

-- IvanShvetsov - 2015-07-19

This is a twiki devoted to the WW semi-leptonic analysis in Run II

aTGC analysis (WV -> InuJ) analysis Run II

code and instructions can be found here:

Analysis code (making trees) [↗](#)

Presentations

SMP-VV meeting, 31.07.2015 [↗](#)

SMP-VV meeting, 20.11.2015 [↗](#)

SMP-VV meeting, 11.03.2015 [↗](#)

SMP-VV meeting, 22.04.2016 [↗](#)

SMP-VV meeting, 20.05.2016 [↗](#)

Samples 25 ns (Monte Carlo), 76X campaign,

sample
/TTJets_13TeV-amcatnloFXFX-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/TT_TuneCUETP8M1_13TeV-powheg-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-100To200_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-200To400_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-400To600_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-600To800_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-800To1200_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-1200To2500_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WJetsToLNu_HT-2500ToInf_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WWToLNuQQ_13TeV-powheg/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WZTo1L1Nu2Q_13TeV-amcatnloFXFX_madspin_pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/ST_s-channel_4f_leptonDecays_13TeV-amcatnlo-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/ST_t-channel_4f_leptonDecays_13TeV-amcatnlo-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/ST_tW_antitop_5f_inclusiveDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/ST_tW_top_5f_inclusiveDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/

Signal sample 25 ns, 76X campaign,

sample
/WWToLNuQQ_aTGC_13TeV-madgraph-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/
/WZToLNu2QorQQ2L_aTGC_13TeV-madgraph-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/

Data (25 ns,, 76X)

dataset	Nevents	run range
/SingleElectron/Run2015D-16Dec2015-v1/MINIAOD	134140420	256630-260627
/SingleMuon/Run2015D-16Dec2015-v1/MINIAOD	91999861	256630-260627

Luminosity

Luminosity is 2.26 /fb

JSON file used:

[/afs/cern.ch/cms/CAF/CMSCOMM/COMM_DQM/certification/Collisions15/13TeV/Reprocessing/Cert_13TeV_16Dec2015-v1-20151213.json](#)

PU reweighting

PU distribution is calculated running pileUpCalc.py:

pileupCalc.py -i

/afs/cern.ch/cms/CAF/CMSCOMM/COMM_DQM/certification/Collisions15/13TeV/Reprocessing/Cert_13TeV_16Dec2015-v1-20151213.json

--inputLumiJSON

/afs/cern.ch/cms/CAF/CMSCOMM/COMM_DQM/certification/Collisions15/13TeV/PileUp/pileup_latest.txt

--calcMode true --minBiasXsec 72000 --maxPileupBin 50 --numPileupBins 50

MyDataPileupHistogram.root

True distribution is taken from here:

[SimGeneral/MixingModule/python/mix_2015_25ns_FallMC_matchData_PoissonOOTPU_cfi.py](#)

PU distributions are being set here:

<https://github.com/ishvetso/aTGCsAnalysis/blob/76X/TreeMaker/plugins/PU.h>

PDF uncertainties

sample
/TTJets_13TeV-amcatnloFXFX-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-100To200_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-200To400_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-400To600_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-600To800_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-800To1200_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-1200To2500_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WJetsToLNu_HT-2500ToInf_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M
/WWToLNuQQ_13TeV-powheg/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcRun2_asymptotic_v12-v1/M

/WZTo1L1Nu2Q_13TeV_amcatnloFXFX_madspin_pythia8/RunIIFall15MiniAODv2-PU25nsData2015v1_76X_mcR
/ST_s-channel_4f_leptonDecays_13TeV-amcatnlo-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData2
/ST_t-channel_4f_leptonDecays_13TeV-amcatnlo-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData20
/ST_tW_antitop_5f_inclusiveDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsDa
/ST_tW_top_5f_inclusiveDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIIFall15MiniAODv2-PU25nsData20

sample
/TT_TuneCUETP8M1_13TeV-powheg-pythia8/RunIISpring15MiniAODv2-74X_mcRun2_asymptotic_v2_ext3-v1/M
/WJetsToLNu_TuneCUETP8M1_13TeV-amcatnloFXFX-pythia8/RunIISpring15MiniAODv2-74X_mcRun2_asympto
/WJetsToLNu_HT-100To200_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIISpring15MiniAODv2-74X_m
/WJetsToLNu_HT-200To400_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIISpring15MiniAODv2-74X_m
/WJetsToLNu_HT-400To600_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIISpring15MiniAODv2-74X_m
/WJetsToLNu_HT-600ToInf_TuneCUETP8M1_13TeV-madgraphMLM-pythia8/RunIISpring15MiniAODv2-74X_mc
/WWToLNuQQ_13TeV-powheg/RunIISpring15MiniAODv2-74X_mcRun2_asymptotic_v2-v1/MINIAODSIM
/WZTo1L1Nu2Q_13TeV_amcatnloFXFX_madspin_pythia8/RunIISpring15MiniAODv2-74X_mcRun2_asymptotic_v
/ST_s-channel_4f_leptonDecays_13TeV-amcatnlo-pythia8_TuneCUETP8M1/RunIISpring15MiniAODv2-74X_mcRu
/ST_t-channel_antitop_4f_leptonDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIISpring15MiniAODv2-74X
/ST_t-channel_top_4f_leptonDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIISpring15MiniAODv2-74X_mc
/ST_tW_top_5f_DS_inclusiveDecays_13TeV-powheg-pythia8_TuneCUETP8M1/RunIISpring15MiniAODv2-74X_m

Samples 50 ns

Monte Carlo

sample
/TTJets_TuneCUETP8M1_13TeV-amcatnloFXFX-pythia8/RunIISpring15DR74-Asympt50ns_MCRUN2_74_V9A-v1
/WJetsToLNu_TuneCUETP8M1_13TeV-amcatnloFXFX-pythia8/RunIISpring15DR74-Asympt50ns_MCRUN2_74_V
/WW_TuneCUETP8M1_13TeV-pythia8/RunIISpring15DR74-Asympt50ns_MCRUN2_74_V9A-v1/MINIAODSIM

Data

PromptReco can be used **only since run 251585 in order to apply MET filters**:

sample	Nevents
/SingleMuon/Run2015B-PromptReco-v1/MINIAOD	2814400
/SingleElectron/Run2015B-PromptReco-v1/MINIAOD	2489088

for the earlier run range (251162-251562) use the

sample	Nevents
/SingleElectron/Run2015B-17Jul2015-v1/MINIAOD	1027225
/SingleMuon/Run2015B-17Jul2015-v1/MINIAOD	1039658

Please note that you should **rerun HBHE filter for all runs** . Please refer here.

WWSemileptonicRun2 < Sandbox < TWiki

Other filters can be obtained from TriggerResults. You should apply filteres that are marked "TO BE USED", have a look here.

The following

/afs/cern.ch/cms/CAF/CMSCOMM/COMM_DQM/certification/Collisions15/13TeV/Cert_246908-251883_13TeV_Pr is used which corresponds to recorded integrated luminosity 40.24/pb .

This topic: Sandbox > WWSemileptonicRun2

Topic revision: r34 - 2016-06-05 - IvanShvetsov



Copyright &© 2008-2021 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.

or Ideas, requests, problems regarding TWiki? use Discourse or Send feedback