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Top PAG Reference Selection Configurations

🔨 *Currently under construction/maintenance!*

Complete:

💡 This documentation refers to TopQuarkAnalysis/Configuration in *CMSSW_7_2_3*)
Installation recipes and older releases and CVS tags are found in the release notes.

Introduction

General Information Sources for the User

Concepts

Configuration Organisation

Usage

Documentation

User Job Steering UPDATED

This section describes the constants offered to user for easy steering of the PAT tuple creation.

The descriptions are given regardless of the appearance of the parameters in single example configurations.
Not all described constants are available resp. usable in every configuration.

Data or MC? UPDATED

Configuration Parameter Constants UPDATED

- **runOnMC** (*boolean*):
general switch to run the configuration on:
 - ◆ True: MC input.
 - ◆ False: real data input;

Remarks

AOD or miniAOD? NEW

Configuration Parameter Constants

- **runOnMiniAOD** (*boolean*):
general switch to run the configuration on:
 - ◆ True: miniAOD input;
 - ◆ False: AOD input.

Remarks

Selection Steps

Configuration Parameter Constants

- **useTrigger** (*boolean*):
general switch to apply analysis specific trigger selection.
- **useGoodVertex** (*boolean*):
general switch to apply selection on primary vertex quality

- **useGoodMuon** (*boolean*):
general switch to require the existence of a good muon.
- **useMuonVeto** (*boolean*):
general switch to apply a veto on an additional muon.

- **useElectronVeto** (*boolean*):
general switch to apply a veto on an additional electron.

- **use1Jet** (*boolean*):
general switch to require at least one good jet fulfilling a tight pt cut.
- **use2Jets** (*boolean*):
general switch to require at least two good jets fulfilling a tight pt cut.
- **use3JetsTight** (*boolean*):
general switch to require at least three good jets fulfilling a tight pt cut.
- **use3JetsLoose** (*boolean*):
general switch to require at least three good jets fulfilling a loose pt cut.
- **use4Jets** (*boolean*):
general switch to require at least four good jets fulfilling a very loose pt cut.
- **use6JetsLoose** (*boolean*):
general switch to require at least six good jets.
- **use6JetsTight** (*boolean*):
general switch to require at least six good jets with variably increased pt cuts.

- **addTriggerMatching** (*boolean*):
general switch to apply trigger matching according to the trigger selection.

Remarks

Reference Selection

Configuration Parameter Constants

- **muonCut** (*string*):
cut string defining generally good standard muons to be considered for signal and veto;
default : 'isPFMuon && (isGlobalMuon || isTrackerMuon) && pt > 10. && abs(eta) < 2.5 && (chargedHadronIso+max(0.,neutralHadronIso+photonIso-0.50*puChargedHadronIso))/pt < 0.2'
- **signalMuonCut** (*string*):
cut string defining standard signal muons;
default : 'isPFMuon && isGlobalMuon && pt > 26. && abs(eta) < 2.1 && globalTrack.normalizedChi2 < 10. && track.hitPattern.trackerLayersWithMeasurement > 5 && globalTrack.hitPattern.numberOfValidMuonHits > 0 && abs(dB) < 0.2 && innerTrack.hitPattern.numberOfValidPixelHits > 0 && numberOfMatchedStations > 1 && (chargedHadronIso+max(0.,neutralHadronIso+photonIso-0.50*puChargedHadronIso))/pt < 0.12'
- **muonVertexMaxDZ** (*double*):
maximum distance between muon vertex and primary vertex in z;

default : 0.5


- **jetCut** (*string*):
cut string defining good calorimeter jets;
default : 'pt > 20. && abs(eta) < 2.5 && numberOfDaughters > 1 && neutralHadronEnergyFraction < 0.99 && neutralEmEnergyFraction < 0.99 && (chargedEmEnergyFraction < 0.99 || abs(eta) > 2.4) && (chargedHadronEnergyFraction > 0. || abs(eta) >= 2.4) && (chargedMultiplicity > 0 || abs(eta) >= 2.4)'
- **veryLooseJetCut** (*string*):
cut string defining signal jets on top of **jetCut**.
- **looseJetCut** (*string*):
cut string defining signal jets on top of **jetCut**.
- **veryLooseJetCut** (*string*):
cut string defining signal jets on top of **jetCut**.

- **electronCut** (*string*):
cut string defining generally good standard electrons to be considered for signal and veto;
default : 'pt > 20. && abs(eta) < 2.5 && electronID("mvaTrigV0") > 0. && (chargedHadronIso+max(0.,neutralHadronIso+photonIso-1.0*userIsolation("User1Iso")))/et < 0.15'

Trigger


- **triggerSelectionData** (*string*):
logical expression defining the trigger event selection on data.
- **triggerObjectSelectionData** (*string*):
logical expression selecting trigger objects for trigger matching according to the trigger event selection on data.
- **triggerSelectionMC** (*string*):
logical expression defining the trigger event selection on Monte Carlo.
- **triggerObjectSelectionMC** (*string*):
logical expression selecting trigger objects for trigger matching according to the trigger event selection on Monte Carlo.

Remarks


 These configuration parameters are commented in the example configuration files, and their values do not necessarily reflect the default settings, which are defined elsewhere.

Input

Configuration Parameter Constants

- **useRelVals** (*boolean*):
switch to use automatically retrieved release validation files of the current release;
 input files are determined considering the **runOnMC** parameter.
- **inputFiles** (*vector of strings*):
list of input files.
- **maxEvents** (*integer*):
maximum number of events;
setting this to -1 means *all*.

Remarks

 If **useRelVals** is set to `True`, **inputFiles** will be ignored.

Conditions UPDATED

Configuration Parameter Constants UPDATED

- **globalTagData** (*string*):
global tag used on data;
default : 'DEFAULT' (picks global tag from release)
- **globalTagMC** (*string*):
global tag used on Monte Carlo;
default : 'DEFAULT' (picks global tag from release)

Remarks

Output

Configuration Parameter Constants

- **outputFile** (*string*):
name of the output EDM file.
- **fwkReportEvery** (*integer*):
define frequency of log messages showing the job's advance.
- **wantSummary** (*boolean*):
switch to add trigger and time report to the end of the job's log output.

Remarks

Command Line Arguments UPDATED

Configuration parameters UPDATED

Following parameters can be steered by passing command line arguments to the configuration:

- standard command line arguments as defined in `VarParsing('standard')`
 - ◆ **'maxEvent'** (*int*, default: -1)
- **'runOnMC'** (*bool*, default: True): decide if run on MC or real data
- **'runOnMiniAOD'** (*bool*, default: True): decide if run on miniAOD or AOD input
- **'useElecEAIsoCorr'** (*bool*, default: True): decide, if EA (rho) or Delta beta corrections are used for electron isolation is used
- **'useCalibElec'** (*bool*, default: False): decide, if electron re-calibration using regression energies is used
- **'addTriggerMatch'** (*bool*, default: True): decide, if trigger objects are matched to signal muons
- standard command line arguments as defined in `FWCore.ParameterSet.VarParsing.VarParsing('standard')` :
 - ◆ **maxEvents** (*int*):
default: -1 (all).
 - **runOnMC** (*bool*):
decide if run on MC or real data; **default**: True.
 - **runOnMiniAOD** (*bool*):
decide if run on *miniAOD* or *AOD* input; **default**: True.
 - **useElecEAIsoCorr** (*bool*):
decide, if EA (rho) or Delta beta corrections are used for electron isolation; **default**: True.
 - **useCalibElec** (*bool*):
decide, if electron re-calibration using regression energies is used; **default**: False (only Run I calibrations available).

- **addTriggerMatch** (*bool*):
decide, if trigger objects are matched to signal muons; **default:** `True` (only Run I calibrations available).

Examples

- Run semi-muonic example configuration on all events with real data input:

```
cmsRun TopQuarkAnalysis/Configuration/test/patRefSel_muJets_cfg.py runOnMC=False
```

- Run hadronic example configuration on 1000 events with MC input and user-defined output file name:


```
cmsRun TopQuarkAnalysis/Configuration/test/patRefSel_muJets_cfg.py maxEvents=1000 outputFi
```

Release Notes UPDATED

The versions given refer to the the tag of the [CMSSW/TopQuarkAnalysis/Configuration](#) package..

The *CMSSW* versions given refer to the inclusion of the according code into the release cycle. The actual tag in *CMSSW* is possibly a later/different one.

CMSSW_7_2_3 UPDATED

 **This is, what *this* version of the documentation refers to!**

Change Log

- **First version for Run II:**
 - ◆ Runs on *miniAOD* or *AOD*
 - ◆ No top projections
 - ◆ Currently on mu+jets example

Installation Recipe

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_7_2_3
cd CMSSW_7_2_3/src
cmsenv
git cms-addpkg TopQuarkAnalysis/Configuration
git cms-addpkg EgammaAnalysis/ElectronTools
cd EgammaAnalysis/ElectronTools/data
cat download.url | xargs wget
cd -
scram b -j 20
cmsRun TopQuarkAnalysis/Configuration/test/patRefSel_muJets_cfg.py maxEvents=100
```

Older Tags

Show older tags ▾ Hide older tags ▾

CMSSW_5_3_18

 **This tag is documented in this version of this TWiki!**

Change Log

- b-tag fixes in PAT (from Dinko).
- Update TrackProbabilityCalibration for b-tagging to recommended one (MC).
- *optional* : use `goodOfflinePrimaryVertices` in b-tagging (from Dinko)
 - ⚠ This is a change in the RECO configuration.

Installation Recipe

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_3_18
cd CMSSW_5_3_18/src
cmsenv
git cms-addpkg TopQuarkAnalysis/Configuration
git cms-addpkg EgammaAnalysis/ElectronTools
git cms-merge-topic cms-analysis-tools:5_3_18-updateTopRefSel
cd EgammaAnalysis/ElectronTools/data
cat download.url | xargs wget
cd -
scram b -j 20
```

Optional: To re-run b-tagging with `goodOfflinePrimaryVertices`:

```
git cherry-pick 49db937
scram b -j 20
```

CMSSW_5_3_16_patch1 UPDATED💡 **This tag is documented in this version of this TWiki!****Change Log**

- Move CSC halo filter to more appropriate location (backport)

Installation Recipe

Show ▾ Hide ▾

```
ssh lxplus5.cern.ch
cmsrel CMSSW_5_3_16_patch1
cd CMSSW_5_3_16_patch1/src
cmsenv
git cms-addpkg TopQuarkAnalysis/Configuration
git cms-addpkg EgammaAnalysis/ElectronTools
git cms-merge-topic cms-analysis-tools:5_3_16_patch1-updateTopRefSel
cd EgammaAnalysis/ElectronTools/data
cat download.url | xargs wget
cd -
scram b -j 20
```

CMSSW_5_3_13 UPDATED💡 **This tag is documented in this version of this TWiki!****Change Log**

- GIT transition of recipe, incl. policy changes for package repositories.
- Update to most recent *CMSSW_5_3_X* release.
- Switch on base selection for leptons in PFBRECO.
- Use EA/rho corrections for electrons.

Installation Recipe

Show ▾ Hide ▾

```
ssh lxplus5.cern.ch
cmsrel CMSSW_5_3_13
cd CMSSW_5_3_13/src
cmsenv
git cms-addpkg TopQuarkAnalysis/Configuration
git cms-addpkg EgammaAnalysis/ElectronTools
git cms-merge-topic cms-analysis-tools:5_3_13-updateTopRefSel
cd EgammaAnalysis/ElectronTools/data
cat download.url | xargs wget
cd -
scram b -j 20
```

V07-00-04 (CMSSW_5_3_X) **This tag is documented in this version of this TWiki!****Change Log**

- Update of recommended MET filters.

Installation Recipes**CMSSW_5_3_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_3_11
cd CMSSW_5_3_11/src
cmsenv
addpkg TopQuarkAnalysis/Configuration
addpkg TopQuarkAnalysis/TopSkimming V07-01-04
addpkg TopQuarkAnalysis/TopTools V06-07-13
cvs co -r V03-03-11-01 DataFormats/METReco
cvs co -r V04-06-09-02 JetMETCorrections/Type1MET
cvs co -r V00-00-08 RecoMET/METAnalyzers
cvs co -r V15-02-06 RecoParticleFlow/PFProducer
cvs co -r V00-00-30-01 -d EGamma/EGammaAnalysisToolsUserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V07-00-03 (CMSSW_5_3_X) **This tag is documented in this version of this TWiki!****Change Log**

- Update to *CMSSW_5_3_X*.

Installation Recipes**CMSSW_5_3_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_3_5
cd CMSSW_5_3_5/src
cmsenv
```


Installation Recipe

```

cvs co -r V07-00-03      TopQuarkAnalysis/Configuration
cvs co -r V07-01-04      TopQuarkAnalysis/TopSkimming
cvs co -r V06-07-13      TopQuarkAnalysis/TopTools
cvs co -r V00-00-08      RecoMET/METAnalyzers
cvs co -r V15-02-06      RecoParticleFlow/PFProducer
cvs co -r V00-00-13 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9

```

V07-00-02 (CMSSW_5_2_X)

 This tag is documented in this version of this TWiki!

Change Log

- Update GlobalTags for broken ones.

Installation Recipes

CMSSW_5_2_X


Show Hide

```

ssh lxplus.cern.ch
cmsrel CMSSW_5_2_6
cd CMSSW_5_2_6/src
cmsenv
cvs co -r V07-00-02      TopQuarkAnalysis/Configuration
cvs co -r V06-07-11-01  TopQuarkAnalysis/TopTools
cvs co -r V06-05-01     DataFormats/PatCandidates
cvs co -r V08-09-11-06  PhysicsTools/PatAlgos
cvs co -r V03-09-22     PhysicsTools/PatUtils
cvs co -r V00-03-16     CommonTools/ParticleFlow
cvs co -r V00-00-09     CommonTools/RecoUtils
cvs co -r V04-06-09     JetMETCorrections/Type1MET
cvs co -r V00-00-08     RecoMET/METAnalyzers
cvs co -r V00-00-07     RecoMET/METFilters
cvs co -r V00-00-13 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9

```

V07-00-01 (CMSSW_5_2_X)

 This tag is documented in this version of this TWiki!

Change Log

- Update to the latest reference selection prescription after object approvals for ICHEP2012:
 - ◆ new MET filters;
 - ◆ use only PFBRECO (formerly known as PF2PAT);
 - ◆ remove obsolete x-object DeltaR cleaning;
 - ◆ add missing simple muon selector for z-distance of vertices (mu+jets);
 - ◆ muon updates;
 - ◆ jet updates (mu+jets:different pt cuts).
- Update GlobalTags for Summer12 JECs and new b-tag scale factors.

Installation Recipes**CMSSW_5_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_6
cd CMSSW_5_2_6/src
cmsenv
cvs co -r V07-00-01      TopQuarkAnalysis/Configuration
cvs co -r V06-07-11-01 TopQuarkAnalysis/TopTools
cvs co -r V06-05-01      DataFormats/PatCandidates
cvs co -r V08-09-11-02 PhysicsTools/PatAlgos
cvs co -r V03-09-22      PhysicsTools/PatUtils
cvs co -r V00-03-14      CommonTools/ParticleFlow
cvs co -r V00-00-09      CommonTools/RecoUtils
cvs co -r V04-06-09      JetMETCorrections/Type1MET
cvs co -r V00-00-08      RecoMET/METAnalyzers
cvs co -r V00-00-07      RecoMET/METFilters
cvs co -r V00-00-13 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V06-02-08 (CMSSW_5_2_X)

💡 This tag is documented in this version of this TWiki!

Change Log

- Update to the latest PAT prescription.

Installation Recipes**CMSSW_5_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-08      TopQuarkAnalysis/Configuration
cvs co -r V06-05-01      DataFormats/PatCandidates
cvs co -r V08-09-11-00 PhysicsTools/PatAlgos
cvs co -r V03-09-22      PhysicsTools/PatUtils
cvs co -r V00-03-14      CommonTools/ParticleFlow
cvs co -r V00-00-09      CommonTools/RecoUtils
cvs co -r V04-06-05      JetMETCorrections/Type1MET
cvs co -r V00-00-13 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V06-02-07 (CMSSW_5_2_X)

💡 This tag is documented in this version of this TWiki!

Change Log

- Eliminate obsolete re-running of jet algos completely.

Installation Recipes**CMSSW_5_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-07      TopQuarkAnalysis/Configuration
cvs co -r V06-07-11-01  TopQuarkAnalysis/TopTools
cvs co -r V06-05-01     DataFormats/PatCandidates
cvs co -r V08-09-07     PhysicsTools/PatAlgos
cvs co -r V00-03-11     CommonTools/ParticleFlow
cvs co -r V00-00-08 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V06-02-06 (CMSSW_5_2_X)💡 **This tag is documented in this version of this TWiki!****Change Log**

- Fix/update isolation treatment in/from PF2PAT.
- Fix input to `rho` calculation for all *CMSSW_5_2_X* GlobalTags according to this update from Mar. 15th.
(The *CMSSW_5_2_X* GlobalTags inherit from *CMSSW_5_0_X* GlobalTags, which are newer than the ones mentioned there.)

Installation Recipes**CMSSW_5_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-06      TopQuarkAnalysis/Configuration
cvs co -r V06-05-01     DataFormats/PatCandidates
cvs co -r V08-09-07     PhysicsTools/PatAlgos
cvs co -r V00-03-11     CommonTools/ParticleFlow
cvs co -r V00-00-08 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V06-02-05 (CMSSW_5_2_X)💡 **This tag is documented in this version of this TWiki!**

Change Log

- Fix electrons PF isolation for recent naming scheme updates (from Sarah).


Installation Recipes

CMSSW_5_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-05      TopQuarkAnalysis/Configuration
cvs co -r V06-05-01      DataFormats/PatCandidates
cvs co -r V08-09-05      PhysicsTools/PatAlgos
cvs co -r V00-03-11      CommonTools/ParticleFlow
cvs co -r V00-00-08 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V06-02-04 (CMSSW_5_2_X)

 This tag is documented in this version of this TWiki!

Change Log

- Apply HBHE noise and scraping filters to data only (thanx, Andrea G.).
- Use correct MVA electron ID.

Installation Recipes

CMSSW_5_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-04      TopQuarkAnalysis/Configuration
cvs co -r V06-05-01      DataFormats/PatCandidates
cvs co -r V08-09-05      PhysicsTools/PatAlgos
cvs co -r V00-03-11      CommonTools/ParticleFlow
cvs co -r V00-00-08 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
cd EGamma/EGammaAnalysisTools/data
cat download.url | xargs wget
cd -
scram b -j 9
```

V06-02-02 (CMSSW_5_2_X)

 This tag is documented in this version of this TWiki!


Change Log

- Apply new reference selection as in TWikiTopRefEventSel:
 - ◆ New MVA electron ID instead of CiC.
 - ◆ Delta R cut for jets vs. leptons removed in PF2PAT.
 - ◆ Updated cuts and IDs.

Installation Recipes**CMSSW_5_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-02      TopQuarkAnalysis/Configuration
cvs co -r V06-05-01      DataFormats/PatCandidates
cvs co -r V08-09-04      PhysicsTools/PatAlgos
cvs co -r V00-00-06 -d EGamma/EGammaAnalysisTools UserCode/EGamma/EGammaAnalysisTools
scram b -j 9
```

V06-02-01 (CMSSW_5_2_X) **This tag is documented in this version of this TWiki!****Change Log**

- Remove `TotalKinematicsFilter` for MC again, since it is not needed any more.
- Clean up triggers and run ranges.

Installation Recipes**CMSSW_5_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_5_2_5
cd CMSSW_5_2_5/src
cmsenv
cvs co -r V06-02-01 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-23 (CMSSW_4_4_X) **This tag is documented in this version of this TWiki!****Change Log**


- Update to latest PAT prescription for CMSSW_4_4_X, incl. final fix for obsolete re-running of `kt6PFJets`.

Installation Recipes**CMSSW_4_4_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_4_4
cd CMSSW_4_4_4/src
cmsenv
cvs co -r V00-03-05-10 CommonTools/ParticleFlow
cvs co -r V06-05-01      DataFormats/PatCandidates
cvs co -r V08-07-47      PhysicsTools/PatAlgos
cvs co -r V06-01-23      TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-22 (CMSSW_4_4_X)

 This tag is documented in this version of this TWiki!

Change Log

- Remove incompatibility switch to 42X again.
- Fix/update isolation treatment in/from PF2PAT.
- Fix input to `rho` calculation for used GlobalTags `START44_V13`, `GR_R_44_V15` according to this update from Mar. 15th.

Installation Recipes

CMSSW_4_4_X

Show Hide

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_4_4
cd CMSSW_4_4_4/src
cmsenv
cvs co -r V00-03-05-10 CommonTools/ParticleFlow
cvs co -r V06-05-01 DataFormats/PatCandidates
cvs co -r V08-07-46 PhysicsTools/PatAlgos
cvs co -r V06-01-22 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-19 (CMSSW_4_4_X)

 This tag is documented in this version of this TWiki!

Change Log

- Add forgotten `TotalKinematicsFilter` for MC
- Deal with new backward incompatibility to 42X input in PAT with a new switch.
- Use `pvCollection` collection parameter of `usePF2PAT`.
- Adapt `kt6PFJets` to latest JetMET recipe.

Installation Recipes

CMSSW_4_4_X

Show Hide

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_4_4
cd CMSSW_4_4_4/src
cmsenv
cvs co -r V00-03-05-04 CommonTools/ParticleFlow
cvs co -r V08-07-42 PhysicsTools/PatAlgos
cvs co -r V06-01-19 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-17 (CMSSW_4_4_X)

 This tag is documented in this version of this TWiki!

Change Log

- Updated GlobalTags.

Installation Recipes**CMSSW_4_4_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_4_4
cd CMSSW_4_4_4/src
cmsenv
cvs co -r V00-03-05-04 CommonTools/ParticleFlow
cvs co -r V08-07-41 PhysicsTools/PatAlgos
cvs co -r V06-01-17 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-14-04 (CMSSW_4_2_X) **This tag is documented in this version of this TWiki!****Change Log**

- Fix/update isolation treatment in/from PF2PAT.
- Fix input to `rho` calculation for used GlobalTags `START42_V17`, `GR_R_42_V23` according to this update from Mar. 15th.

Installation Recipes**CMSSW_4_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_8_patch7
cd CMSSW_4_2_8_patch7/src
cmsenv
cvs co -r B4_2_X_V00-03-02 CommonTools/ParticleFlow
cvs co -r V06-04-19-04 DataFormats/PatCandidates
cvs co -r V08-06-54 PhysicsTools/PatAlgos
cvs co -r V03-09-18 PhysicsTools/PatUtils
cvs co -r V00-03-24 PhysicsTools/SelectorUtils
cvs co -r V08-02-14 PhysicsTools/UtilAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-17 RecoJets/Configuration
cvs co -r V06-01-14-02 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-14-02 (CMSSW_4_2_X) and V06-01-16 (CMSSW_4_4_X) **This tag is documented in this version of this TWiki!****Change Log**

- Added switch for new pile-up subtraction for PF isolation calculation (from TJ).

Installation Recipes**CMSSW_4_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_8_patch7
cd CMSSW_4_2_8_patch7/src
cmsenv
```

```

cvs co -r B4_2_X_V00-03-02 CommonTools/ParticleFlow
cvs co -r V06-04-19-04 DataFormats/PatCandidates
cvs co -r V08-06-54 PhysicsTools/PatAlgos
cvs co -r V03-09-18 PhysicsTools/PatUtils
cvs co -r V00-03-24 PhysicsTools/SelectorUtils
cvs co -r V08-02-14 PhysicsTools/UtilAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-17 RecoJets/Configuration
cvs co -r V06-01-14-02 TopQuarkAnalysis/Configuration
scram b -j 9

```

CMSSW_4_4_X

Show ▾ Hide ▾

```

ssh lxplus.cern.ch
cmsrel CMSSW_4_4_3
cd CMSSW_4_4_3/src
cmsenv
cvs co -r V08-07-38-02 PhysicsTools/PatAlgos
cvs co -r V06-01-16 TopQuarkAnalysis/Configuration
scram b -j 9

```

V06-01-14-01 (CMSSW_4_2_X) and V06-01-15 (CMSSW_4_4_X)

 This tag is documented in this version of this TWiki!

Change Log

- Update to the latest version of the PAT: *CMSSW_4_2_X* resp. *CMSSW_4_4_X*.
- New JEC tags (2011V12).

Installation Recipies

CMSSW_4_2_X

Show ▾ Hide ▾

```

ssh lxplus.cern.ch
cmsrel CMSSW_4_2_8_patch7
cd CMSSW_4_2_8_patch7/src
cmsenv
cvs co -r B4_2_X_V00-03-01 CommonTools/ParticleFlow
cvs co -r V06-04-19-02 DataFormats/PatCandidates
cvs co -r V08-06-53 PhysicsTools/PatAlgos
cvs co -r V03-09-18 PhysicsTools/PatUtils
cvs co -r V00-03-24 PhysicsTools/SelectorUtils
cvs co -r V08-02-14 PhysicsTools/UtilAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-17 RecoJets/Configuration
cvs co -r V06-01-14-01 TopQuarkAnalysis/Configuration
scram b -j 9

```

CMSSW_4_4_X

Show ▾ Hide ▾

```

ssh lxplus.cern.ch
cmsrel CMSSW_4_4_3
cd CMSSW_4_4_3/src
cmsenv
cvs co -r V08-07-38-02 PhysicsTools/PatAlgos
cvs co -r V06-01-15 TopQuarkAnalysis/Configuration
scram b -j 9

```

V06-01-14

 **This tag is documented in this version of this TWiki!**

Change Log

- Update to the latest version of the PAT:
 - ◆ Use switches to select lepton isolation cones of $R=0.3$ (default: 0.4) rather than setting the absolute value.

This goes along with PF2PAT developments, where these two values are *both* used for production by default (muons only so far).
- Fix missing parameter in `PrimaryVertexFilter` configuration (from Supriya).

Installation Recipies**CMSSW_4_2_X**


Show  Hide 

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_8_patch7
cd CMSSW_4_2_8_patch7/src
cmsenv
cvs co -r B4_2_X_V00-03-00 CommonTools/ParticleFlow
cvs co -r V06-04-19-02 DataFormats/PatCandidates
cvs co -r V08-06-50 PhysicsTools/PatAlgos
cvs co -r V03-09-18 PhysicsTools/PatUtils
cvs co -r V00-03-24 PhysicsTools/SelectorUtils
cvs co -r V08-02-14 PhysicsTools/UtilAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-17 RecoJets/Configuration
cvs co -r V06-01-14 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-12

 **This tag is documented in this version of this TWiki!**

Change Log

- Provide switch to add minimal lepton analysis selection cuts (veto leptons) to top projections.
- Calculating jet areas for jets from RECO in case of *L1FastJet* corrections, which would be constantly 1 otherwise.
- Use another instance of `PrimaryVertexObjectFilter` instead of the buggy `PrimaryVertexFilter`.
 -  However, the fix for the `PrimaryVertexFilter` is also included in the tag set below.
- Use correct vertices also in PAT lepton producers.

Installation Recipies**CMSSW_4_2_X**

Show  Hide 

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_8
cd CMSSW_4_2_8/src
cmsenv
cvs co -r V06-04-19-01 DataFormats/PatCandidates
cvs co -r V08-06-41-02 PhysicsTools/PatAlgos
cvs co -r V00-03-24 PhysicsTools/SelectorUtils
cvs co -r V08-02-14 PhysicsTools/UtilAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
```

```
cvs co -r V02-04-17 RecoJets/Configuration
cvs co -r V06-01-12 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-08

 **This tag is documented in this version of this TWiki!**

Change Log

- Added further electron ID working points.
- Require comb. iso. of 0.2 in a cone of 0.4 for muons in PF.
- Require comb. iso. of 0.125 for signal PF muons (tight and loose identical).
- Bug fix for PF leptons iso. calculation config. (Nic, HN message [↗](#)).
- Covering issue described in <https://hypernews.cern.ch/HyperNews/CMS/get/JetMET/1215.html> [↗](#) by switching Voronoi computation off.
- Produce *kt6PF rho* in any case in order to be available for later application of L1Fastjet corrections ("on-the-fly").
- Some minor fixes.

Installation Recipies

CMSSW_4_2_X

Show  Hide 

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_8
cd CMSSW_4_2_8/src
cmsenv
cvs co -r V06-04-19-01 DataFormats/PatCandidates
cvs co -r V08-06-41 PhysicsTools/PatAlgos
cvs co -r V00-03-17 PhysicsTools/SelectorUtils
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-17 RecoJets/Configuration
cvs co -r V06-01-08 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-04

 **This tag is documented in this version of this TWiki!**

Change Log

- Changed minNdf cut back to 4.0 based on WorkbookJetEnergyCorrections
- Updated tag of RecoJets/Configuration to not use Voronoi areas, also based on WorkbookJetEnergyCorrections

Installation Recipies

CMSSW_4_2_X

Show  Hide 

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-16 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-17 RecoJets/Configuration
```

```
cvs co -r V06-01-04 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-03

Change Log

- Bug fix in order of tool calls (Kevin);
- Added pile-up info for MC (Kevin);
- Fixing some input tags.


Installation Recipies

CMSSW_4_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-16 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V06-01-03 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-02

 This tag is documented in this version of this TWiki!

Change Log

- Enable option to run a separate *standard* workflow with PF jets instead of Calo jets.


Installation Recipies

CMSSW_4_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-14 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V06-01-02 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-01

 This tag is documented in this version of this TWiki!

Change Log

- Add CiC electron IDs to the work flows (not used in selection yet), following the recipe given on the CiCelectronID TWiki.

Installation Recipies**CMSSW_4_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-14 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V00-03-31 RecoEgamma/ElectronIdentification
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V06-01-01 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-01-00💡 **This tag is documented in this version of this TWiki!****Change Log**

- Updated reference selection as described in TWikiTopRefEventSel.

Installation Recipies**CMSSW_4_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-14 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V06-01-00 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-00-16💡 **This tag is documented in this version of this TWiki!****Change Log**


- Added PF jets to standard work-flow in the all-hadronic example by Eike.

Installation Recipies**CMSSW_4_2_X**

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-14 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V06-00-16 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-00-15

 **This tag is documented in this version of this TWiki!**

Change Log

- Added configuration parameters to steer the PF2PAT top projections;
- Added PF jets to standard work-flow in the all-hadronic example.

Installation Recipes

CMSSW_4_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_4
cd CMSSW_4_2_4/src
cmsenv
cvs co -r V06-04-14 DataFormats/PatCandidates
cvs co -r V08-06-31 PhysicsTools/PatAlgos
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V06-00-15 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-00-13

 **This tag is documented in this version of this TWiki!**

Change Log

- All hadronic example added by Eike.

Installation Recipes

CMSSW_4_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_3
cd CMSSW_4_2_3/src
cmsenv
cvs co -r V08-06-25 PhysicsTools/PatAlgos
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V04-01-00 RecoJets/JetAlgorithms
cvs co -r V05-05-03 RecoJets/JetProducers
cvs co -r V06-00-13 TopQuarkAnalysis/Configuration
scram b -j 9
```

V06-00-12 and V06-00-09-03

 **These tags are documented in this version of this TWiki!**

Change Log

- Initial tag announced to public;
- mu+jets only.

Installation Recipies

CMSSW_4_1_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_1_6
cd CMSSW_4_1_6/src
cmsenv
addpkg FWCore/ParameterSet
cvs up -r 1.76 FWCore/ParameterSet/python/SequenceTypes.py
addpkg PhysicsTools/PatAlgos
cvs up -r 1.22.2.1 PhysicsTools/PatAlgos/python/tools/trigTools.py
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V04-01-00 RecoJets/JetAlgorithms
cvs co -r V05-05-03-00 RecoJets/JetProducers
cvs co -r V06-00-09-03 TopQuarkAnalysis/Configuration
scram b -j 9
```

CMSSW_4_2_X

Show ▾ Hide ▾

```
ssh lxplus.cern.ch
cmsrel CMSSW_4_2_3
cd CMSSW_4_2_3/src
cmsenv
cvs co -r V08-06-25 PhysicsTools/PatAlgos
cvs co -r V02-04-16 RecoJets/Configuration
cvs co -r V04-01-00 RecoJets/JetAlgorithms
cvs co -r V05-05-03 RecoJets/JetProducers
cvs co -r V06-00-12 TopQuarkAnalysis/Configuration
scram b -j 9
```

Contacts

- **Responsible:** Volker Adler
- **Group home page:** CMS Top Quark Physics Group
- **Reference selection page:** Towards a Reference Selection
- **Conveners:** Martijn Mulders and Andreas Meyer
- **Hypernews forum:** Top Physics: Selection & Reconstruction [↗](#)

Review status

Reviewer/Editor and Date	Comments
Volker Adler - 19-May-2011	created page

-- VolkerAdler - 19-May-2011

This topic: CMSPublic > SWGuideTopRefEventSel

Topic revision: r71 - 2014-12-05 - VolkerAdler



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