

LibraryNames libTopEventSelectionTools libTopEventReconstructionTools

Good Run List

GRLDir GoodRunsLists

GRLFile data15_13TeV/20160720/physics_25ns_20.7.xml

data16_13TeV/20101101/physics_25ns_20.7.xml

Pile-up reweighting tool - this is now mandatory

Need to setup the following three options

PRWConfigFiles TopCorrections/PRW.410000.mc15c.r7725_r7676.root

PRWLumiCalcFiles

GoodRunsLists/data15_13TeV/20160720/physics_25ns_20.7.lumicalc.OfiLumi-13TeV-005.root

GoodRunsLists/data16_13TeV/20160916/physics_25ns_20.7.lumicalc.OfiLumi-13TeV-005.root

PRWDefaultChannel 410000

ElectronCollectionName Electrons

MuonCollectionName Muons

JetCollectionName AntiKt4EMTopoJets

LargeJetCollectionName None

LargeJetSubstructure None

TauCollectionName None

PhotonCollectionName None

TruthCollectionName TruthParticles

TruthJetCollectionName AntiKt4TruthWZJets

#TopPartonHistory ttbar

#TruthBlockInfo False

#PDFInfo False

ObjectSelectionName top::ObjectLoaderStandardCuts

OutputFormat top::EventSaverFlatNtuple

OutputEvents SelectedEvents

OutputFilename output.root

PerfStats No

Systematics Nominal

JetUncertainties_NPModel 19NP

JetUncertainties_BunchSpacing 25ns

ElectronID TightLH

ElectronIDLoose MediumLH

ElectronIsolation Gradient

ElectronIsolationLoose None

MuonQuality Medium

MuonQualityLoose Medium

MuonIsolation Gradient

MuonIsolationLoose None

FakesControlRegionDoLooseMC False

OverlapRemovalLeptonDef Tight

ApplyElectronInJetSubtraction False

BTaggingWP FixedCutBEff_77

kNotag,kVetoNoFit,kVetoNoFitLight,kVetoNoFitBoth,kWorkingPoint,kVeto,kVetoLight or
kVetoBoth

"KLfitterBTaggingMethod" : "kNotag" - Recommend use kNotag or

kVetoNoFit - see KLfitter TWiki

"KLfitterJetSelectionMode" : "kBtagPriorityFourJets" - kLeadingFour ,
kLeadingFive , kBtagPriorityFourJets , kBtagPriorityFiveJets

"KLfitterSaveAllPermutations" : "False" - Save All permutations to the
output file (False will save only the best)

"KLfitterTopMassFixed" : "True" - Fix the mass of the top quark?
True or False

"KLfitterTransferFunctionsPath" : "8TeV/ttbar/mc12_LCJets_v1" - Select the transfer
functions to use

KLfitterTopMassFixed False

KLfitterSaveAllPermutations False

KLfitterJetSelectionMode kBtagPriorityFourJets

KLfitterBTaggingMethod kVeto

IsAFII True

SELECTION ejets_2015

INITIAL

GRL

GOODCALO

PRIVTX

TRIGDEC HLT_e24_lhmedium_L1EM20VH HLT_e60_lhmedium HLT_e120_lhloose

RUN_NUMBER >= 276262

RUN_NUMBER <= 284484

EL_N 25000 >= 1

EL_N 25000 == 1

MU_N 25000 == 0

TRIGMATCH

JETCLEAN LooseBad

JET_N 25000 >= 1

JET_N 25000 >= 2

JET_N 25000 >= 3

JET_N 25000 >= 4

JET_N_BTAG FixedCutBEff_77 >= 1

RECO::KLFITTERRUN kElectron

EXAMPLEPLOTS

SAVE

SELECTION ejets_2016

INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_e26_lhtight_nod0_ivarloose HLT_e60_lhmedium_nod0 HLT_e140_lhloose_nod0
RUN_NUMBER >= 297730
EL_N 28000 >= 1
EL_N 28000 == 1
MU_N 28000 == 0
TRIGMATCH
JETCLEAN LooseBad
JET_N 25000 >= 1
JET_N 25000 >= 2
JET_N 25000 >= 3
JET_N 25000 >= 4
JET_N_BTAG FixedCutBEff_77 >= 1
RECO::KLFITTERRUN kElectron
EXAMPLEPLOTS
SAVE

SELECTION mujets_2015
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_mu20_iloose_L1MU15 HLT_mu50
RUN_NUMBER >= 276262
RUN_NUMBER <= 284484
MU_N 25000 >= 1
MU_N 25000 == 1
EL_N 25000 == 0
TRIGMATCH
JETCLEAN LooseBad
JET_N 25000 >= 1
JET_N 25000 >= 2
JET_N 25000 >= 3
JET_N 25000 >= 4
JET_N_BTAG FixedCutBEff_77 >= 1
RECO::KLFITTERRUN kMuon
EXAMPLEPLOTS
SAVE

SELECTION mujets_2016
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_mu26_ivarmedium HLT_mu50
RUN_NUMBER >= 297730
MU_N 28000 >= 1
MU_N 28000 == 1
EL_N 28000 == 0

TRIGMATCH
JETCLEAN LooseBad
JET_N 25000 >= 1
JET_N 25000 >= 2
JET_N 25000 >= 3
JET_N 25000 >= 4
JET_N_BTAG FixedCutBEff_77 >= 1
RECO::KLFITERRUN kMuon
EXAMPLEPLOTS
SAVE

#mll > 15 GeV
#window cut: 10 GeV

SELECTION ee_2015
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_e24_lhmedium_L1EM20VH HLT_e60_lhmedium HLT_e120_lhloose
RUN_NUMBER >= 276262
RUN_NUMBER <= 284484
EL_N 25000 >= 1
EL_N 25000 >= 2
TRIGMATCH
JETCLEAN LooseBad
MET > 60000
JET_N 25000 >= 1
JET_N 25000 >= 2
EL_N 25000 == 2
MU_N 25000 == 0
OS
MLL > 15000
MLLWIN 80000 100000
JET_N_BTAG FixedCutBEff_77 >= 1
EXAMPLEPLOTS
SAVE

SELECTION ee_2016
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_e26_lhtight_nod0_ivarloose HLT_e60_lhmedium_nod0 HLT_e140_lhloose_nod0
RUN_NUMBER >= 297730
EL_N 28000 >= 1
EL_N 25000 >= 2
TRIGMATCH
JETCLEAN LooseBad
MET > 60000
JET_N 25000 >= 1
JET_N 25000 >= 2

EL_N 25000 == 2
MU_N 25000 == 0
OS
MLL > 15000
MLLWIN 80000 100000
JET_N_BTAG FixedCutBEff_77 >= 1
EXAMPLEPLOTS
SAVE

SELECTION mumu_2015
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_mu20_iloose_L1MU15 HLT_mu50
RUN_NUMBER >= 276262
RUN_NUMBER <= 284484
MU_N 25000 >= 1
MU_N 25000 >= 2
TRIGMATCH
#EMU_OVERLAP
JETCLEAN LooseBad
MET > 60000
JET_N 25000 >= 1
JET_N 25000 >= 2
MU_N 25000 == 2
EL_N 25000 == 0
OS
MLL > 15000
MLLWIN 80000 100000
JET_N_BTAG FixedCutBEff_77 >= 1
EXAMPLEPLOTS
SAVE

SELECTION mumu_2016
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_mu26_ivarmedmedium HLT_mu50
RUN_NUMBER >= 297730
MU_N 28000 >= 1
MU_N 25000 >= 2
TRIGMATCH
#EMU_OVERLAP
JETCLEAN LooseBad
MET > 60000
JET_N 25000 >= 1
JET_N 25000 >= 2
MU_N 25000 == 2
EL_N 25000 == 0
OS

```
MLL > 15000
MLLWIN 80000 100000
JET_N_BTAG FixedCutBEff_77 >= 1
EXAMPLEPLOTS
SAVE
```

```
SELECTION emu_2015
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_e24_lhmedium_L1EM20VH HLT_e60_lhmedium HLT_e120_lhloose
HLT_mu20_iloose_L1MU15 HLT_mu50
RUN_NUMBER >= 276262
RUN_NUMBER <= 284484
EL_N_OR_MU_N 25000 >= 1
EL_N 25000 >= 1
MU_N 25000 >= 1
TRIGMATCH
#EMU_OVERLAP
JETCLEAN LooseBad
HT > 120000
JET_N 25000 >= 1
JET_N 25000 >= 2
EL_N 25000 == 1
MU_N 25000 == 1
OS
MLL > 15000
JET_N_BTAG FixedCutBEff_77 >= 1
EXAMPLEPLOTS
SAVE
```

```
SELECTION emu_2016
INITIAL
GRL
GOODCALO
PRIVTX
TRIGDEC HLT_e26_lhtight_nod0_ivarloose HLT_e60_lhmedium_nod0 HLT_e140_lhloose_nod0
HLT_mu26_ivarmedium HLT_mu50
RUN_NUMBER >= 297730
EL_N_OR_MU_N 28000 >= 1
EL_N 25000 >= 1
MU_N 25000 >= 1
TRIGMATCH
#EMU_OVERLAP
JETCLEAN LooseBad
HT > 120000
JET_N 25000 >= 1
JET_N 25000 >= 2
EL_N 25000 == 1
MU_N 25000 == 1
OS
```

```
MLL > 15000
JET_N_BTAG FixedCutBEff_77 >= 1
EXAMPLEPLOTS
SAVE
```