



Status of the CSC Track-Finding Processor

D.Acosta
University of Florida

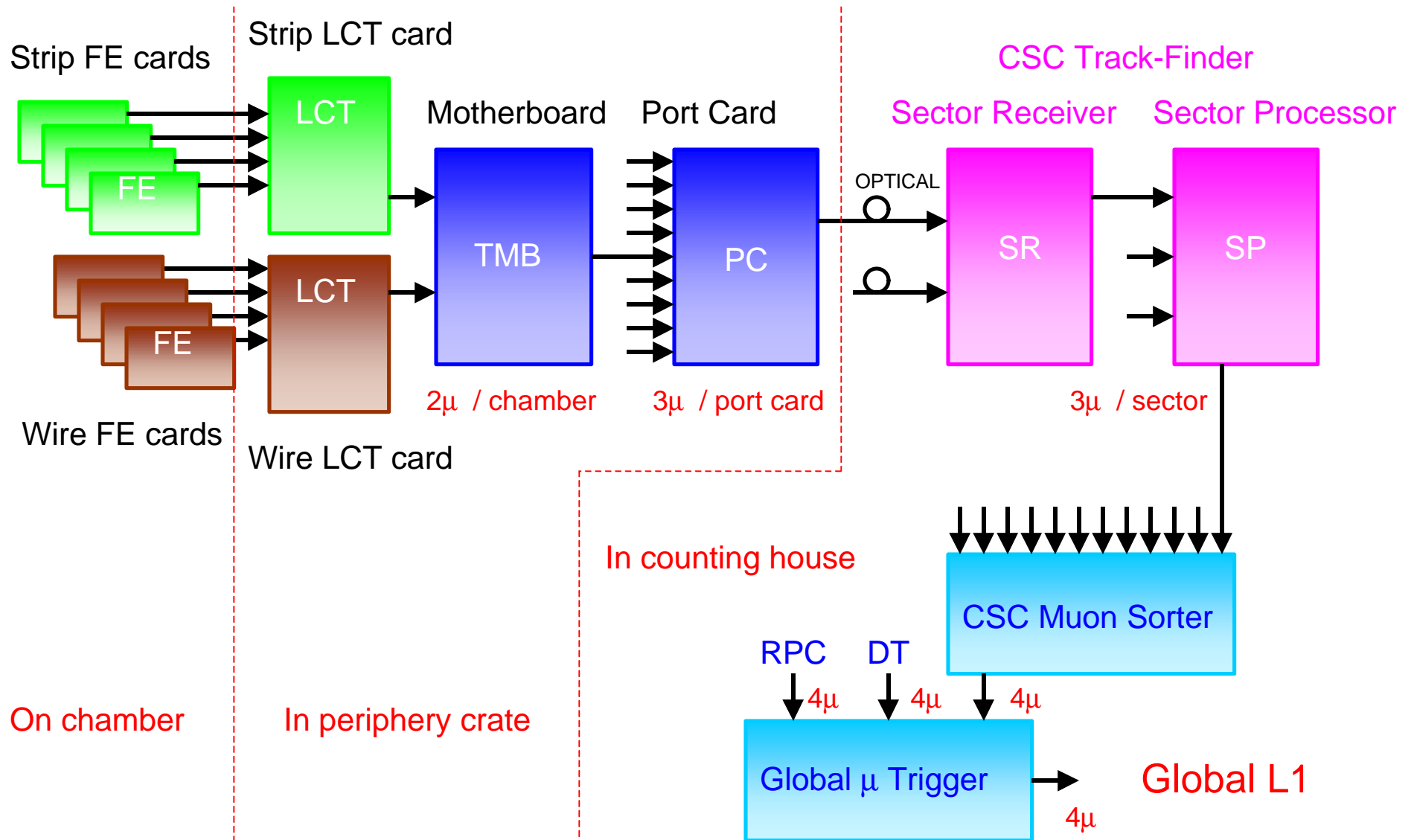


News

- Full report of CSC Track-Finder given at last TriDAS Review
- Not much hardware development since last month
- Presently running simulations on CSC and overlap region
- Formal agreement should be made between the two Track-Finder groups on the overlap region

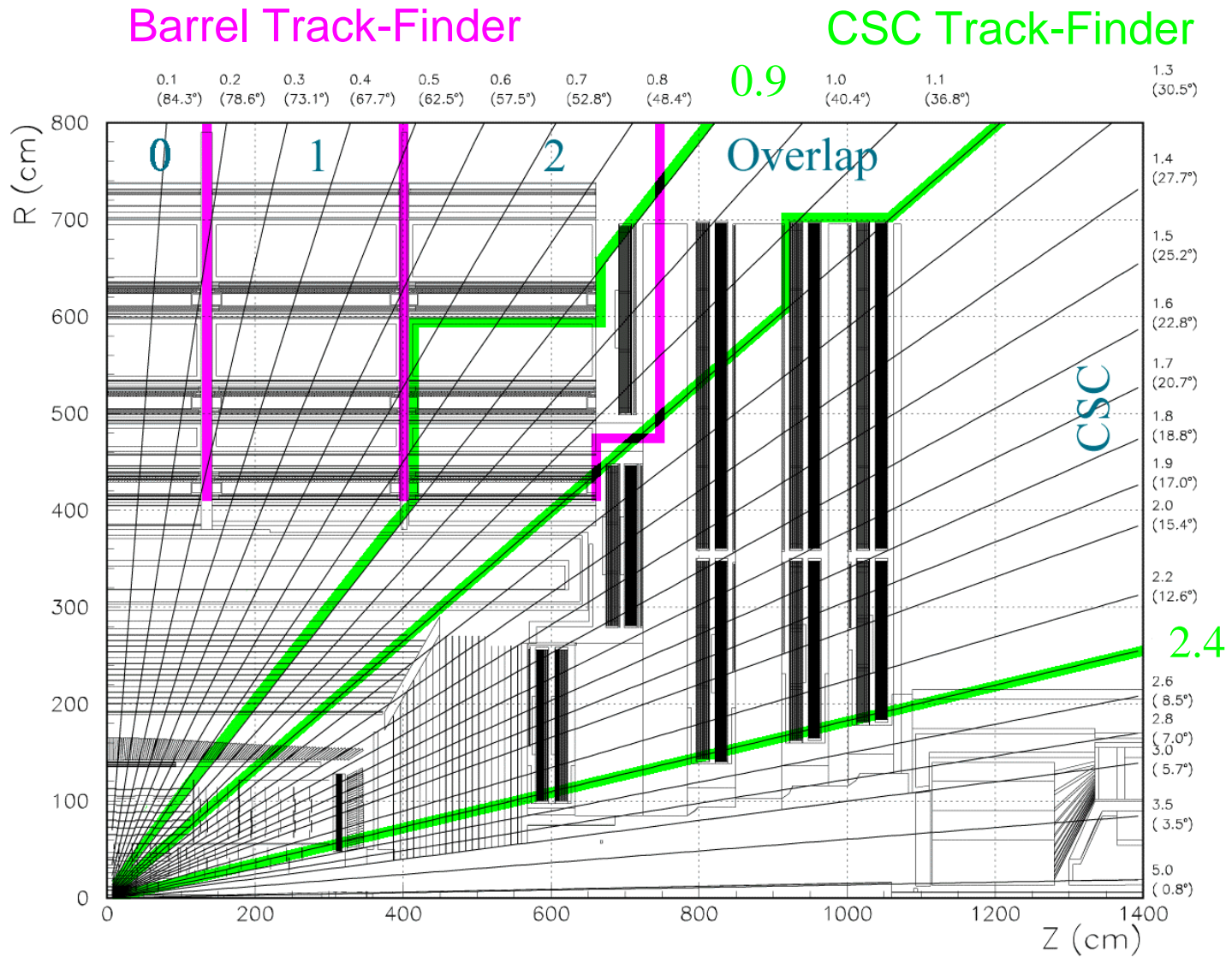


CSC Muon Trigger Scheme



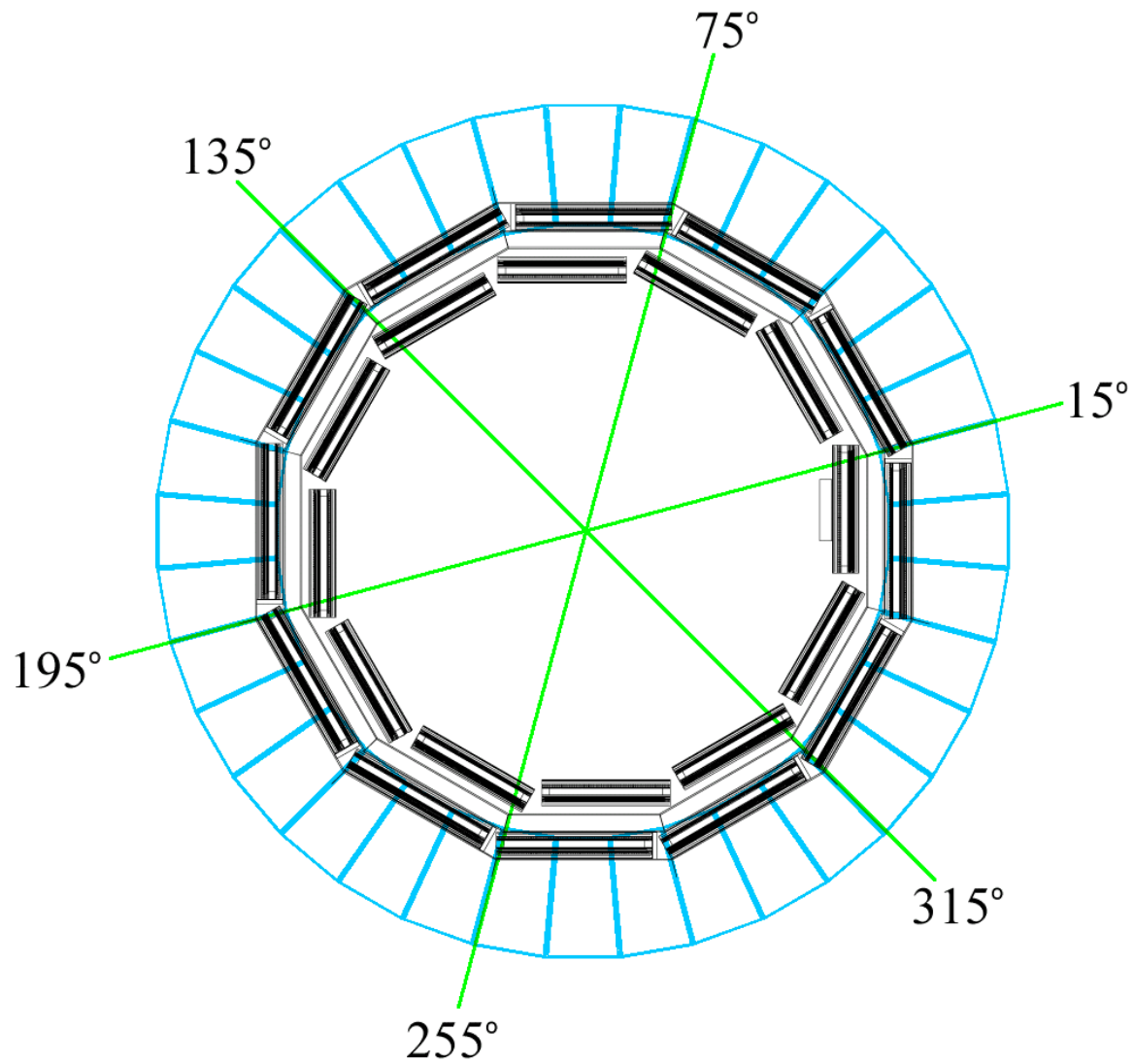


Trigger Regions in η





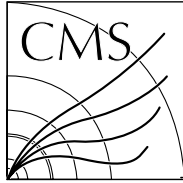
CSC Sectors in ϕ for Overlap Region





Differences between CSC and DT Track-Finders

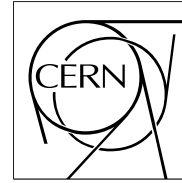
- No neighbor input for CSC T-F implies
 - Fewer extrapolations
 - Less data input
 - Fewer signals to fan out
 - Less opportunity for two tracks to arise from one muon
- Inclusion of η in CSC T-F allows
 - Precise P_T assignment in endcap
 - Track-Finding in 3 dimensions
 - Rate reduction
- *Therefore, CSC T-F is fundamentally different than DT T-F*
- Coverage of overlap region in CSC T-F complements approach taken by DT T-F



The Compact Muon Solenoid Experiment

CMS Note

Mailing address: CMS CERN, CH-1211 GENEVA 23, Switzerland



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Issues Related to the Separation of the Barrel and Endcap Muon Trigger Track-Finders

D. Acosta ^{a)},

University of Florida, USA

G.M. Dallavalle ^{b)},

INFN e Dipartimento di Fisica dell'Università, Bologna, Italy

N. Neumeister ^{c)}

Institut für Hochenergiephysik der ÖAW, Wien, Austria

Abstract

Requirements are specified for the barrel and endcap Muon Trigger Track-Finders to ensure efficient coverage of the overlap region between the barrel and endcap muon systems and to avoid duplicity of triggers.

Preliminary version

^{a)} acosta@phys.ufl.edu

^{b)} Marco.Dallavalle@bo.infn.it

^{c)} Norbert.Neumeister@cern.ch



Agreement Between the Two Track-Finder Projects

- Exchange of Trigger Primitives
 - MB2/1 and MB2/2 → CSC Track-Finder
 - ME1/3 and ME2/2 → DT Track-Finder
 - Exchange takes place in counting house
- Definition of a sharp boundary in η
 - Both Track-Finders are not allowed to report the same muon
 - *Actual boundary should be programmable*
 - Implementation:
 - CSC T-F suppresses primitives or complete tracks found in barrel side
 - Straightforward since η information is available
 - DT T-F does not receive CSC primitives in endcap side
 - Boundary must be defined by determining which DT and CSC chambers are included in track since η information is not explicit
- Separate ordering of CSC and DT muons
 - Allows for different sort and/or ghost cancellation criteria