

# Table of Contents

<b>ArizonaFJetNtuples.....</b>	<b>1</b>
<b>Introduction.....</b>	<b>2</b>
<b>Pre-selection.....</b>	<b>3</b>
<b>Selection.....</b>	<b>4</b>
MC normalization.....	4
Weights.....	4
Lepton/Trigger scale factors.....	4
W+jets SFs.....	5
NNLO corrections.....	5
Heavy Flavor SFs and CA normalization.....	5
Selection example.....	5
HFOR.....	5
B-Tagging.....	6
Leptons.....	6
Trigger matching.....	6
Delayed stream.....	6
True event type.....	6
Multijet estimation.....	6
Leptonic top jet.....	6
Large-R jet isolation requirement.....	6
Signal region.....	6
CR1.....	6
CR2.....	6
CR3.....	7
Recipe.....	7
Validation.....	7
<b>Branches.....</b>	<b>8</b>
<b>Systematics.....</b>	<b>9</b>
Object systematics.....	9
Variations.....	9
Affected quantities.....	9
MET systematics.....	9
Variations.....	9
Affected quantities.....	9
Lepton SF systematics.....	9
Variations.....	9
Affected quantities.....	9
Trigger SF systematics.....	10
Variations.....	10
Affected quantities.....	10
Large-R systematics.....	10
Variations.....	10
Affected quantities.....	10
Large-R substructure systematics.....	10
<b>Example analysis code.....</b>	<b>11</b>

# Table of Contents

<b>Production code.....</b>	<b>12</b>
Build.....	12
Modify.....	12
Run.....	12
<b>Step 2 code.....</b>	<b>13</b>
Modify code.....	13
Compile.....	13
Run.....	13
<b>Ntuples in Arizona Tier3 Cluster.....</b>	<b>14</b>
<b>Samples Processed.....</b>	<b>15</b>
Dataset names.....	15
MC.....	15
data.....	15
ttbar.....	15
ttbar+V (MadGraph+Pythia).....	15
W+jets (AlpGen+Pythia).....	15
W+jets Akt10 filtered samples (AlpGen+Pythia).....	16
Z+jets (AlpGen+Pythia).....	16
Single-top.....	17
Diboson.....	17
WPrime.....	18
Data.....	18

# ArizonaFJetNtuples

# Introduction

This twiki is meant to provide information regarding the ntuples produced by Arizona for the purpose of hadronically decaying W and top studies using large-R jets.

# Pre-selection

- Use TopCommonObjects
  - ◆ Use mini-isolation for both e+jet and mu+jets
  - ◆ Large-R jet  $pt > 100$  GeV
- Pass lepton trigger, trigger matching, pvtx, jet cleaning, and error flags
- No MET or \$WTransMass (MTW) cuts
- Exactly 1 lepton, e or mu
- $\geq 1$  akt-4 jets within  $dR < 1.5$  from lepton
- $\geq 1$  akt-4 jet with  $mv1 > 0.1340$  (85%) OR  $mv1c > 0.4051$  (80%)
- $\geq 1$  large-R jet (from any available collection) with  $pt > 175$  GeV (to allow for offline uncertainties to be added)

# Selection

W+jets and multijet tools are already in this package:

```
svn+ssh://svn.cern.ch/repos/atlasinst/Institutes/Arizona/TopResonances/D5PDMacros
```

## MC normalization

`xsec`, `kf`, and `ninit` are stored as branches for easy MC normalization

Scale each event with `lumi * xsec * kf / ninit`

If entire MC sample is not available, use `h_cutflow_EJB_weighted_mcw->GetBinContent(1)` from a combined file for the sample instead of `ninit`.

## Weights

`weight_total` contains the following weights:

- MC (only needed for MC@NLO)
- pileup
- lepton scale
- pvtx
- b-tagging

`SF_btagMV170`: b-tag weight, there are 6 operating points available

`weight_ews`: TtbarWeakCorrections applied to ttbar

`weight_tpt`: \$PowHeg+Pythia top Pt reweighting

**single top weight:**

`mc12_8TeV.110090.PowhegPythia_P2011C_single_top_tchan_lept_top.merge.NTUP_COMMON.e2575_s1773_s1776`  
and

`mc12_8TeV.110091.PowhegPythia_P2011C_single_top_tchan_lept_antitop.merge.NTUP_COMMON.e2575_s1773_s1776`  
require an additional event weight of `e9` to correct MC weight

## Lepton/Trigger scale factors

Nominal:

```
weight_total * (SF_btagMV170 / weight_btagScale) * weight_ews * weight_tpt
```

Lepton variation:

```
weight_total * (SF_btagMV170 / weight_btagScale) * weight_ews * weight_tpt *  
(SF_el_ElScaleUp * SF_mu_ElScaleUp * SF_elTrig_ElScaleUp * SF_muTrig_ElScaleUp *  
SF_dmuTrig_ElScaleUp) / weight_lepScale
```

Trigger SF variation:

```
weight_total * (SF_btagMV170 / weight_btagScale) * weight_ews * weight_tpt *  
(SF_elTrig_TrigUp * SF_muTrig_TrigUp) / (SF_elTrig * SF_muTrig)
```

Lepton SF variation:

```
IsoUp/Down weight_total * (SF_btagMV170 / weight_btagScale) * weight_ews * weight_tpt *
(SF_elIdIso_SFUp * SF_muIso_SFUp) / (SF_elIdIso * SF_muIso)
```

```
RecoUp/Down weight_total * (SF_btagMV170 / weight_btagScale) * weight_ews * weight_tpt *
(SF_elReco_SFUp * SF_muReco_SFUp) / (SF_muReco * SF_elReco)
```

## W+jets SFs

### NNLO corrections

Apply NNLO corrections to each of the el and mu channel W+Jets samples based on their lepton charge as so:

```
k_pos = A/C * ((1+R)/(1+R*(A/C))) k_neg = ((1+R)/(1+R*(A/C)))
```

Where  $A = 1.415=0$ ,  $=C = 1.447$ , and  $R = 1.47803$

### Heavy Flavor SFs and CA normalization

In D5PDMacros, use src/HFsys.cxx and include/HFsys.h to get the correct scale factors. You need the .txt and .root files from share/wjets/ as inputs to the tool.

```
Initialize: HFsys *HFsysTool_boosted = new HFsys("share/wjets/HFsys_WjetYields.txt",
"share/wjets/HFsysboosted_SF.root", HFSYS::BOOSTED);
```

```
For each event: double weight_wjetsf_boosted = HFsysTool_boosted->GetWjetSFWeight(wjets_syst,
hfsf_chan, HFORtype, NAkt4);
```

=wjets\_syst" is a string that should be "nominal", unless evaluating JESUp or JESDown systematics, in which case it should be "jesup" and "jesdown" respectively.

## Selection example

```
(MuonsN = 1) && (ElectronsN = 0) && (MuonsIsIsolated = 1) && (IsTrigMatch_mu = 1) &&
(IsBoosted = 1) && (HFORtype < 4) && (NBjets > 0) && (passJetCut) && (passFJetCut) &&
(passMETMTWCut)
```

Where `NBjets` is the sum of akt4 jets passing your favorite b-tag requirement.

`passJetCut` is the requirement that there exists at least 1 akt-4 jet with  $pt > 25$  GeV and  $dR(\text{lep}, \text{jet}) < 1.5$ . The highest pt of these jets is considered the leptonic top jet (`ltjet`).

`passFJetCut` is the requirement that there is a large-R jet with  $dR(\text{fjet}, \text{ltjet}) > 1.5$  and  $d\Phi(\text{fjet}, \text{lep}) > 2.3$

`passMETMTWCut` is your favorite MET and MTW cut(s) using `EtMiss` and `WTransMass`

## HFOR

Only relevant for W+jets. Reject events with `HFORtype > 3`

## B-Tagging

Use `JetsMV1` or `JetsMV1C` as desired

## Leptons

There is no lepton isolation pre-selection. In order to select events with an isolated lepton use `MuonsIsIsolated/ElectronsIsIsolated = true`

## Trigger matching

Use `IsTrigMatch_el/mu = 1`

## Delayed stream

Events passing emulated large-R jet trigger are included in MC to be used with delayed muon stream data (not processed). Use `IsBoosted = 1` or `IsDelayedBoosted = 0` to remove these events

If you do use the delayed stream, MC with `IsDelayedBoosted = 1` need to be normalized to `lumi = 17356 pb-1`

## True event type

If using truth matching, use `TruEventType != 3` to remove dilepton events

## Multijet estimation

To be updated shortly.

## Leptonic top jet

The highest  $p_{t, \text{akt-4}}$  jet that lies within  $dR(\text{jet}, \text{lep}) < 1.5$  is considered the leptonic top jet, `ltjet`. Require all events to have a leptonic top jet.

## Large-R jet isolation requirement

Define an isolated large-R jet as having  $dR(\text{large-R}, \text{ltjet}) > 1.5$

## Signal region

Require lepton isolation and that there is at least 1 isolated large-R jet.

### CR1

Invert lepton isolation

### CR2

Require lepton isolation and invert large-R jet isolation, requiring exactly 0 isolated large-R jets



## CR3

Invert both lepton and large-R jet isolation

## Recipe

Get QCD templates from CR1, defined as data - MC.

Scale templates to  $n_{CR2}/n_{CR3}$ , where  $n_{CR2}$  and  $n_{CR3}$  are the data - MC yields from the respective control region **before** MET and MTW cuts are applied.

## Validation

Closure tests are still needed

# Branches

- `sampName`: Name of individual sample, ie. `WenuNp0`
- `bkgName`: Name of background, ie. `wjets`
- `Leptons*`: `Electrons* + Muons*`
- `Jets*`: Akt-4 jets
- `bJetsN`: Akt-4 jets passing mv1 b-tagging at 70%
- `BuiltCandAkt10Jets*`: Trimmed R = 30 akt-10 jets
- `BuiltCandAkt10TrimF5R20Jets*`: Trimmed R = 20 akt-10 jets
- `BuiltCandCamKt10PrunR50Z15Jets*`: Pruned R = 50 Z = 15 C/A 10 jets
- `BuiltCandCamKt12BDRSM100R30Y15Jets*`: Split/filtered R = 30 Y = 15 C/A 12 jets
- `TruEventType`: 0 = e+jets, 1 = mu+jets, 2 = tau+jets, 3 = dilepton
- `Tru*`: Truth particles, always filled for ttbar and sometimes for single top (be careful)
- `TruW`: Truth W **not** decaying from a top. To be used for W+jets pt reweighting and for single top Wt channel truth matching
- `TruRawAkt10*`: Untrimmed truth akt-10 jets to be used to stitch pt filtered W+jets samples to inclusive samples
- `TruAkt10*`: Trimmed truth akt-10 jets with  $pt > 75$  GeV
- `TruCA12*`: Split/filtered truth CA-12 jets with  $pt > 75$  GeV

# Systematics

Unless a quantity is explicitly affected by a systematic, use the nominal value

## Object systematics

### Variations

ElScaleUp/Down  
ElResUp/Down  
MuScaleUp/Down  
MuResUp/Down  
MuIdUp/Down  
JESUp/Down  
JER

### Affected quantities

Electrons  
Muons  
Akt4 jets  
WTransMass  
SF\_el  
SF\_mu  
SF\_elTrig  
SF\_muTrig  
IsTrigMatch\_el/mu

## MET systematics

### Variations

METResUp/Down  
METSCUp/Down

### Affected quantities

EtMiss  
EtMiss\_phi  
WTransMass

## Lepton SF systematics

Each component of the lepton SFs is stored individually, but combining them properly will take some work. The process will be posted here asap.

### Variations

SFUp/Down

### Affected quantities

SF\_elReco  
SF\_elId  
SF\_elIso

SF\_elIdIso  
SF\_muReco  
SF\_muIso

## Trigger SF systematics

### Variations

TrigUp/Down

### Affected quantities

SF\_elTrig  
SF\_muTrig

## Large-R systematics

Each jet collection has JES/JER and JMS/JMR (using UJUncertaintyProvider) variations, for which E/Pt or M variations are stored. To use any of these systematics, make sure to use the systematic version of the quantity affected while using nominal for all other quantities. Large-R jets are selected such that at least one systematic variation passes the Pt requirement.

### Variations

BJESUp/Down  
BJER  
BJMSUp/Down  
BJMR

### Affected quantities

Large-R jet 4-vectors

## Large-R substructure systematics

To be implemented using UJUncertaintyProvider offline

The respective substructure quantities

# Example analysis code

To be added soon

# Production code

Framework developed by Xiaowen Lei

```
svn+ssh://@svn.cern.ch/repos/atlasinst/Institutes/Arizona/xlei/TopLJetsResAnaArea/trunk
TopLJetsResAnaArea
```

See README.txt for thorough instructions, but here is a brief overview:

```
rm -rf TopCommonScales/include/QCDMMScalTool.h
rm -rf TopCommonScales/src/QCDMMScalTool.cxx
```

In order to get fastjet working, modify the following files:

```
Asg_FastJet/cmt/install
```

Add the line `make fragile-shared-install` at the end of the file

```
Asg_FastJet/cmt/Makefile.RootCore
```

Modify line to `PACKAGE_PRELOAD = fastjet fastjettools siscone siscone_spherical fastjetplugins fastjetcontribfragile`

## Build

```
source ./scripts/setup.sh first
./scripts/build_root_core.sh first
./scripts/compile.sh first
```

Leave off `first` after the first time you compile.

## Modify

`TopLJetsResonance/src/TtbarResCycle.cxx` controls the main cycle.

`TopLJetsResonance/src/TtbarResCycleTree.cxx` handles the output tree.

`TopCommonObjects/src/LargeRJetSelectorTool.cxx` is used to select/build large-R jets.

## Run

```
sframe_main TopLJetsResonance/config/JMRConfig_mc.xml
```

## Step 2 code

This is still in progress so the instructions may change over time

```
svn+ssh://svn.cern.ch/repos/atlasinst/Institutes/Arizona/TopResonances/D5PDMacros
```

## Modify code

src/WTag.cxx and include/WTag.h are the latest working examples. samp.h and ttres.h are important helper files as well.

To modify your input file lists:

```
cd inputs/Spring2014_8TeV/res/jmr/mc/ (or /data/) source makelists.sh
```

It is best to merge the output ntuples for each sample using the attached merge.sh scripts. This will reduce the processing time.

## Compile

```
source setup.sh
```

```
make wtag
```

## Run

```
./bin/wtag.exe NOM
```

# Ntuples in Arizona Tier3 Cluster

- MC: /export/share/data1/jveatch/dataset/data/TopAnalysis/rel18/d4pd/jmr/mc/2014.10.30/merge/
- data: /export/share/data1/jveatch/dataset/data/TopAnalysis/rel18/d4pd/jmr/data/2014.10.08/merge/



# Samples Processed

## Dataset names

Datasets that have the same date but end with a different version number are produced with identical code. The multiple versioning is sometimes necessary due to a quirk with JEDI. If there are multiple versions of the same sample number with the same date, use the later version number.

## MC

```
group10.perf-jets.mc12_8TeV.*.jmr.2015.02.11.v01*root/
```

## data

```
group10.perf-jets.data12_8TeV*Egamma.jmr.2015.02.12.v01*/  
group10.perf-jets.data12_8TeV*Muons.jmr.2015.02.12.v01*/
```

## ttbar

```
mc12_8TeV.117050.PowhegPythia_P2011C_ttbar.merge.NTUP_COMMON.e1728_s1581_s1586_r3658_r3549_p1562/
```

```
mc12_8TeV.110898.Pythia8_AU2MSTW2008LO_EWttbar.merge.NTUP_COMMON.e2512_s1499_s1504_r3658_r3549_p1
```

## systematics/cross-check samples

```
cp zpt/libZpTReweighting.a lib/.  
mc12_8TeV.117050.PowhegPythia_P2011C_ttbar.merge.NTUP_COMMON.e1727_a188_a171_r3549_p1575/  
mc12_8TeV.105200.McAtNloJimmy_CT10_ttbar_LeptonFilter.merge.NTUP_COMMON.e1513_s1499_s1504_r3945_r  
mc12_8TeV.105200.McAtNloJimmy_CT10_ttbar_LeptonFilter.merge.NTUP_COMMON.e1513_a159_a171_r3549_p15  
mc12_8TeV.117840.TTbar_MT1700_nonallhad_PowHeg_Pythia_P2011C.merge.NTUP_COMMON.e2051_s1581_s1586_  
mc12_8TeV.117842.TTbar_MT1750_nonallhad_PowHeg_Pythia_P2011C.merge.NTUP_COMMON.e2051_s1581_s1586_  
mc12_8TeV.105860.PowhegJimmy_AUET2CT10_ttbar_LeptonFilter.merge.NTUP_COMMON.e1576_a159_a171_r3549  
mc12_8TeV.105861.PowhegPythia_AUET2BCT10_ttbar_LeptonFilter.merge.NTUP_COMMON.e1317_a159_a165_r35  
mc12_8TeV.117209.AcerMCPythia_AUET2BCTEQ6L1_MorePS_ttbar_noallhad.merge.NTUP_COMMON.e1378_a159_a1  
mc12_8TeV.117210.AcerMCPythia_AUET2BCTEQ6L1_LessPS_ttbar_noallhad.merge.NTUP_COMMON.e1378_a159_a1
```

## ttbar+V (MadGraph+Pythia)

```
mc12_8TeV.119353.MadGraphPythia_AUET2BCTEQ6L1_ttbarW.merge.NTUP_COMMON.e1352_s1499_s1504_r3658_r3  
mc12_8TeV.119354.MadGraphPythia_AUET2BCTEQ6L1_ttbarWj.merge.NTUP_COMMON.e1352_s1499_s1504_r3658_r  
mc12_8TeV.119355.MadGraphPythia_AUET2BCTEQ6L1_ttbarZ.merge.NTUP_COMMON.e1352_s1499_s1504_r3658_r3  
mc12_8TeV.119356.MadGraphPythia_AUET2BCTEQ6L1_ttbarZj.merge.NTUP_COMMON.e1352_s1499_s1504_r3658_r
```

## W+jets (Alpgen+Pythia)

```
mc12_8TeV.147025.AlpgenPythia_Auto_P2011C_WenuNp0.merge.NTUP_COMMON.e1879_s1581_s1586_r3658_r3549  
mc12_8TeV.147026.AlpgenPythia_Auto_P2011C_WenuNp1.merge.NTUP_COMMON.e1879_s1581_s1586_r3658_r3549  
mc12_8TeV.147027.AlpgenPythia_Auto_P2011C_WenuNp2.merge.NTUP_COMMON.e1879_s1581_s1586_r3658_r3549  
mc12_8TeV.147028.AlpgenPythia_Auto_P2011C_WenuNp3.merge.NTUP_COMMON.e1879_s1581_s1586_r3658_r3549  
mc12_8TeV.147029.AlpgenPythia_Auto_P2011C_WenuNp4.merge.NTUP_COMMON.e1879_s1581_s1586_r3658_r3549  
mc12_8TeV.147030.AlpgenPythia_Auto_P2011C_WenuNp5incl.merge.NTUP_COMMON.e1879_s1581_s1586_r3658_r  
mc12_8TeV.147033.AlpgenPythia_Auto_P2011C_WmunuNp0.merge.NTUP_COMMON.e1880_s1581_s1586_r3658_r354  
mc12_8TeV.147034.AlpgenPythia_Auto_P2011C_WmunuNp1.merge.NTUP_COMMON.e1880_s1581_s1586_r3658_r354  
mc12_8TeV.147035.AlpgenPythia_Auto_P2011C_WmunuNp2.merge.NTUP_COMMON.e1880_s1581_s1586_r3658_r354  
mc12_8TeV.147036.AlpgenPythia_Auto_P2011C_WmunuNp3.merge.NTUP_COMMON.e1880_s1581_s1586_r3658_r354  
mc12_8TeV.147037.AlpgenPythia_Auto_P2011C_WmunuNp4.merge.NTUP_COMMON.e1880_s1581_s1586_r3658_r354  
mc12_8TeV.147038.AlpgenPythia_Auto_P2011C_WmunuNp5incl.merge.NTUP_COMMON.e1880_s1581_s1586_r3658_r
```

## ArizonaFJetNtuples < Sandbox < TWiki

mc12\_8TeV.147041.AlpGenPythia\_Auto\_P2011C\_WtaunuNp0.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r3658\_r35  
mc12\_8TeV.147042.AlpGenPythia\_Auto\_P2011C\_WtaunuNp1.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r3658\_r35  
mc12\_8TeV.147043.AlpGenPythia\_Auto\_P2011C\_WtaunuNp2.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r3658\_r35  
mc12\_8TeV.147044.AlpGenPythia\_Auto\_P2011C\_WtaunuNp3.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r3658\_r35  
mc12\_8TeV.147045.AlpGenPythia\_Auto\_P2011C\_WtaunuNp4.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r3658\_r35  
mc12\_8TeV.147046.AlpGenPythia\_Auto\_P2011C\_WtaunuNp5incl.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r3658\_r35

mc12\_8TeV.200056.AlpGenPythia\_Auto\_P2011C\_WcNp0.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200057.AlpGenPythia\_Auto\_P2011C\_WcNp1.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200058.AlpGenPythia\_Auto\_P2011C\_WcNp2.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200059.AlpGenPythia\_Auto\_P2011C\_WcNp3.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200060.AlpGenPythia\_Auto\_P2011C\_WcNp4incl.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r35  
mc12\_8TeV.200156.AlpGenPythia\_Auto\_P2011C\_WccNp0.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200157.AlpGenPythia\_Auto\_P2011C\_WccNp1.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200158.AlpGenPythia\_Auto\_P2011C\_WccNp2.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200159.AlpGenPythia\_Auto\_P2011C\_WccNp3incl.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200256.AlpGenPythia\_Auto\_P2011C\_WbbNp0.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200257.AlpGenPythia\_Auto\_P2011C\_WbbNp1.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200258.AlpGenPythia\_Auto\_P2011C\_WbbNp2.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.200259.AlpGenPythia\_Auto\_P2011C\_WbbNp3incl.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r3549\_p

## W+jets Akt10 filtered samples (AlpGen+Pythia)

Use these samples only for boosted analysis requiring 1-lepton and a truth-level ungroomed jet with  $pt > 250 \text{ GeV}$ . These samples are of same processes as the inclusive samples above, thus safe to be stitched together if lower  $pt$  range is desired.

mc12\_8TeV.190001.AlpGenPythia\_Auto\_P2011C\_WenuNp1\_Akt10Pt250.merge.NTUP\_COMMON.e2327\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.190002.AlpGenPythia\_Auto\_P2011C\_WenuNp2\_Akt10Pt250.merge.NTUP\_COMMON.e2327\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.190003.AlpGenPythia\_Auto\_P2011C\_WenuNp3\_Akt10Pt250.merge.NTUP\_COMMON.e2327\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.190004.AlpGenPythia\_Auto\_P2011C\_WenuNp4\_Akt10Pt250.merge.NTUP\_COMMON.e2327\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.190005.AlpGenPythia\_Auto\_P2011C\_WenuNp5\_Akt10Pt250.merge.NTUP\_COMMON.e2327\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.190011.AlpGenPythia\_Auto\_P2011C\_WmunuNp1\_Akt10Pt250.merge.NTUP\_COMMON.e2328\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.190012.AlpGenPythia\_Auto\_P2011C\_WmunuNp2\_Akt10Pt250.merge.NTUP\_COMMON.e2328\_s1581\_s1586\_r3658\_r3549\_p  
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## Z+jets (AlpGen+Pythia)

mc12\_8TeV.147105.AlpGenPythia\_Auto\_P2011C\_ZeeNp0.merge.NTUP\_COMMON.e1879\_s1581\_s1586\_r3658\_r3549\_p  
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mc12\_8TeV.147107.AlpGenPythia\_Auto\_P2011C\_ZeeNp2.merge.NTUP\_COMMON.e1879\_s1581\_s1586\_r3658\_r3549\_p  
mc12\_8TeV.147108.AlpGenPythia\_Auto\_P2011C\_ZeeNp3.merge.NTUP\_COMMON.e1879\_s1581\_s1586\_r3658\_r3549\_p

## ArizonaFJetNtuples < Sandbox < TWiki

mc12\_8TeV.147109.AlpGenPythia\_Auto\_P2011C\_ZeeNp4.merge.NTUP\_COMMON.e1879\_s1581\_s1586\_r3658\_r3549\_  
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mc12\_8TeV.147113.AlpGenPythia\_Auto\_P2011C\_ZmumuNp0.merge.NTUP\_COMMON.e1880\_s1581\_s1586\_r3658\_r354  
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mc12\_8TeV.147115.AlpGenPythia\_Auto\_P2011C\_ZmumuNp2.merge.NTUP\_COMMON.e1880\_s1581\_s1586\_r3658\_r354  
mc12\_8TeV.147116.AlpGenPythia\_Auto\_P2011C\_ZmumuNp3.merge.NTUP\_COMMON.e1880\_s1581\_s1586\_r3658\_r354  
mc12\_8TeV.147117.AlpGenPythia\_Auto\_P2011C\_ZmumuNp4.merge.NTUP\_COMMON.e1880\_s1581\_s1586\_r3658\_r354  
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mc12\_8TeV.147126.AlpGenPythia\_Auto\_P2011C\_ZtautauNp5incl.merge.NTUP\_COMMON.e1881\_s1581\_s1586\_r365

mc12\_8TeV.200332.AlpGenPythia\_Auto\_P2011C\_ZeebbNp0.merge.NTUP\_COMMON.e2384\_s1581\_s1586\_r3658\_r354  
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mc12\_8TeV.200342.AlpGenPythia\_Auto\_P2011C\_ZmumubbNp2.merge.NTUP\_COMMON.e2385\_s1581\_s1586\_r3658\_r3  
mc12\_8TeV.200343.AlpGenPythia\_Auto\_P2011C\_ZmumubbNp3incl.merge.NTUP\_COMMON.e2385\_s1581\_s1586\_r365  
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mc12\_8TeV.200351.AlpGenPythia\_Auto\_P2011C\_ZtautauNp3incl.merge.NTUP\_COMMON.e2386\_s1581\_s1586\_r3  
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mc12\_8TeV.200440.AlpGenPythia\_Auto\_P2011C\_ZmumuccNp0.merge.NTUP\_COMMON.e2385\_s1581\_s1586\_r3658\_r3  
mc12\_8TeV.200441.AlpGenPythia\_Auto\_P2011C\_ZmumuccNp1.merge.NTUP\_COMMON.e2385\_s1581\_s1586\_r3658\_r3  
mc12\_8TeV.200442.AlpGenPythia\_Auto\_P2011C\_ZmumuccNp2escape.merge.NTUP\_COMMON.e2385\_s1581\_s1586\_r3  
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mc12\_8TeV.200448.AlpGenPythia\_Auto\_P2011C\_ZtautauNp0.merge.NTUP\_COMMON.e2386\_s1581\_s1586\_r3658\_r3  
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mc12\_8TeV.200450.AlpGenPythia\_Auto\_P2011C\_ZtautauNp2.merge.NTUP\_COMMON.e2386\_s1581\_s1586\_r3658\_r3  
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## Single-top

mc12\_8TeV.110090.PowhegPythia\_P2011C\_single\_top\_tchan\_lept\_top.merge.NTUP\_COMMON.e2575\_s1773\_s1776\_  
mc12\_8TeV.110091.PowhegPythia\_P2011C\_single\_top\_tchan\_lept\_antitop.merge.NTUP\_COMMON.e2575\_s1773\_s  
mc12\_8TeV.110119.PowhegPythia\_P2011C\_st\_schan\_lep.merge.NTUP\_COMMON.e1720\_s1581\_s1586\_r3658\_r3549\_  
mc12\_8TeV.110140.PowhegPythia\_P2011C\_st\_Wtchan\_incl\_DR.merge.NTUP\_COMMON.e1743\_s1581\_s1586\_r3658\_r3

## Diboson

mc12\_8TeV.183585.Sherpa\_CT10\_ZWtoeeqq\_MassiveCB.merge.NTUP\_COMMON.e2370\_s1581\_s1586\_r4485\_r4540\_p  
mc12\_8TeV.183586.Sherpa\_CT10\_ZZtoeeqq\_MassiveCB.merge.NTUP\_COMMON.e2370\_s1581\_s1586\_r4485\_r4540\_p  
mc12\_8TeV.183587.Sherpa\_CT10\_ZWtomumuqq\_MassiveCB.merge.NTUP\_COMMON.e2370\_s1581\_s1586\_r4485\_r4540\_p  
mc12\_8TeV.183588.Sherpa\_CT10\_ZZtomumuqq\_MassiveCB.merge.NTUP\_COMMON.e2370\_s1581\_s1586\_r4485\_r4540\_p  
mc12\_8TeV.183589.Sherpa\_CT10\_ZWtotautauqq\_MassiveCB.merge.NTUP\_COMMON.e2370\_s1581\_s1586\_r4485\_r45  
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mc12\_8TeV.183734.Sherpa\_CT10\_WWtoenuqq\_MassiveCB.merge.NTUP\_COMMON.e2347\_s1581\_s1586\_r4485\_r4540\_p  
mc12\_8TeV.183735.Sherpa\_CT10\_WZtoenuqq\_MassiveCB.merge.NTUP\_COMMON.e2347\_s1581\_s1586\_r4485\_r4540\_p  
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mc12\_8TeV.183738.Sherpa\_CT10\_WWtotanuqq\_MassiveCB.merge.NTUP\_COMMON.e2347\_s1581\_s1586\_r4485\_r4540\_p  
mc12\_8TeV.183739.Sherpa\_CT10\_WZtotanuqq\_MassiveCB.merge.NTUP\_COMMON.e2347\_s1581\_s1586\_r4485\_r4540\_p

## WPrime

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mc12_8TeV.158858.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m400.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158860.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m600.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158862.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m800.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158864.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m1000.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158866.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m1200.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158868.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m1400.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158870.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m1600.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158872.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m1800.merge.NTUP_COMMON.e1569_s1499_s1504_r3
mc12_8TeV.158874.Pythia8_AU2MSTW2008LO_Wprime_WZ_llqq_m2000.merge.NTUP_COMMON.e1569_s1499_s1504_r3
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## Data

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data12_8TeV.periodC.physics_Egamma.PhysCont.NTUP_COMMON.grp14_v01_p1278_p1562/
data12_8TeV.periodD.physics_Egamma.PhysCont.NTUP_COMMON.grp14_v01_p1278_p1562/
data12_8TeV.periodE.physics_Egamma.PhysCont.NTUP_COMMON.grp14_v01_p1278_p1562/
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data12_8TeV.periodH.physics_Egamma.PhysCont.NTUP_COMMON.grp14_v01_p1278_p1562/
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data12_8TeV.periodL.physics_Egamma.PhysCont.NTUP_COMMON.grp14_v01_p1562/
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data12_8TeV.periodJ.physics_Muons.PhysCont.NTUP_COMMON.grp14_v01_p1562/
data12_8TeV.periodL.physics_Muons.PhysCont.NTUP_COMMON.grp14_v01_p1562/
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### Major updates:

-- JasonVeatch - 2015-02-07

**%RESPONSIBLE%** JasonVeatch

**%REVIEW%** **Never reviewed**

- merge\_data.sh: Scripts to merge ntuples by sample
- merge\_MC.sh: Scripts to merge ntuples by sample

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This topic: [Sandbox > ArizonaFJetNtuples](#)

Topic revision: r28 - 2015-02-21 - JasonVeatch



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