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ptLUTs generation

Introduction

The purpose of the CSC Track-Finder is to link trigger primitives (track segments) from individual CSC stations into complete tracks, measure the transverse momentum p_T from the sagitta induced by the magnetic bending, and report the number and quality of tracks to the Level-1 Global Muon Trigger. This objective is complicated by the non-uniform magnetic field in the CMS endcap and by the high background rates; consequently, the present design incorporates full three-dimensional information into the track-finding and measurement procedures.

Events

Date	Event	Comments
30.05.2011	Pre-approved plots for CSCTF PT threshold efficiency curves in golden eta region at L1 DPG meeting ↗ .	The most updated Slides: ppt-slides and pdf-slides, Figures: Prelim2011_Eff_PTLUT2010_PT_golden.gif - Prelim2011_Eff_PTLUT2010_PT_golden.pdf, Prelim2011_Eff_PTLUT2011_PT_golden.gif - Prelim2011_Eff_PTLUT2011_PT_golden.pdf, Prelim2011_Eff_PTLUT2011_ETA_golden.gif - Prelim2011_Eff_PTLUT2011_ETA_golden.pdf, Prelim2011_Eff_PTLUT2011_PHI_golden.gif - Prelim2011_Eff_PTLUT2011_PHI_golden.pdf
27.10.2010	Final approved plots for CSCTF PT threshold efficiency curves in golden eta region at GWM 39 ↗	Most update Slides: slides, Figures: Prelim_Eff_PT_golden.gif, Prelim_Eff_ETA_golden.gif and Prelim_Eff_PHI_golden.gif. Also you could find information at L1 DPG Page
05.03.2010	Anna committed code L1Trigger/CSCTrackFinder/ in the CVS with tag-name: V00-18-00. The new PtLUTs L1CSCPtLUT_4N9.bin.gz are generated by default in this version (method 4).	Anna asked Vasile Mihai Ghete to put it in the next release of CMSSW. We are waiting for the reply now.
04.03.2010	Gian Piero and Anna uploaded new PtLUTs L1CSCPtLUT_4N9.bin.gz at Point 5	This information is posted at Trigger elog ID 183962 ↗ and CSC elog ID 183926 ↗

ptLUTs

Creation Date	ptLUTs	Version	Comments
25.02.2010 by Anna	L1CSCPtLUT_4N9.bin.gz and L1CSCPtLUT_4N9.dat.gz	the newest	set isBeamStart = true (in previous versions of ptLUTs isBeamStart = false)
17.02.2010 by Anna	L1CSCPtLUT_4N8.bin and L1CSCPtLUT_4N8.dat.gz	version 1.0b	bug with overlap region is fixed (see at CSCTF Talks 17.02.2010 by Anna)
03.02.2010 by Anna	L1CSCPtLUT_4N2.bin	version 1.0a	bug with high contribution of low p_T muons to high p_T muons is fixed (see CSCTF Talks 04.02.2010 by

			Anna), problems with overlap region (DT-ME) at high pT (see CSCTF Talks 04.02.2010 and 08.02.2010 by Anna)
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CMS Talks

Date	Meeting	Topic	Speacker	Files	Comments
27.10.2010	CMS General Weekly Meeting: GWM 39 ↗	DPG plots for approval: CSC Track Finder updates	Luca Malgeri	ppt ↗	Final approved plots for CSCTF PT threshold efficiency curves in golden eta region
22.10.2010	Run organization meeting ↗	Approval session: CSCTF PT assignment	Anna Kropivnitskaya	ppt ↗ , pdf ↗	CSCTF PT threshold efficiency curves were approved fro golden eta region
30.09.2010	L1 Trigger DPG meeting ↗	CSCTF Pt assignement + follow up on overlap region	Anna Kropivnitskay	ppt ↗ , pdf ↗	CSCTF Pt resolution after technical stop and DT delay set 1 bx at Sep. 25
25.00.2010	CSC Operation + DPG Main Meeting ↗	CSC Track Finder status and plans for technical stop	Anna Kropivnitskaya	ppt ↗ , pdf ↗	CSCTF Pt resolution at Point 5
22.04.2010	L1 Trigger DPG meeting ↗	CSC Trigger Efficiency and Pt Assignment	Anna Kropivnitskaya	pdf , ppt	Study of CSCTF efficiency and pt assignment (more detailed) with 7 TeV collision data
14.04.2010	CSC Operations + DPG Main Meeting ↗	CSC TF efficiency studies	Gian Piero Di Giovanni	pdf ↗ , ppt	Study of CSCTF efficiency and pt assignment with 7 TeV collision data
14.03.2010	EMU CSC ME1/1 ↗	CSCTF Status	Anna Kropivnitskaya	pptx , pdf	overview of the CSCTF: what was done for the previous 3 months, upgrade study, new PtLUTs L1CSCPtLUT_4N9.bin are upload at P5 March, 4
23.02.2010	CMS Trigger Meeting ↗	CSCTF Status	Anna Kropivnitskaya	pdf ↗ , ppt ↗	status report
18.02.2010	Trigger Studies Group meeting ↗	Improvements of the CSCTF pT assignment LUTs	Edmund Berry	pdf ↗ , ppt ↗	overview of ptLUT L1CSCPtLUT_4N8.bin

CSCTF Talks (Likelihood method)

Date	Topic	Speaker	Files	Comments
21.04.2010	ptLUTs update	Anna Kopivnitskaya	kropiv_2010.04.21.ppt , kropiv_2010.04.21.pdf	pt assignment with 7 TeV collision data (more detailed)
14.04.2010	ptLUTs update	Anna Kopivnitskaya	kropiv_2010.04.14.ppt , kropiv_2010.04.14.pdf	pt assignment with 7 TeV collision data
9.03.2010	ptLUTs update	Anna Kopivnitskaya	kropiv_2010.03.09.ppt , kropiv_2010.03.09.pdf	status report (PtLUTs TWIKI page creation)
23.02.2010	ptLUTs update	Anna Kopivnitskaya	kropiv_2010.02.23.ppt , kropiv_2010.02.23.pdf	status report (PtLUTs TWIKI page creation)

17.02.2010	ptLUTs update	Anna Kropivnitskaya	kropiv_2010.02.17.ppt, kropiv_2010.02.17.pdf	overview of ptLUT L1CSCPtLUT_4N8.bin
08.02.2010	ptLUTs update	Anna Kropivnitskaya	kropiv_2010.02.08.ppt, kropiv_2010.02.08.pdf	overview of ptLUT L1CSCPtLUT_4N2.bin
04.02.2010	ptLUTs update	Anna Kropivnitskaya	kropiv_2010.02.04.ppt, kropiv_2010.02.04.pdf	overview of ptLUT L1CSCPtLUT_4N2.bin

CSCTF Talks (Data-driven method)

Date	Topic	Speaker	Files	Comments
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Useful Links

- IN01/33:: Simulated Performance of the CSC Track-Finder [↗](#)
- SP02 LUT Address & Data Fields
- mode definition for CSCTF tracks valid till the end 2010
- CSC geometry, updated version here
- A semi-automated validation system and website for CSCTF Monte Carlo (Justin Hugon) [↗](#)
- CSC diagram with geometry
- TMB information [↗](#) description of CLCT Pattern at Page 5 + TMB description [↗](#). lctTrk->getPattern()
- TMB LCT Quality Definition. lctTrk->getQuality()
- current version of CSCTF core [↗](#)
- Phi alignment in CSC 2010 [↗](#), see page fig. 9 and 10.

This topic: Main > PtLUTs

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