

HLT menu(s) for ditau Higgs searches

24th March 2015

Adrian Perieanu



LHC schedule

ML

March 12, 2015

V1.3

LHC Schedule 2015

Approved by the Research Board, December 2014

officially: first beams in LHC Run II

problem: Non conclusive result on exact location of the ground fault of RB.A34

	Jan				Feb				Mar				
Wk	1	2	3	4	5	6	7	8	9	10	11	12	
Mo	29	5	12	19	26	2	9	16	23	2	9	16	23
Tu													
We													
Th													
Fr													
Sa													
Su													

Controls maintenance

Start LHC comm with beam

Powering tests

Sector test 23 78-67

Machine checkout

CRAFT

first technical stop

	Apr				May				June				
Wk	14	15	16	17	18	19	20	21	22	23	24	25	26
Mo	30	Easter Mon 6	13	20	27	4	11	18	Whit 25	1	8	15	22
Tu													
We										TS1			
Th							Ascension						
Fr	G. Friday				1st May								
Sa													
Su													

Scrubbing for 50 ns operation

Recommissioning with beam

Ascension

Special physic run

Intensity ramp-up with 50 ns beam

collisions: few bunches

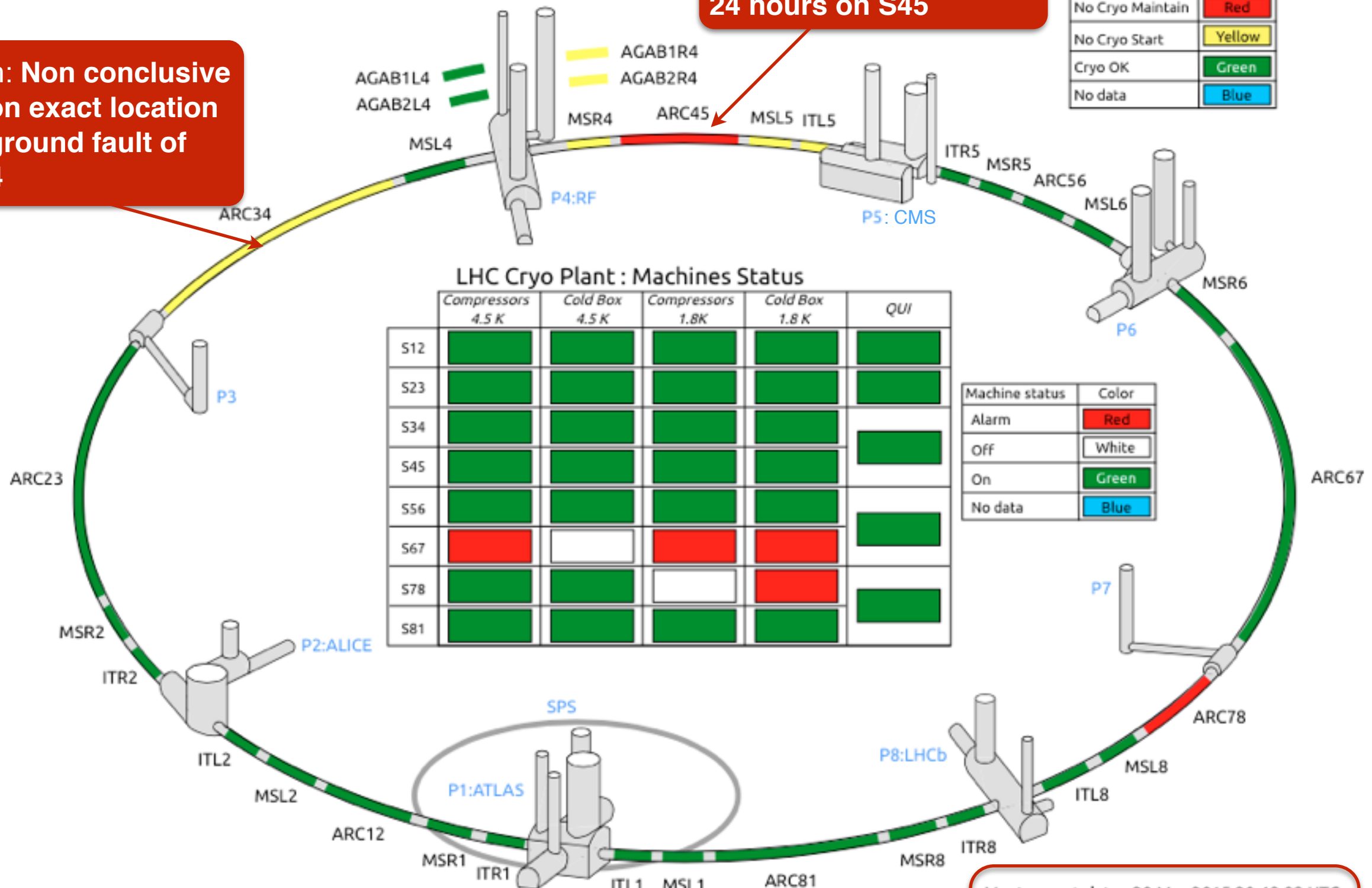
collisions: 50 ns

LHC Cryogenic Status

problem: Non conclusive result on exact location of the ground fault of RB.A34

3 quenches in the last 24 hours on S45

Legend for ring	Color
No Cryo Maintain	Red
No Cryo Start	Yellow
Cryo OK	Green
No data	Blue

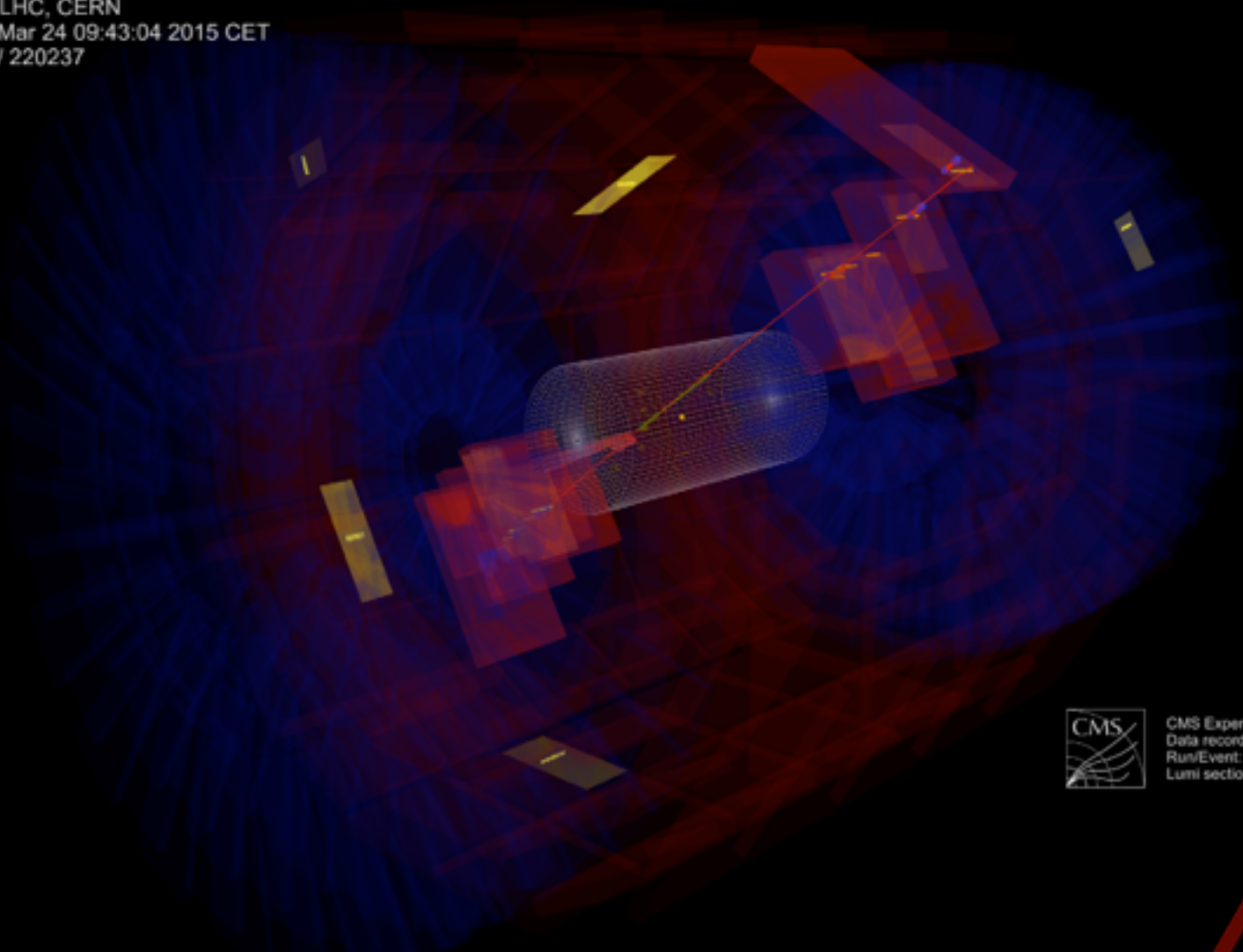


Most recent data : 20 Mar 2015 20:48:08 UTC
Last update : 20 Mar 2015 20:48:09 UTC

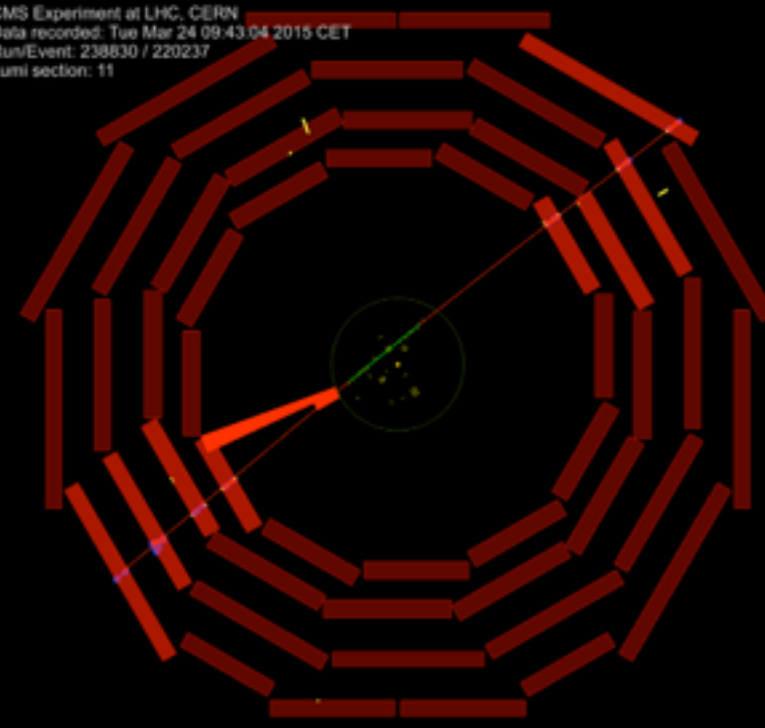
back to CMS



CMS Experiment at LHC, CERN
Data recorded: Tue Mar 24 09:43:04 2015 CET
Run/Event: 238830 / 220237
Lumi section: 11



CMS Experiment at LHC, CERN
Data recorded: Tue Mar 24 09:43:04 2015 CET
Run/Event: 238830 / 220237
Lumi section: 11



one of the last running HLT menus for pp collisions:

← → ↻ 📑 | j2eeps.cern.ch/cms-project-confdb-hltdev/browser/ | ❤️ ⬇️

HLT Development | ORCOFF | INT2R | INT9R

enter config name here

[Expand all](#) [Collapse all](#)

- V17 - 2014-04-29 14:13:50.0
- V16 - 2014-04-27 07:55:33.0
- V15 - 2014-04-23 14:52:25.0
- V14 - 2014-04-23 14:14:35.0
- V13 - 2014-04-16 11:40:10.0
- V12 - 2014-04-14 07:16:25.0
- V11 - 2014-04-11 18:03:50.0
- V10 - 2014-04-11 17:21:12.0
- V9 - 2014-04-11 16:51:12.0
- V8 - 2014-04-11 16:34:53.0
- V7 - 2014-04-11 08:00:50.0
- V6 - 2014-04-04 12:52:11.0
- V5 - 2014-03-28 14:55:16.0
- V4 - 2014-03-25 13:46:31.0
- V3 - 2014-03-21 16:04:36.0
- V2 - 2014-03-21 15:45:16.0
- V1 - 2014-03-21 15:40:48.0

- Protonlons
- 2013
- week44
- week49
- commissioning10
- cosmics
- special
- /users

/online/collisions/2012/8e33/v3.2/HLT/V50

Migrate to 719
created: 2014-09-19 16:50:33

[download .py](#)

[details](#) [summary](#) [streams](#)

Stream	Primary Dataset	HLT path
▼ A		
	▶ BJetPlusX	
	▶ BTag	
	▶ Commissioning	
	▶ Cosmics	
	▶ DoubleElectron	
	▶ DoubleMu	
	▶ DoubleMuParked	
	▶ DoublePhoton	
	▶ DoublePhotonHighPt	
	▶ ElectronHad	
	▶ FEDMonitor	
	▶ HLTPhysicsParked	
	▶ HTMHT	
	▶ HTMHTParked	
	▶ HcalHPDNoise	
	▶ HcalNZS	
	▶ JetHT	
	▶ JetMon	
	▶ LogMonitor	
	▶ MET	
	▶ METParked	

one of the last running HLT menus for *pp* collisions:

/online/collisions/2012/8e33/v3.2/HLT/V50

Migrate to 719
created: 2014-09-19 16:50:33

[download .py](#)

detailssummarystreams

▼ Tau

HLT_DoubleIsoL2Tau30_eta2p1_v1

HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_Jet30_v6

HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_Reg_Jet30_v2

HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_Reg_v2

HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_v5

HLT_DoubleMediumIsoPFTau35_Trk1_eta2p1_Prong1_Reg_v2

HLT_DoubleMediumIsoPFTau35_Trk1_eta2p1_Prong1_v5

HLT_LooseIsoPFTau35_Trk20_Prong1_MET70_v11

HLT_LooseIsoPFTau35_Trk20_Prong1_MET75_v11

HLT_LooseIsoPFTau35_Trk20_Prong1_v11

triggers for fully hadronic
ditau searches
had 30 and 35 GeV thresholds

one of the last running HLT menus for *pp* collisions:

/online/collisions/2012/8e33/v3.2/HLT/V50

Migrate to 719
created: 2014-09-19 16:50:33

[download .py](#)

detailssummarystreams

▼ TauPlusX

HLT_Ele13_eta2p1_WP90NoIso_LooseIsoPFTau20_L1ETM36_v2

HLT_Ele13_eta2p1_WP90Rho_LooseIsoPFTau20_L1ETM36_v2

HLT_Ele13_eta2p1_WP90Rho_LooseIsoPFTau20_v2

HLT_Ele22_eta2p1_WP90NoIso_LooseIsoPFTau20_v8

HLT_Ele22_eta2p1_WP90Rho_LooseIsoPFTau20_v8

HLT_IsoMu15_eta2p1_L1ETM20_v8

HLT_IsoMu15_eta2p1_LooseIsoPFTau35_Trk20_Prong1_L1ETM20_v11

HLT_IsoMu17_eta2p1_LooseIsoPFTau20_v8

HLT_IsoMu18_eta2p1_MediumIsoPFTau25_Trk1_eta2p1_Reg_v2

HLT_IsoMu18_eta2p1_MediumIsoPFTau25_Trk1_eta2p1_v5

HLT_IsoMu8_eta2p1_LooseIsoPFTau20_L1ETM26_v2

HLT_IsoMu8_eta2p1_LooseIsoPFTau20_v2

HLT_Mu15_eta2p1_L1ETM20_v6

HLT_Mu17_eta2p1_LooseIsoPFTau20_v8

HLT_Mu8_eta2p1_LooseIsoPFTau20_L1ETM26_v2

also the cross-triggers were
reasonably loose

CMSSW_7_3_0 HLT menu for *GR*: Tau

Browser address: j2eeps.cern.ch/cms-project-confdb-hltdev/browser/

Search: Tau 448 of 1019

Navigation: HLT Development | ORCOFF | INT2R | INT9R

Left sidebar (config tree):

- enter config name here
- Expand all
- Collapse all
- CMSSW_7_2_1
- CMSSW_7_3_0
 - 50nsGRun
 - Fake
 - GRun
 - V56 - 2015-02-19 10:31:37.0
 - V55 - 2015-02-17 16:50:25.0
 - V54 - 2015-02-16 17:51:24.0
 - V53 - 2015-02-16 10:34:44.0
 - V52 - 2015-02-16 10:12:41.0
 - V51 - 2015-02-12 20:36:35.0
 - V50 - 2015-02-12 17:49:16.0

Main content area:

Config name: /dev/CMSSW_7_3_0/GRun/V56

Created by: ConfDBCreateConfig from master /dev/CMSSW_7_3_0/HLT/V127
created: 2015-02-19 10:31:37

download .py

Buttons: details | summary | streams

trigger name	L1 condition
HLT_DoubleEle33_CaloidL_GsfTrkIdVL_v1	L1_SingleEG40 OR L1_SingleEG35 OR L1_DoubleEG_22_10 OR L1_DoubleEG_15_10
HLT_DoubleMediumIsoPFTau40_Trk1_eta2p1_Reg_v1	L1_DoubleIsoTau36er OR L1_DoubleIsoTau40er OR L1_DoubleIsoTau44er

the new menu will have for
double taus a
40 GeV threshold (prescale 1)

CMSSW_7_3_0 HLT menu for *GR*: TauPlusX

Browser address: j2eeps.cern.ch/cms-project-confdb-hltdev/browser/

Search: Tau 448 of 1019

HLT Development ORCOFF INT2R INT9R

enter config name here

Expand all Collapse all

CMSSW 7 2 1

CMSSW

50nsGR

Fake

GRun

V56 - 2015-02-19 10:31:37.0

V55 - 2015-02-17 16:50:25.0

V54 - 2015-02-16 17:51:24.0

V53 - 2015-02-16 10:34:44.0

V52 - 2015-02-16 10:12:41.0

V51 - 2015-02-12 20:36:35.0

V50 - 2015-02-12 17:49:16.0

V49 - 2015-02-10 20:39:10.0

V48 - 2015-02-10 20:39:10.0

V47 - 2015-02-10 20:39:10.0

V46 - 2015-02-10 20:39:10.0

V45 - 2015-02-10 20:39:10.0

V44 - 2015-02-10 20:39:10.0

V43 - 2015-01-28 00:09:16.0

V42 - 2015-01-26 18:54:49.0

V41 - 2015-01-26 15:57:26.0

V40 - 2015-01-26 10:42:55.0

V39 - 2015-01-26 10:42:55.0

Created by
ConfDBCreateConfig from
master
/dev/CMSSW_7_3_0/HLT/V127
created: 2015-02-19 10:31:37

download .py

details summary streams

trigger name	L1 condition
HLT_Ele22_eta2p1_WP75_Gsf_v1	L1_SingleIsoEG18
HLT_Ele22_eta2p1_WP75_Gsf_LooseIsoPFTau20_v1	L1_IsoEG20er_TauJet20er_NotWdEta0
HLT_Ele25WP60_SC4_Mass55_v1	L1_SingleEG20
HLT_Ele25_eta2p1_WP85_Gsf_PFMET80_boostedW_v1	L1_SingleEG40 OR L1_SingleIsoEG30er OR L1_ETM70
HLT_Ele35_eta2p1_WP85_Gsf_v1	L1_SingleEG40 OR L1_SingleIsoEG30er
HLT_Ele40_eta2p1_WP85_Gsf_v1	L1_SingleEG40 OR L1_SingleIsoEG30er
HLT_Ele27_WP85_Gsf_v1	L1_SingleEG25
HLT_Ele27_eta2p1_WP75_Gsf_LooseIsoPFTau20_v1	L1_SingleIsoEG22er
HLT_Ele27_eta2p1_WP75_Gsf_DoubleMediumIsoPFTau20_v1	L1_SingleIsoEG22er
HLT_Ele27_eta2p1_WP75_Gsf_CentralPFJet30_BTagCS_v1	L1_SingleIsoEG22er
HLT_Ele27_eta2p1_WP75_Gsf_TriCentralPFJet30_v1	L1_SingleIsoEG22er
HLT_Ele27_eta2p1_WP75_Gsf_TriCentralPFJet50_40_30_v1	L1_SingleIsoEG22er
HLT_Ele27_eta2p1_WP75_Gsf_v1	L1_SingleIsoEG22er
HLT_Ele32_eta2p1_WP75_Gsf_LooseIsoPFTau20_v1	L1_SingleIsoEG30er
HLT_Ele32_eta2p1_WP75_Gsf_DoubleMediumIsoPFTau20_v1	L1_SingleIsoEG30er

prescale 1, so far

prescale 1
in Run I: Ele was
having WP90

CMSSW_7_3_0 HLT menu for *GR*: TauPlusX

Browser address: j2eeps.cern.ch/cms-project-confdb-hltdev/browser/

Search: 5 of 1040

HLT Development | ORCOFF | INT2R | INT9R

enter config name here [Expand all](#) [Collapse all](#)

- CMSSW_3_8_0
- CMSSW_3_9_0
- CMSSW_4_2_0
- CMSSW_4_4_2
- CMSSW_5_0_0
- CMSSW_5_1_0
- CMSSW_5_2_6
- CMSSW_6_2_0
- CMSSW_7_0_0
- CMSSW_7_1_0
- CMSSW_7_1_1
- CMSSW_7_1_2
- CMSSW_7_2_0
- CMSSW_7_2_1
- CMSSW_7_3_0

/dev/CMSSW_7_3_0/GRun/V56

Created by ConfDBCreateConfig from master
/dev/CMSSW_7_3_0/HLT/V127
created: 2015-02-19 10:31:37

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[details](#) [summary](#) [streams](#)

trigger name	L1 condition
HLT_Ele45_CalIdVT_GsfTrkIdT_PFJet200_PFJet50_v1	L1_SingleEG40
HLT_Ele105_CalIdVT_GsfTrkIdT_v1	L1_SingleEG35 OR L1_SingleEG40
HLT_Mu16_eta2p1_CaloMET30_v1	L1_Mu14er_ETM30
HLT_IsoMu16_eta2p1_CaloMET30_v1	L1_Mu14er_ETM30
HLT_IsoMu16_eta2p1_CaloMET30_LooseIsoPFTau50_T...	L1_Mu14er_ETM30
HLT_IsoMu17_eta2p1_v1	L1_SingleMu16er
HLT_IsoMu17_eta2p1_LooseIsoPFTau20_v1	L1_Mu16er_TauJet20er
HLT_IsoMu17_eta2p1_LooseIsoPFTau20_SingleL1_v1	L1_SingleMu16er
HLT_IsoMu17_eta2p1_MediumIsoPFTau40_Trk1_eta2p...	L1_Mu16er_IsoTau36er
HLT_DoubleIsoMu17_eta2p1_v1	L1_DoubleMu_12_5
HLT_IsoMu24_eta2p1_LooseIsoPFTau20_v1	L1_SingleMu20er

prescale 1, so far

prescale 1
in Run I: Mu was not isolated
and had a 15 GeV threshold

CMSSW_7_3_0 HLT menu for *GR*: Tau (loose Isolation)

enter config name here

Expand all Collapse all

- CMSSW_7_2_1
- CMSSW_7_3_0
 - 50nsGRun
 - Fake
 - GRun
 - V56 - 2015-02-19 10:31:37.0
 - V55 - 2015-02-17 16:50:25.0
 - V54 - 2015-02-16 17:51:24.0
 - V53 - 2015-02-16 10:34:44.0
 - V52 - 2015-02-16 10:12:41.0
 - V51 - 2015-02-12 20:36:35.0
 - V50 - 2015-02-12 17:49:16.0

Created by ConfDBCreateConfig from master
/dev/CMSSW_7_3_0/HLT/V127
created: 2015-02-19 10:31:37

download .py

details summary streams

trigger name	L1 condition
HLT_L2Mu40_NoVertex_3Sta_NoBPTX3BX_NoHalo_v1	L1_SingleMu6_NotBptxOR
HLT_LooseIsoPFTau50_Trk30_eta2p1_v1	L1_QuadJetC36_TauJet52
HLT_LooseIsoPFTau50_Trk30_eta2p1_MET120_v1	L1_ETM70 OR L1_ETM60_NotJet52WdPhi2
HLT_LooseIsoPFTau50_Trk30_eta2p1_MET80_v1	L1_ETM50 OR L1_ETM70 OR L1_ETM60_NotJet52WdPhi2

for loose isolation the threshold
will be 50 GeV
with a prescale of 4 for a 7e33 inst. lumi.
and a prescale of 8 for a 1.4e34 inst. lumi.

CMSSW_7_3_0 HLT menu for *GR*: VBF triggers

enter config name here

Expand all Collapse all

GRun

- V56 - 2015-02-19 10:31:37.0
- V55 - 2015-02-17 16:50:25.0
- V54 - 2015-02-16 17:51:24.0
- V53 - 2015-02-16 10:34:44.0
- V52 - 2015-02-16 10:12:41.0
- V51 - 2015-02-12 20:36:35.0
- V50 - 2015-02-12 17:49:16.0
- V49 - 2015-02-10 20:39:10.0
- V48 - 2015-02-10 20:05:28.0
- V47 - 2015-01-30 17:19:09.0
- V46 - 2015-01-30 11:14:34.0
- V45 - 2015-01-29 23:24:14.0
- V44 - 2015-01-29 16:16:03.0
- V43 - 2015-01-28 00:09:16.0
- V42 - 2015-01-26 18:54:49.0
- V41 - 2015-01-26 15:57:26.0
- V40 - 2015-01-26 10:42:55.0
- V39 - 2015-01-26 10:27:22.0
- V38 - 2015-01-26 09:59:38.0

Created by
ConfDBCreateConfig from
master
/dev/CMSSW_7_3_0/HLT/V127.
created: 2015-02-19 10:31:37

download .py

details summary streams

HLT_DiTagMu_DiJet70_Mu5_v1
HLT_BTagMu_DiJet70_Mu5_v1
HLT_BTagMu_Jet300_Mu5_v1
HLT_CaloJet500_NoJetID_v1
HLT_CaloMHTNoPU90_PFMET90_PFMHT90_IDLoose_BTagCSV0p7_
HLT_CaloMHTNoPU90_PFMET90_PFMHT90_IDLoose_v1
HLT_DiCentralPFJet70_PFMET120_NoiseCleaned_v1
HLT_DiMu9_Ele9_CaloIdL_TrackIdL_v1
HLT_DiPFJet40_DEta3p5_MJJ600_PFMETNoMu140_v1
HLT_DiPFJet40_DEta3p5_MJJ600_PFMETNoMu80_v1
HLT_DiPFJetAve100_HFJEC_v1
HLT_DiPFJetAve160_HFJEC_v1
HLT_DiPFJetAve220_HFJEC_v1
HLT_DiPFJetAve300_HFJEC_v1
HLT_DiPFJetAve30_HFJEC_v1
HLT_DiPFJetAve60_HFJEC_v1
HLT_DiPFJetAve80_HFJEC_v1
HLT_Dimuon0_Jpsi_Muon_v1
HLT_Dimuon0_Phi_Barrel_v1
HLT_Dimuon0_Upsilon_Muon_v1
HLT_Dimuon0er16_Jpsi_NoOS_NoVertexing_v1
HLT_Dimuon0er16_Jpsi_NoVertexing_v1
HLT_Dimuon10_Jpsi_Barrel_v1
HLT_Dimuon13_PsiPrime_v1
HLT_Dimuon13_Upsilon_v1

HLT_DiPFJet40_DEta3p5_MJJ600_PFMETNoMu80_v1
with a prescale of 3 for a 7e33 inst. lumi.
and a prescale of 5 for a 1.4e34 inst. lumi.

and so far there are no parked triggers

one of the last running HLT menus for *pp* collisions:

/online/collisions/2012/8e33/v3.2/HLT/V50

Migrate to 719
created: 2014-09-19
16:50:33

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detailssummarystreams

▼ TauParked

HLT_DoubleIsoL2Tau30_eta2p1_v1
HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_Jet30_v6
HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_Reg_Jet30_v2
HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_Reg_v2
HLT_DoubleMediumIsoPFTau30_Trk1_eta2p1_v5
<u>HLT_DoubleMediumIsoPFTau35_Trk1_eta2p1_Prong1_Reg_v2</u>
HLT_DoubleMediumIsoPFTau35_Trk1_eta2p1_Prong1_v5
HLT_DoubleMediumIsoPFTau35_Trk1_eta2p1_Reg_v2
HLT_DoubleMediumIsoPFTau35_Trk1_eta2p1_v5
HLT_LooseIsoPFTau35_Trk20_Prong1_MET70_v11
HLT_LooseIsoPFTau35_Trk20_Prong1_MET75_v11
HLT_LooseIsoPFTau35_Trk20_Prong1_v11

one of the last running HLT menus for *pp* collisions:

/online/collisions/2012/8e33/v3.2/HLT/V50

Migrate to 719
created: 2014-09-19
16:50:33

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detailssummarystreams

▼ VBF1Parked

HLT_DiJet20_MJJ650_AllJets_DEta3p5_HT120_VBF_v1

HLT_DiJet30_MJJ700_AllJets_DEta3p5_VBF_v1

HLT_DiJet35_MJJ650_AllJets_DEta3p5_VBF_v5

HLT_DiJet35_MJJ700_AllJets_DEta3p5_VBF_v5

HLT_DiJet35_MJJ750_AllJets_DEta3p5_VBF_v5

▼ ZeroBiasParked

HLT_ZeroBias_Parked_v1