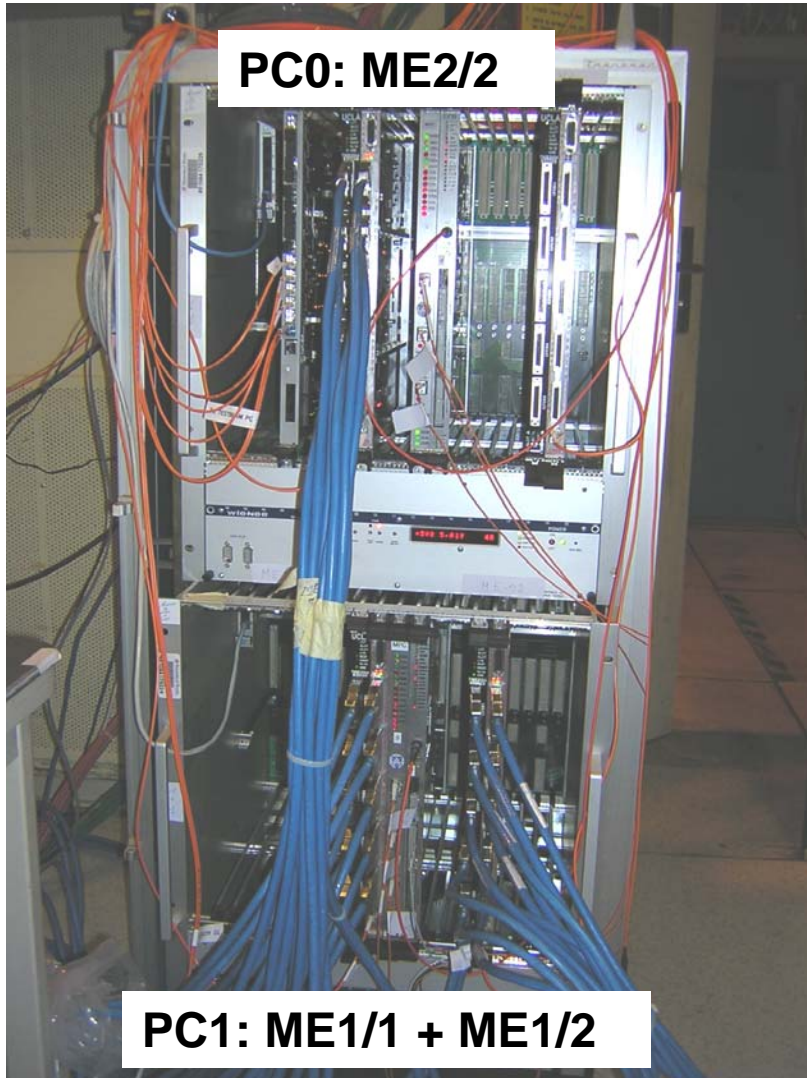
CSC TF Used as Trigger at Beam Tests



Full chain of trigger electronics from detector to TF tested



Scale of Electronic Test at Beam Tests



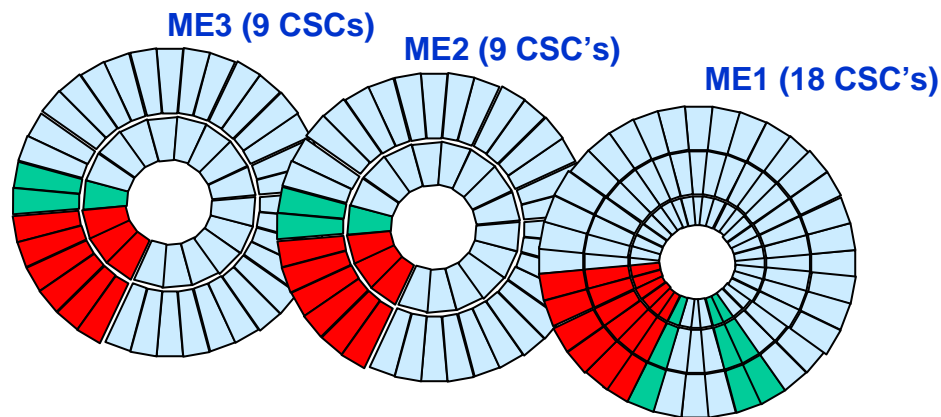
Have tested up to 3 peripheral crates (~ 3 EMU disks $\times 60^\circ$) with up to 2 SP's ($2 \times 60^\circ$ sectors)

(But with only 4 chambers...)



Track-Finder at CMS Magnet Test

- **CSC system will participate in the CMS magnet test with a 60° slice of one endcap**
 - ◆ 36 chambers from 3 stations
 - ◆ trigger and readout cosmic ray hits



- **CSC TF will provide a cosmic trigger (or can be triggered)**
- **Experience at beam tests very useful**
- **Plan smaller slice tests even before magnet test (March)**



Answers to remaining questions

- **Resources required in 904:**
 - ◆ Rack space, power, network access, lab bench space for repairs and PC, locked storage for one crate of cards
- **Interaction with other Sub-Systems, until the end of 2005**
 - ◆ EMU (peripheral crates)
 - ◆ DT TF
 - ◆ GMT and GT
 - ◆ DAQ
- **Contact person**
 - ◆ Acosta for today, to be replaced imminently by a CERN-based postdoc (D.Holmes)
- **Summary:**
 - ◆ Expect many more detailed system tests.
 - ◆ Ready for system tests at 904 and SX5 now.