

sample	nEventsIn	weightIn
SingleMu.Run2012A-22Jan2013.jsonWeight	18959552	1.37e+07
SingleMu.Run2012B-22Jan2013.jsonWeight	59337822	5.33e+07
SingleMu.Run2012C-22Jan2013.jsonWeight	87217361	8.44e+07
SingleMu.Run2012D-22Jan2013.jsonWeight	94667890	8.98e+07
T_s_powheg.puWeight.bTagWeight	243961	2.52e+05
T_tW_powheg.puWeight.bTagWeight	497657	5.14e+05
T_t_powheg.puWeight.bTagWeight	3710226	3.83e+06
Tbar_s_powheg.puWeight.bTagWeight	139973	1.45e+05
Tbar_tW_powheg.puWeight.bTagWeight	493460	5.09e+05
Tbar_t_powheg.puWeight.bTagWeight	1935071	2.00e+06
WW_py6.puWeight.bTagWeight	9840431	1.01e+07
WZ_py6.puWeight.bTagWeight	9872283	1.02e+07
ZZ_py6.puWeight.bTagWeight	9783907	1.01e+07
dyll_HT_400ToInf_M-50.puWeight.bTagWeight	2695789	2.79e+06
dyll_HT_200To400_M-50.puWeight.bTagWeight	6892776	7.12e+06
dyll_HT_10To200_M-50.puWeight.bTagWeight	8111523	8.36e+06
ttbar_CT10_powheg.puWeight.bTagWeight.topPtWeight	26406723	2.73e+07
wj_lv_mg_ht_400ToInf_LO.puWeight.bTagWeight.xsWeight	4875846	5.72e+06
wj_lv_mg_ht_250To300_LO.puWeight.bTagWeight.xsWeight	4924990	6.02e+06
wj_lv_mg_ht_300To400_LO.puWeight.bTagWeight.xsWeight	5125022	6.49e+06
wj_lv_mg_ht_200To250_LO.puWeight.bTagWeight.xsWeight	9799771	1.30e+07
wj_lv_mg_ht_10To150_LO.puWeight.bTagWeight	13992013	1.44e+07
wj_lv_mg_ht_150To200_LO.puWeight.bTagWeight.xsWeight	21126208	2.42e+07

file created at Mon Sep 15 23:34:54 2014

```

electronIndicesNonIsoPat      pass ptMin & id; fail iso
electronIndicesOtherPat      pass ptMin; fail id
electronIndicesPat            pt>10.0; (2012 Veto)
electronIndicesUnmatchedPat  electronIndicesOtherPat; no dR<0.5 match in ak5JetCorrectedP4Pat
genIndicesStatus3t          pdgId in [-6, 6]; status in [3]
jsonWeight                   run:ls in cert/Cert_190456-208686_8TeV_22Jan2013ReReco_Collisions12_JSON.txt
lowestUnPrescaledTrigger    lowest unprescaled of HLT_IsoMu24_eta2p1_v1{1,2,3,4,5}
muonIdPog2012LoosePat       https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Loose_Muon
muonIdPog2012TightPat      https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Tight_Muon
muonIndicesNonIsoPat        pass ptMin & id; fail iso
muonIndicesOtherPat         pass ptMin; fail id
muonIndicesPat              IdPog2012Tight; pt>10.0 GeV; PfIsolationR04DeltaBCorrected<0.12
muonMtPatmetP4TypeIPF      muonPat, metP4TypeIPF, byHand=1
photonIndicesOtherPat       pass ptMin; fail id/iso
photonIndicesPat            pT>=25.0 GeV; photonSimpleCutBased2012TightPat
photonIndicesUnmatchedPat  photonIndicesOtherPat; no dR<0.5 match in ak5JetCorrectedP4Pat
vertexID                    !fake; nd>=5.0; |z|<=24.0 cm; d0<=2.0 cm
vertexIndices               ; pass ID
vertexIndicesOther          pass sumPtMin; fail ID
weight                      1.bTagWeight.puWeight
weight                      1.bTagWeight.puWeight.topPtWeight
weight                      1.bTagWeight.puWeight.xsWeight
weight                      1.jsonWeight
xcak5JetCorrectedP4Pat      muonPatDR<0.50; electronPatDR<0.50; photonPatDR<0.50
xcak5JetDeadEcalDRlowPtPat xcak5JetPat; nXtal>=10; cracks checked
xcak5JetIndicesBtagged2Pat (>0.679)
xcak5JetIndicesOtherPat    pass ptMin; fail jetID or etaMax
xcak5JetIndicesPat         pT>=36.6 GeV; |eta|<3.0; JetIDloose
xcak5JetIndiceshighPtPat   pT>=50.0 GeV; |eta|<3.0; JetIDloose
xcak5JetIndiceslowPtPat    pT>=30.0 GeV; |eta|<3.0; JetIDloose

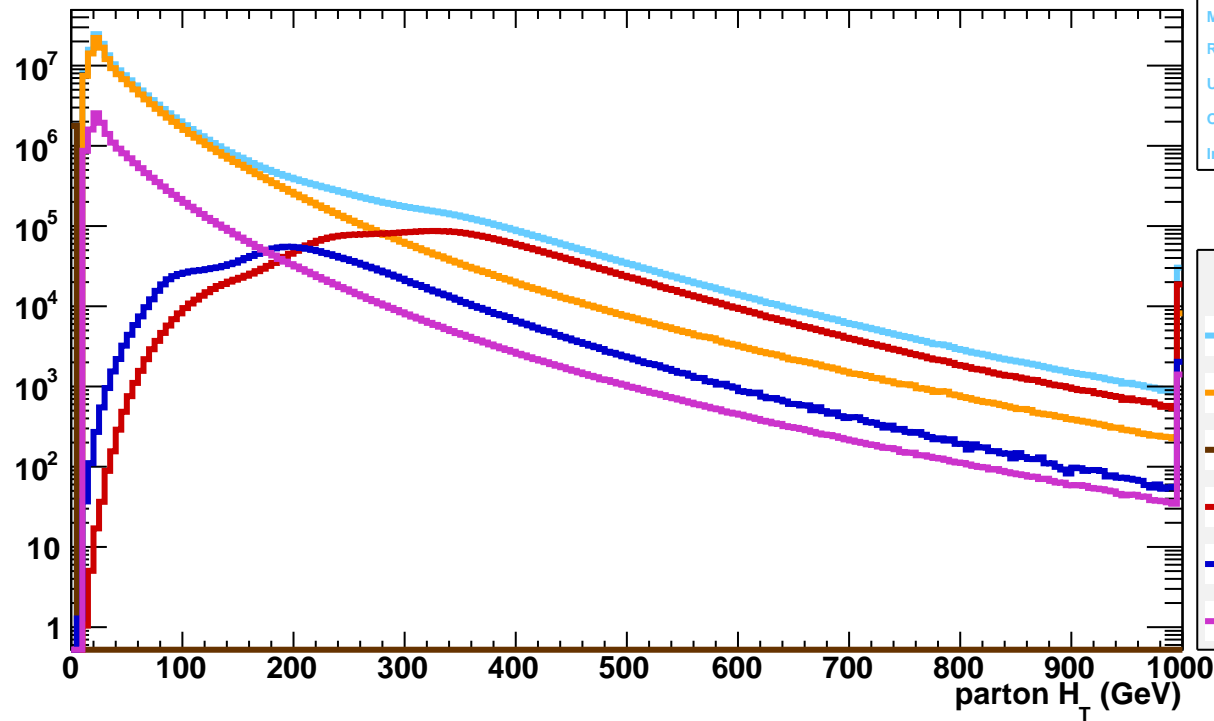
```

Calculables (imperfect) absent calc leaf sltr

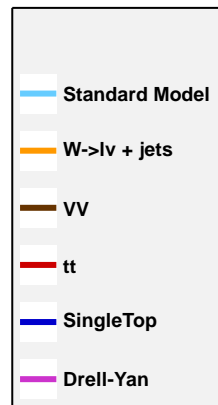
NONE

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
a:	241253707	1.7461(4)e+8	1.4834(4)e+8	1.7672(4)e+6	4.873(1)e+6	2.0802(8)e+6	1.7548(6)e+7	1.3817(3)

events / bin / 20 fb<sup>-1</sup>



genPartonHT	
Entries	1.254566e+08
Mean	64.38
RMS	79.18
Underflow	0
Overflow	0
Integral	1.746e+08



```

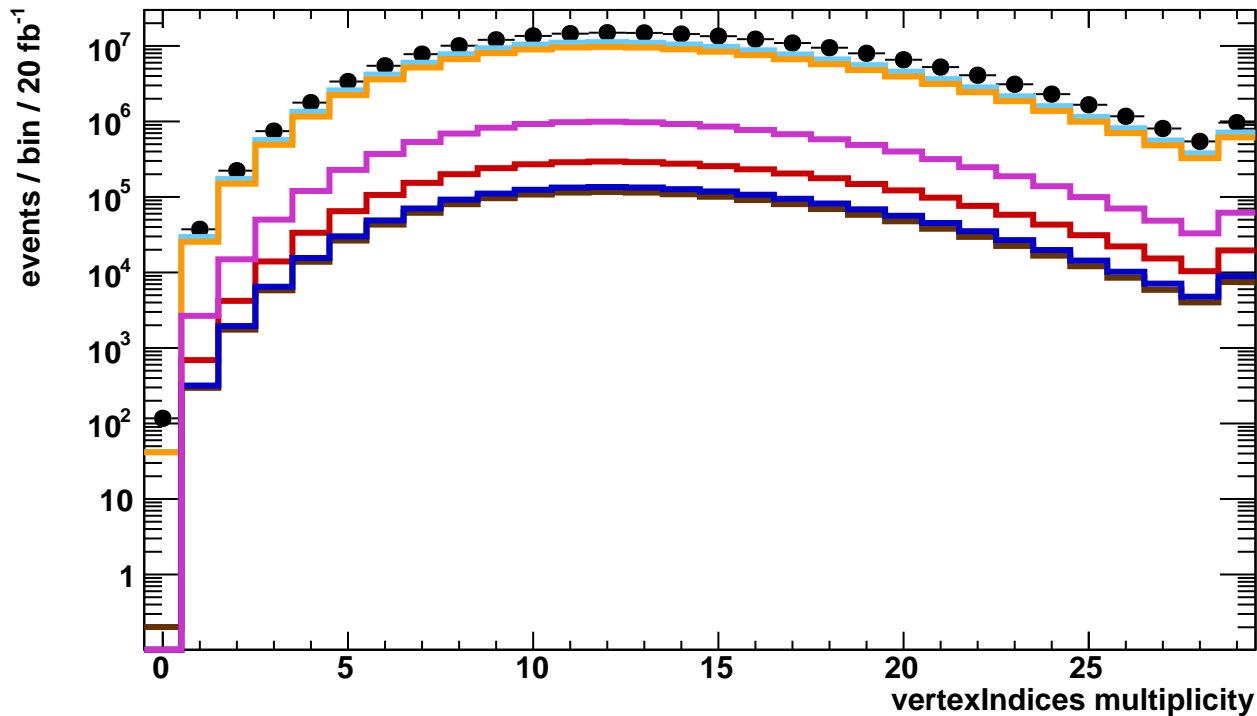
a: master          master
b: monster        <=10 tracks or >0.25 good fraction
c: hbheNoise      hbheNoise
d: value          beamHaloCSCTightHaloId<=0.00
e: value          1.00<=trackingFailureFilterFlag

f: value          1.00<=hcalLaserEventFilterFlag
g: value          1.00<=ecalDeadCellTPFilterFlag
h: value          1.00<=eeBadScFilterFlag
i: value          1.00<=inconsistentMuonPFCandidateFilterFlag
j: value          1.00<=greedyMuonPFCandidateFilterFlag

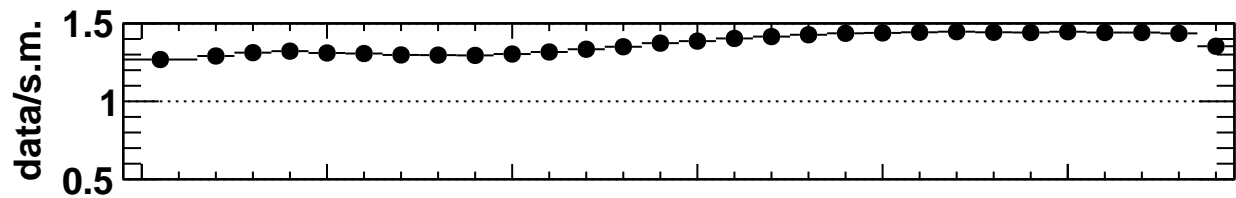
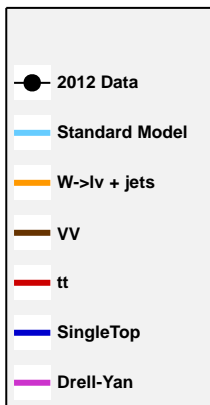
k: multiplicity   0 <= singleIsolatedTrack <= 0

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
a:	241253707	1.7461(4)e+8	1.4834(4)e+8	1.7672(4)e+6	4.873(1)e+6	2.0802(8)e+6	1.7548(6)e+7	1.3817(3)
b:	241253512	1.7461(4)e+8	1.4834(4)e+8	1.7672(4)e+6	4.873(1)e+6	2.0802(8)e+6	1.7548(6)e+7	1.3817(3)
c:	241085057	-	-	-	-	-	-	-
d:	240076513	1.7458(4)e+8	1.4832(4)e+8	1.7669(4)e+6	4.872(1)e+6	2.0798(8)e+6	1.7546(6)e+7	1.3751(3)
e:	235155912	1.7458(4)e+8	1.4832(4)e+8	1.7669(4)e+6	4.872(1)e+6	2.0798(8)e+6	1.7546(6)e+7	1.3470(3)
f:	235155912	-	-	-	-	-	-	-
g:	235146940	1.7457(4)e+8	1.4831(4)e+8	1.7667(4)e+6	4.870(1)e+6	2.0794(8)e+6	1.7543(6)e+7	1.3470(3)
h:	235146940	1.7457(4)e+8	1.4831(4)e+8	1.7667(4)e+6	4.870(1)e+6	2.0794(8)e+6	1.7543(6)e+7	1.3470(3)
i:	235084914	1.7452(4)e+8	1.4828(4)e+8	1.7660(4)e+6	4.867(1)e+6	2.0789(8)e+6	1.7531(6)e+7	1.3470(3)
j:	235047767	1.7450(4)e+8	1.4826(4)e+8	1.7658(4)e+6	4.866(1)e+6	2.0787(8)e+6	1.7527(6)e+7	1.3470(3)
k:	194479631	1.4288(4)e+8	1.2331(4)e+8	1.4823(4)e+6	3.7511(9)e+6	1.7292(8)e+6	1.2613(5)e+7	1.3611(4)



vertexIndicesMultiplicity	
Entries	1.944796e+08
Mean	13.75
RMS	5.052
Underflow	0
Overflow	0
Integral	1.945e+08



```

a: master          master
b: monster        <=10 tracks or >0.25 good fraction
c: hbheNoise      hbheNoise
d: value          beamHaloCSCTightHaloId<=0.00
e: value          1.00<=trackingFailureFilterFlag

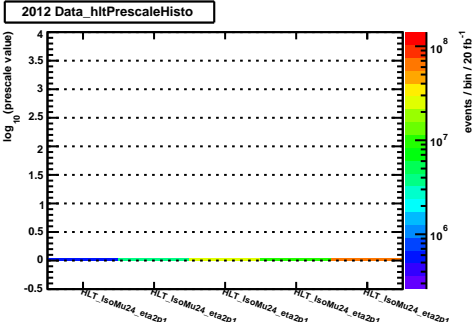
f: value          1.00<=hcalLaserEventFilterFlag
g: value          1.00<=ecalDeadCellTPFilterFlag
h: value          1.00<=eeBadScFilterFlag
i: value          1.00<=inconsistentMuonPFCandidateFilterFlag
j: value          1.00<=greedyMuonPFCandidateFilterFlag

k: multiplicity   0 <= singleIsolatedTrack <= 0
l: multiplicity   1 <= vertexIndices
m: lowestUnPrescaledTriggerFilter lowest unprescaled of triggers in calculable

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
a:	241253707	1.7461(4)e+8	1.4834(4)e+8	1.7672(4)e+6	4.873(1)e+6	2.0802(8)e+6	1.7548(6)e+7	1.3817(3)
b:	241253512	1.7461(4)e+8	1.4834(4)e+8	1.7672(4)e+6	4.873(1)e+6	2.0802(8)e+6	1.7548(6)e+7	1.3817(3)
c:	241085057	-	-	-	-	-	-	-
d:	240076513	1.7458(4)e+8	1.4832(4)e+8	1.7669(4)e+6	4.872(1)e+6	2.0798(8)e+6	1.7546(6)e+7	1.3751(3)
e:	235155912	1.7458(4)e+8	1.4832(4)e+8	1.7669(4)e+6	4.872(1)e+6	2.0798(8)e+6	1.7546(6)e+7	1.3470(3)
f:	235155912	-	-	-	-	-	-	-
g:	235146940	1.7457(4)e+8	1.4831(4)e+8	1.7667(4)e+6	4.870(1)e+6	2.0794(8)e+6	1.7543(6)e+7	1.3470(3)
h:	235146940	1.7457(4)e+8	1.4831(4)e+8	1.7667(4)e+6	4.870(1)e+6	2.0794(8)e+6	1.7543(6)e+7	1.3470(3)
i:	235084914	1.7452(4)e+8	1.4828(4)e+8	1.7660(4)e+6	4.867(1)e+6	2.0789(8)e+6	1.7531(6)e+7	1.3470(3)
j:	235047767	1.7450(4)e+8	1.4826(4)e+8	1.7658(4)e+6	4.866(1)e+6	2.0787(8)e+6	1.7527(6)e+7	1.3470(3)
k:	194479631	1.4288(4)e+8	1.2331(4)e+8	1.4823(4)e+6	3.7511(9)e+6	1.7292(8)e+6	1.2613(5)e+7	1.3611(4)
l:	194479514	1.4288(4)e+8	1.2331(4)e+8	1.4823(4)e+6	3.7511(9)e+6	1.7292(8)e+6	1.2613(5)e+7	1.3611(4)
m:	110730726	-	-	-	-	-	-	-





```

p: jetEtaSelector          xcak5JetPat; |eta[index[0]]|<=2.5
q: jetPtSelector          xcak5JetPat; pT[index[0]]>=73.3 GeV
r: jetPtSelector          xcak5JetPat; pT[index[1]]>=73.3 GeV
s: value                  200.00<=xcak5JetSumEtPat
t: value                  xcak5JetSumEtPat<=325.00

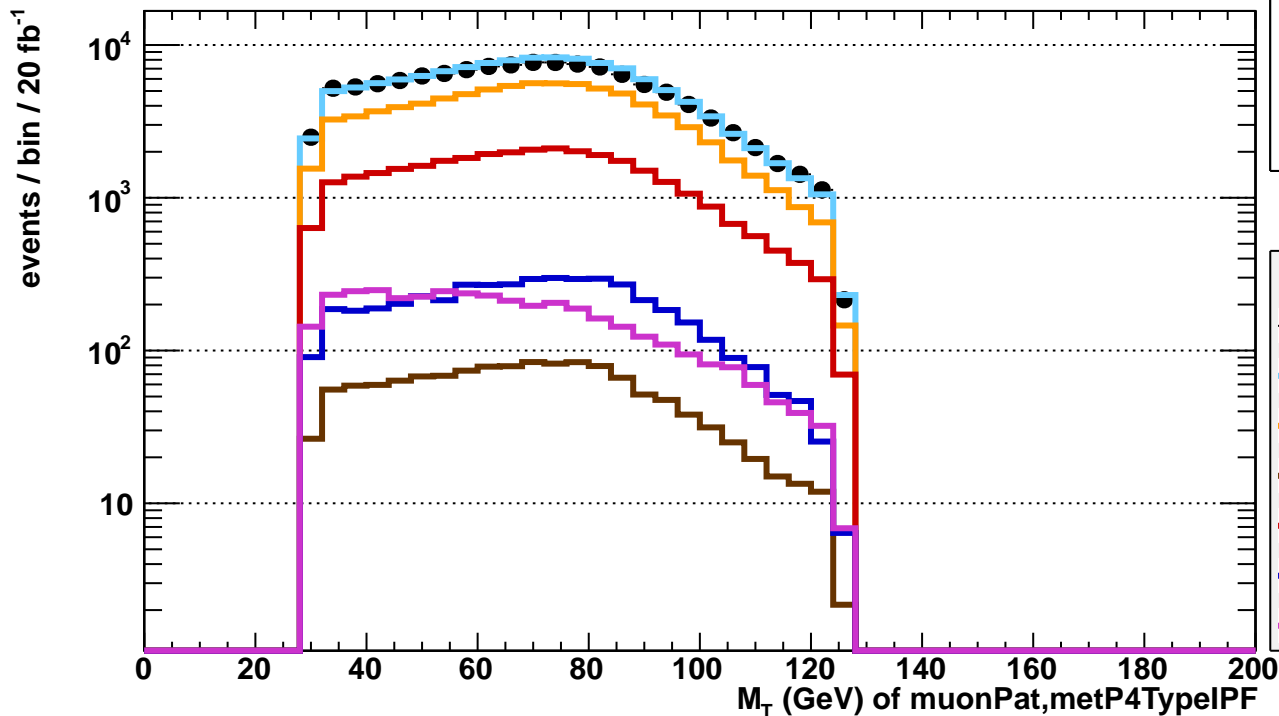
u: multiplicity           2 <= xcak5JetIndicesPat
v: multiplicity           0 <= xcak5JetIndicesOtherPat <= 0
w: multiplicity           0 <= xcak5JetIndicesWithOddMuonPat <= 0
x: uniquelyMatchedNonisoMuons xcak5JetPat
y: multiplicity           0 <= electronIndicesPat <= 0

z: multiplicity           0 <= photonIndicesPat <= 0
A: multiplicity           0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter         xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: multiplicity           1 <= muonIndicesPat <= 1

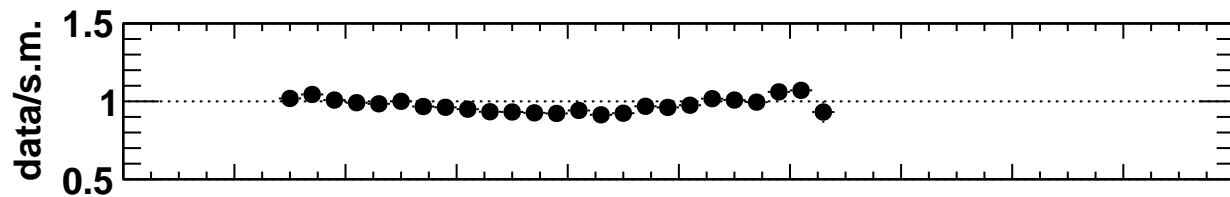
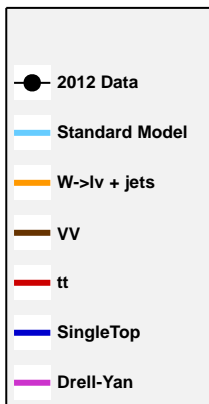
E: pt                     30.00<=muonP4Pat[i[0]].pt; muonIndicesPat
F: eta                    -2.10<=muonP4Pat[i[0]].eta<=2.10; muonIndicesPat
G: value                  30.00<=muonMtPatmetP4TypeIPF<=125.00

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
p:	18548509	6.324(2)e+7	5.135(2)e+7	1.1035(3)e+6	3.6357(9)e+6	1.5354(7)e+6	5.607(4)e+6	0.2933(1)
q:	4484394	1.8650(10)e+7	1.2826(9)e+7	4.167(2)e+5	3.0203(8)e+6	9.092(6)e+5	1.478(2)e+6	0.2405(2)
r:	749516	4.815(2)e+6	2.128(2)e+6	1.424(1)e+5	1.8757(6)e+6	4.020(4)e+5	2.666(5)e+5	0.1557(2)
s:	616848	4.192(1)e+6	1.678(1)e+6	1.199(1)e+5	1.8209(6)e+6	3.624(4)e+5	2.106(4)e+5	0.1472(2)
t:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
u:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
v:	359231	1.996(1)e+6	1.035(1)e+6	6.663(8)e+4	5.888(4)e+5	1.785(3)e+5	1.266(3)e+5	0.1800(3)
w:	351218	1.983(1)e+6	1.032(1)e+6	6.650(8)e+4	5.811(4)e+5	1.772(2)e+5	1.259(3)e+5	0.1771(3)
x:	344418	1.971(1)e+6	1.027(1)e+6	6.641(8)e+4	5.755(3)e+5	1.763(2)e+5	1.249(3)e+5	0.1748(3)
y:	338715	1.569(1)e+6	7.82(1)e+5	6.283(8)e+4	4.768(3)e+5	1.630(2)e+5	8.42(3)e+4	0.2159(4)
z:	337589	1.549(1)e+6	7.68(1)e+5	6.252(8)e+4	4.740(3)e+5	1.625(2)e+5	8.22(3)e+4	0.2180(4)
A:	337320	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
B:	337302	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
C:	212357	8.122(8)e+5	4.428(7)e+5	2.576(5)e+4	2.320(2)e+5	6.83(2)e+4	4.34(2)e+4	0.2614(6)
D:	184117	2.402(3)e+5	1.606(2)e+5	1.230(2)e+3	5.85(1)e+4	5.53(6)e+3	1.022(7)e+4	0.767(2)
E:	162789	1.784(2)e+5	1.197(2)e+5	1.87(1)e+3	4.363(9)e+4	6.00(5)e+3	7.20(5)e+3	0.913(3)
F:	162768	1.653(2)e+5	1.093(2)e+5	1.74(1)e+3	4.221(9)e+4	5.83(5)e+3	6.22(5)e+3	0.985(3)
G:	122374	1.271(2)e+5	8.52(2)e+4	1.28(1)e+3	3.234(8)e+4	4.52(4)e+3	3.80(4)e+3	0.962(3)



muonMtPatmetP4TypeIPF	
Entries	122374
Mean	69.75
RMS	22.42
Underflow	0
Overflow	0
Integral	1.224e+05



```

q: jetPtSelector          xcak5JetPat; pT[index[0]]>=73.3 GeV
r: jetPtSelector          xcak5JetPat; pT[index[1]]>=73.3 GeV
s: value                  200.00<=xcak5JetSumEtPat
t: value                  xcak5JetSumEtPat<=325.00

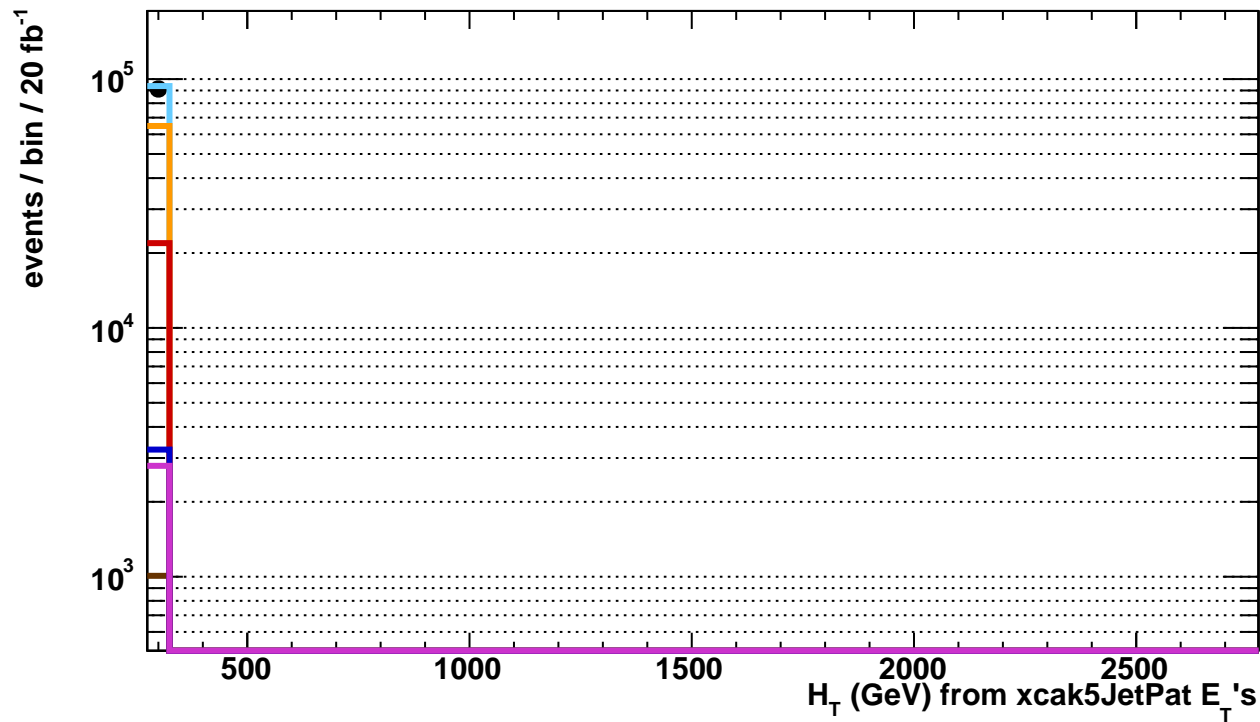
u: multiplicity           2 <= xcak5JetIndicesPat
v: multiplicity           0 <= xcak5JetIndicesOtherPat <= 0
w: multiplicity           0 <= xcak5JetIndicesWithOddMuonPat <= 0
x: uniquelyMatchedNonisoMuons xcak5JetPat
y: multiplicity           0 <= electronIndicesPat <= 0

z: multiplicity           0 <= photonIndicesPat <= 0
A: multiplicity           0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter         xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: multiplicity           1 <= muonIndicesPat <= 1

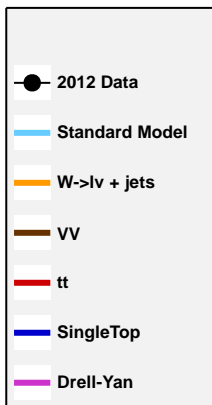
E: pt                     30.00<=muonP4Pat[i[0]].pt; muonIndicesPat
F: eta                    -2.10<=muonP4Pat[i[0]].eta<=2.10; muonIndicesPat
G: value                  30.00<=muonMtPatmetP4TypeIPF<=125.00
H: value                  xcak5JetMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPat<=1.25

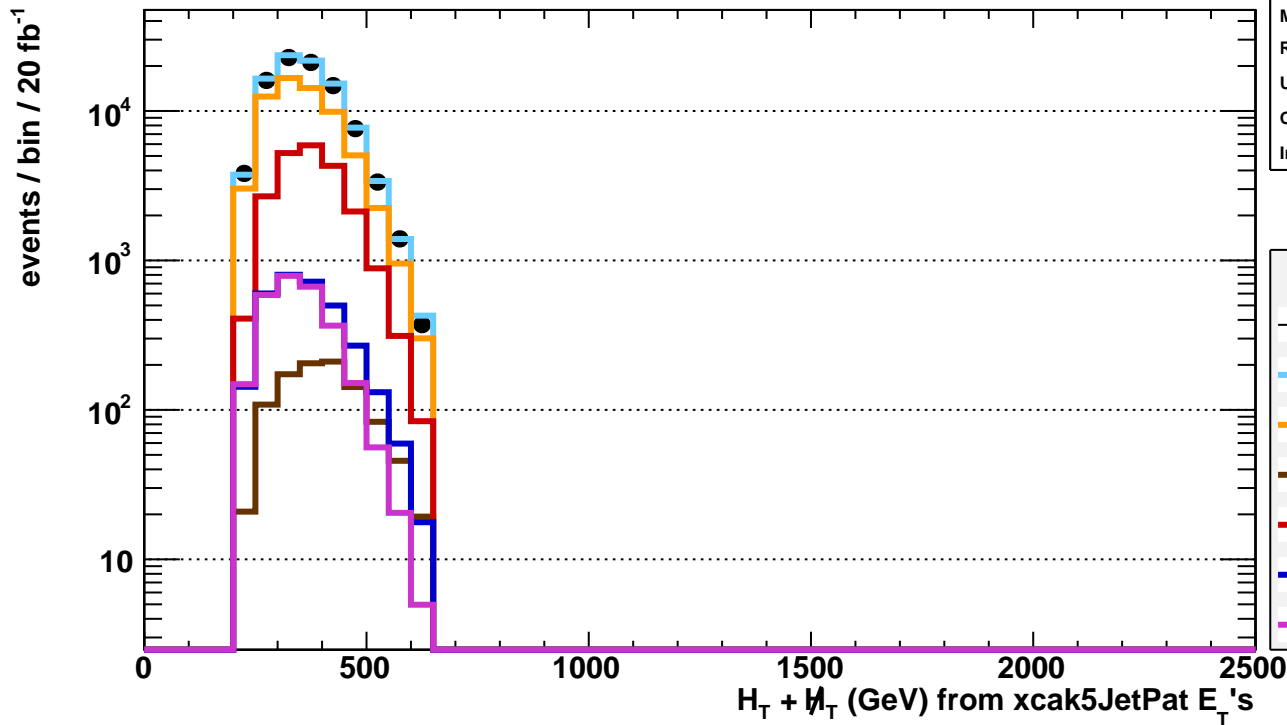
```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
q:	4484394	1.8650(10)e+7	1.2826(9)e+7	4.167(2)e+5	3.0203(8)e+6	9.092(6)e+5	1.478(2)e+6	0.2405(2)
r:	749516	4.815(2)e+6	2.128(2)e+6	1.424(1)e+5	1.8757(6)e+6	4.020(4)e+5	2.666(5)e+5	0.1557(2)
s:	616848	4.192(1)e+6	1.678(1)e+6	1.199(1)e+5	1.8209(6)e+6	3.624(4)e+5	2.106(4)e+5	0.1472(2)
t:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
u:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
v:	359231	1.996(1)e+6	1.035(1)e+6	6.663(8)e+4	5.888(4)e+5	1.785(3)e+5	1.266(3)e+5	0.1800(3)
w:	351218	1.983(1)e+6	1.032(1)e+6	6.650(8)e+4	5.811(4)e+5	1.772(2)e+5	1.259(3)e+5	0.1771(3)
x:	344418	1.971(1)e+6	1.027(1)e+6	6.641(8)e+4	5.755(3)e+5	1.763(2)e+5	1.249(3)e+5	0.1748(3)
y:	338715	1.569(1)e+6	7.82(1)e+5	6.283(8)e+4	4.768(3)e+5	1.630(2)e+5	8.42(3)e+4	0.2159(4)
z:	337589	1.549(1)e+6	7.68(1)e+5	6.252(8)e+4	4.740(3)e+5	1.625(2)e+5	8.22(3)e+4	0.2180(4)
A:	337320	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
B:	337302	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
C:	212357	8.122(8)e+5	4.428(7)e+5	2.576(5)e+4	2.320(2)e+5	6.83(2)e+4	4.34(2)e+4	0.2614(6)
D:	184117	2.402(3)e+5	1.606(2)e+5	2.30(2)e+3	5.85(1)e+4	8.53(6)e+3	1.022(7)e+4	0.767(2)
E:	162789	1.784(2)e+5	1.197(2)e+5	1.87(1)e+3	4.363(9)e+4	6.00(5)e+3	7.20(5)e+3	0.913(3)
F:	162768	1.653(2)e+5	1.093(2)e+5	1.74(1)e+3	4.221(9)e+4	5.83(5)e+3	6.22(5)e+3	0.985(3)
G:	122374	1.271(2)e+5	8.52(2)e+4	1.28(1)e+3	3.234(8)e+4	4.52(4)e+3	3.80(4)e+3	0.962(3)
H:	91256	9.38(2)e+4	6.48(1)e+4	1.01(1)e+3	2.191(7)e+4	3.24(4)e+3	2.79(3)e+3	0.973(4)

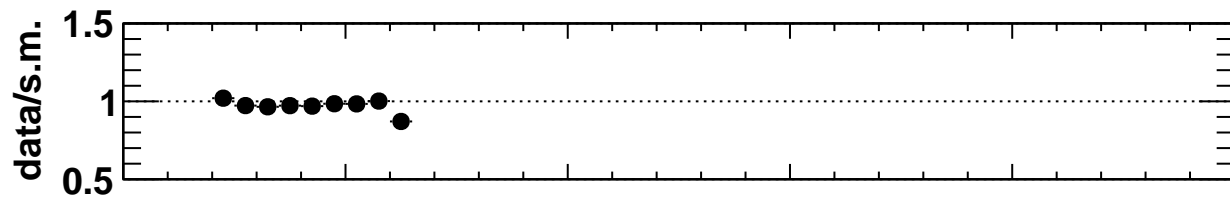
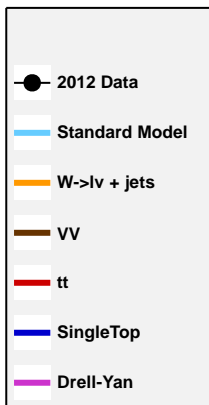


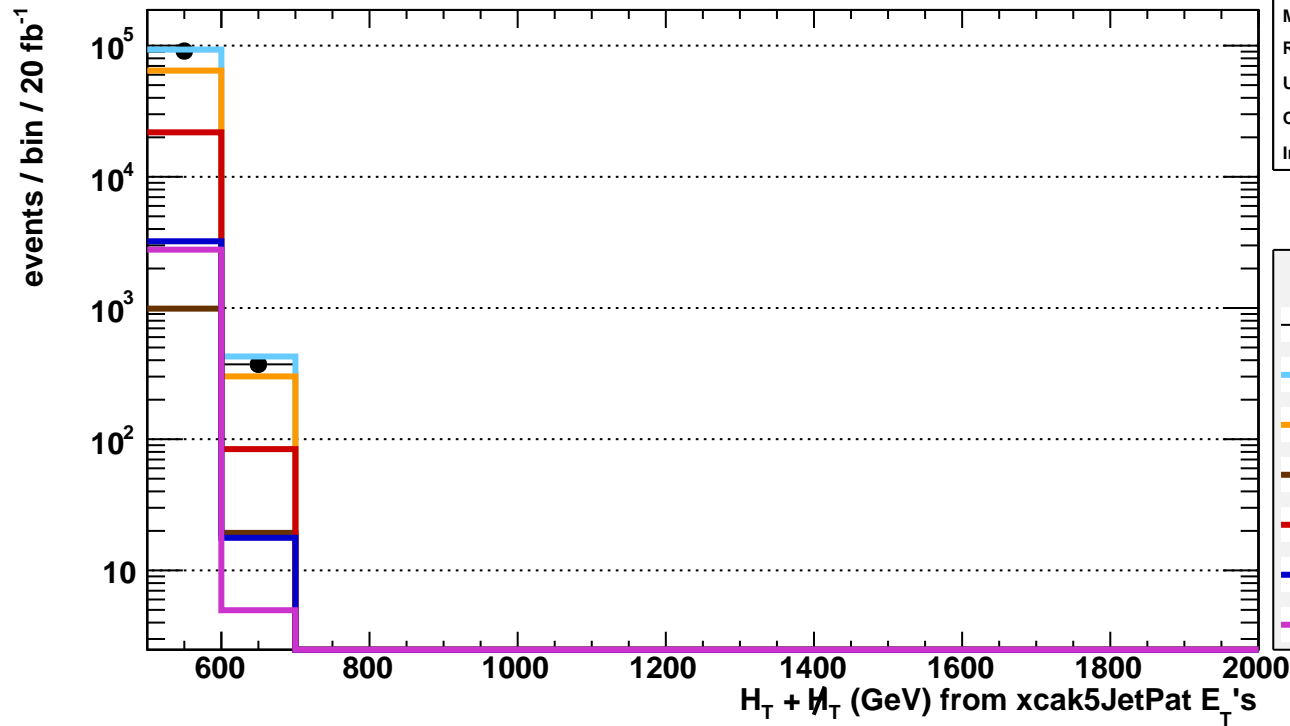
xcak5JetHtPat	
Entries	91256
Mean	300
RMS	0
Underflow	0
Overflow	0
Integral	9.126e+04



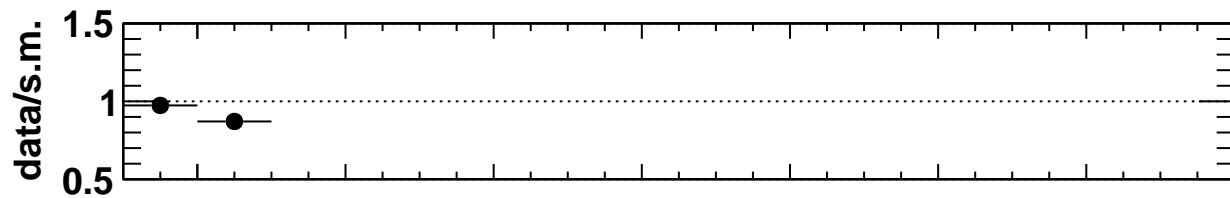
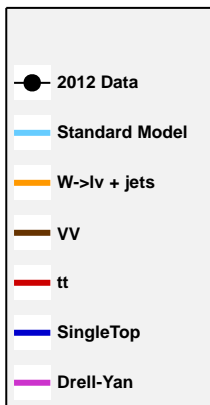


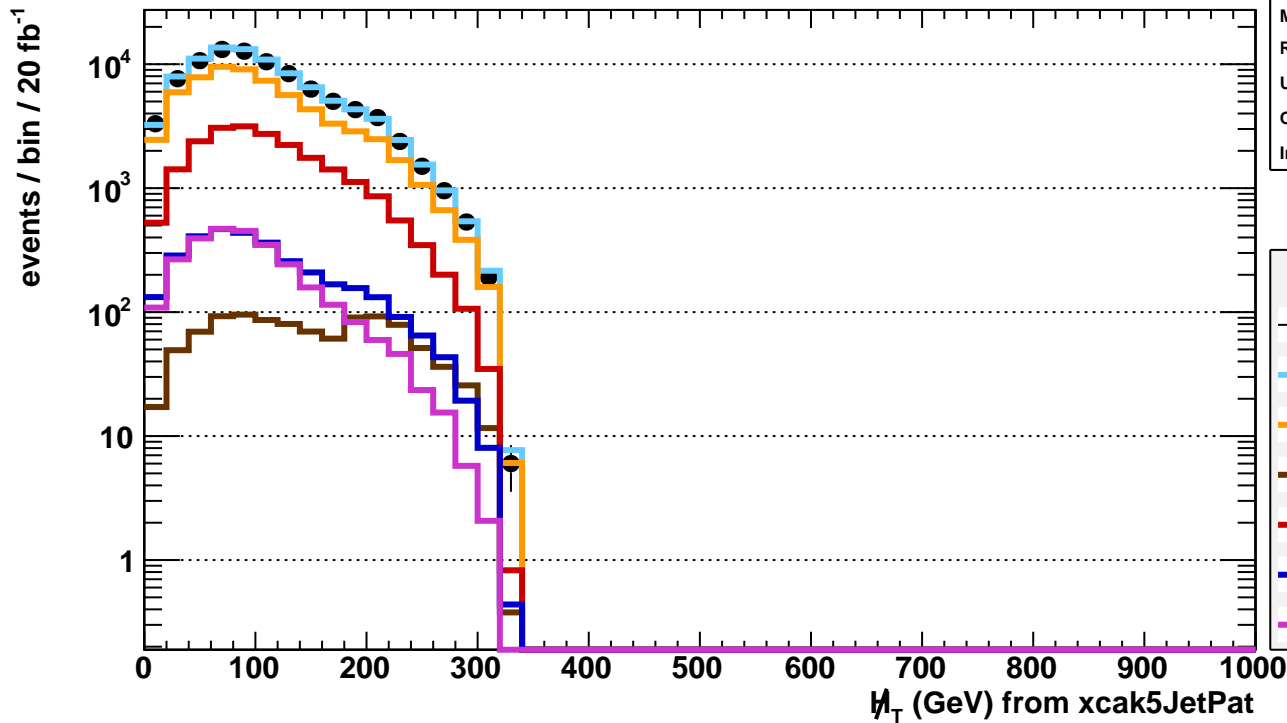
xcak5JetHtPlusMhtPat	
Entries	91256
Mean	364.6
RMS	77.05
Underflow	0
Overflow	0
Integral	9.126e+04



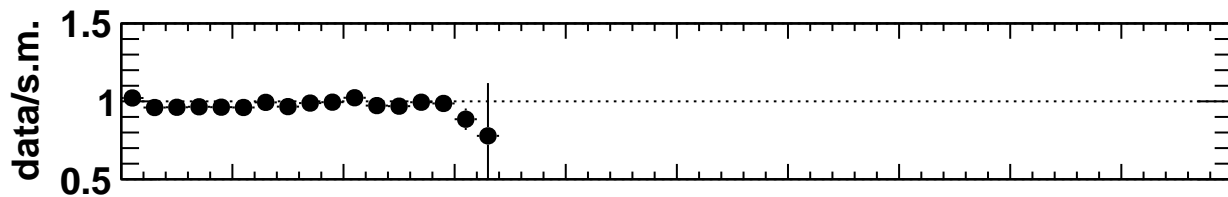
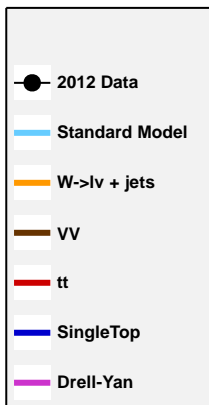


xcak5JetHtPlusMhtRoughPat	
Entries	91256
Mean	550.4
RMS	6.372
Underflow	0
Overflow	0
Integral	9.126e+04

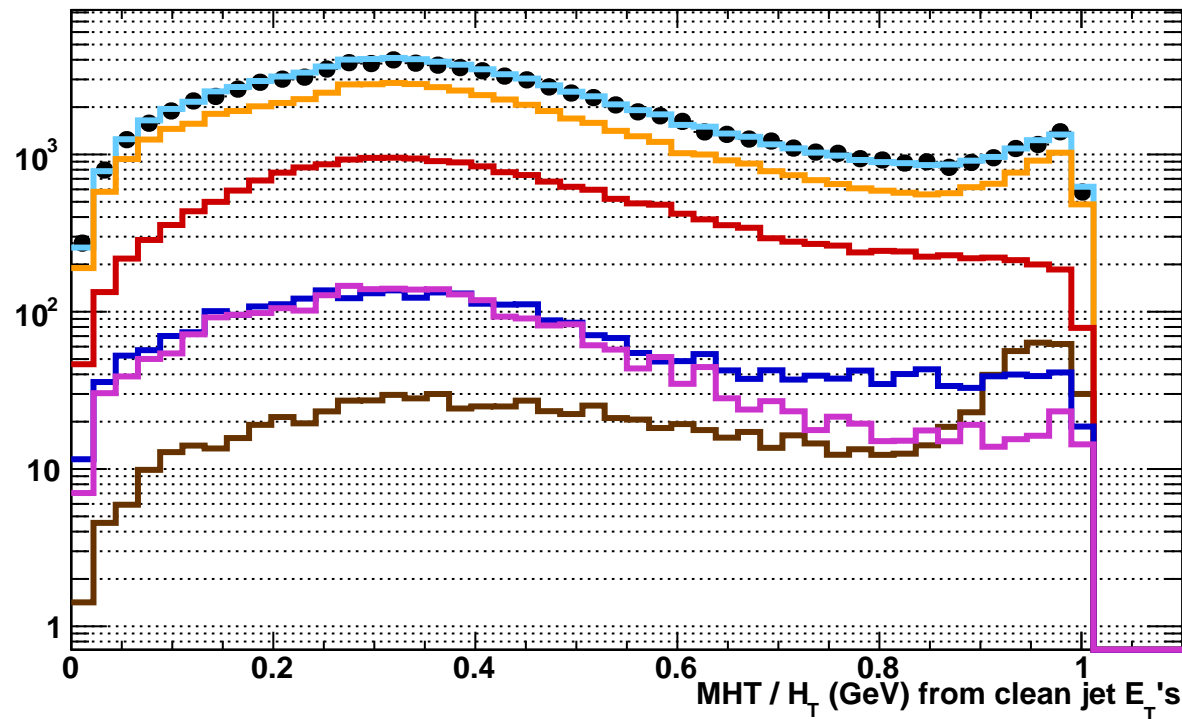




xcak5JetMhtPat	
Entries	91256
Mean	108.4
RMS	62.21
Underflow	0
Overflow	0
Integral	9.126e+04

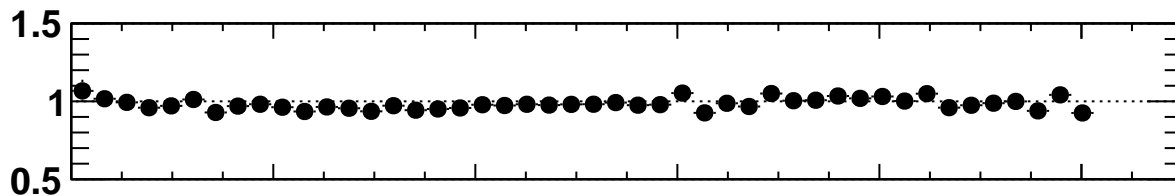


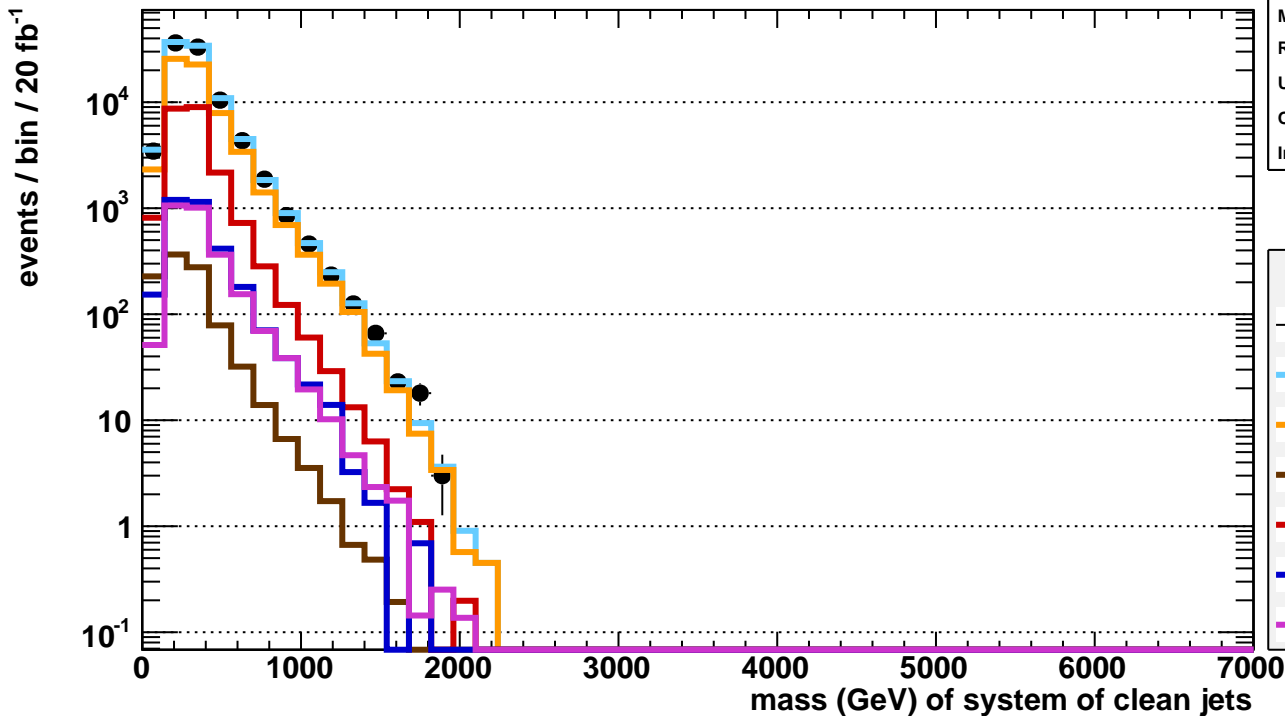


events / bin / 20 fb<sup>-1</sup>

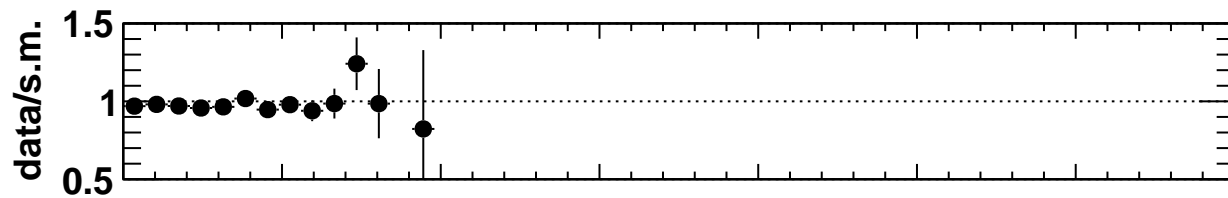
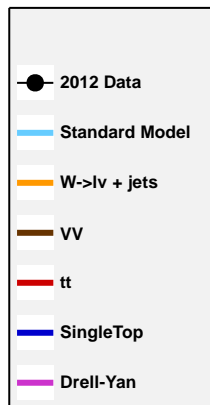
xcak5JetmHtOverHtPat	
Entries	91256
Mean	0.4247
RMS	0.239
Underflow	0
Overflow	0
Integral	9.126e+04

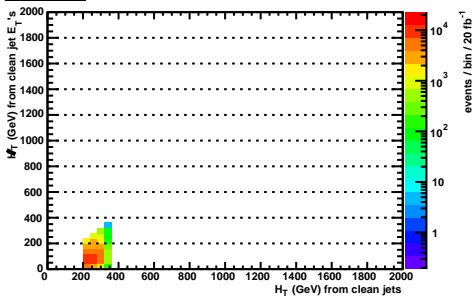
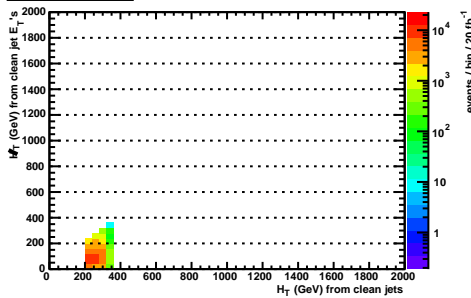
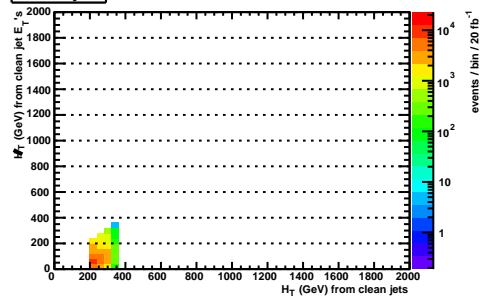
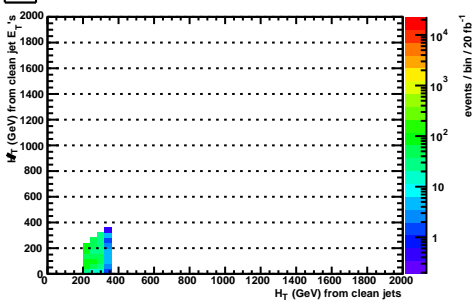
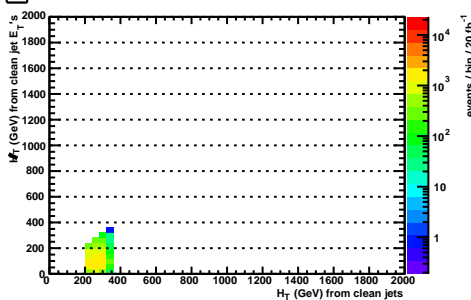
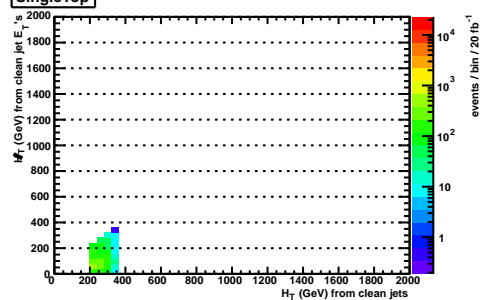
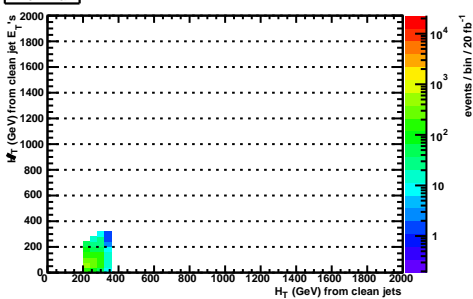
data/s.m.

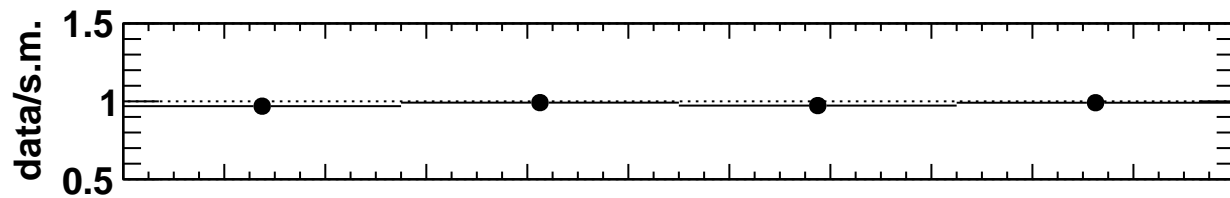
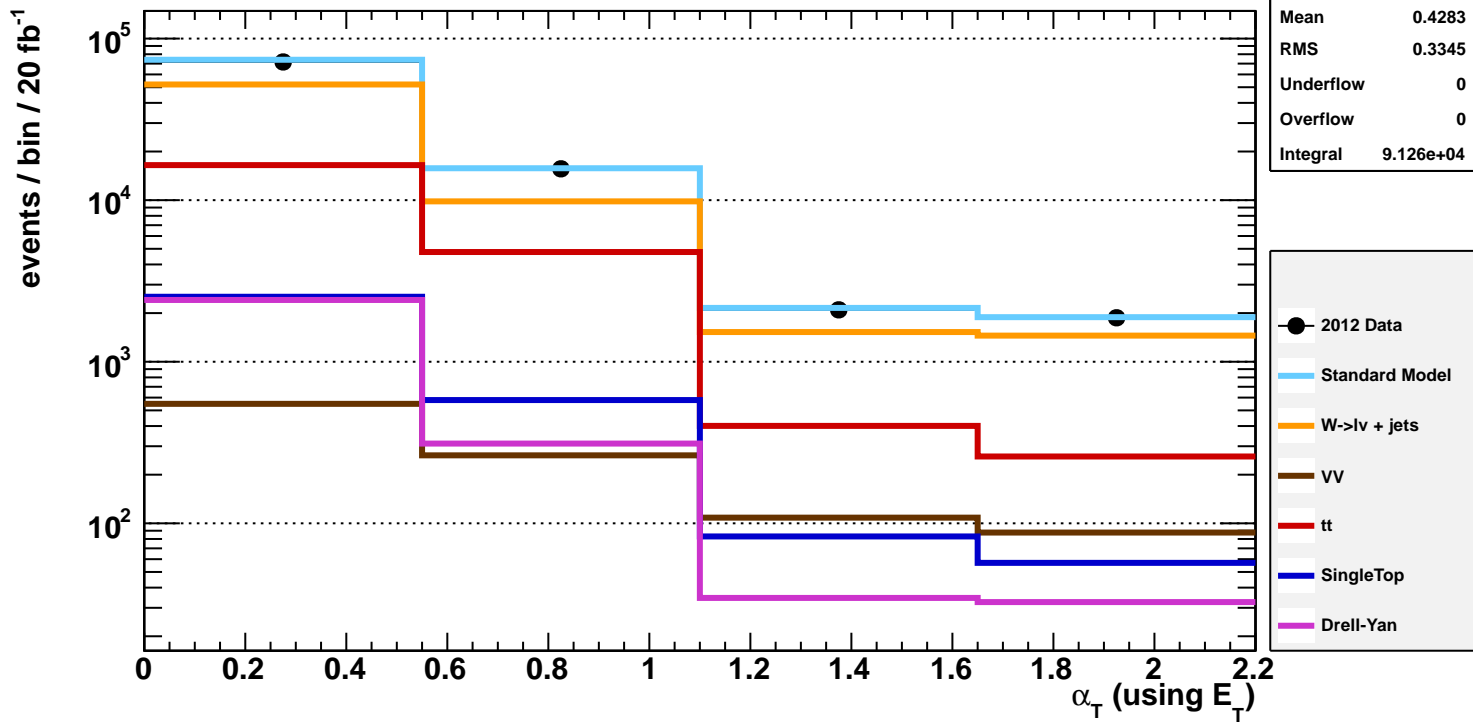


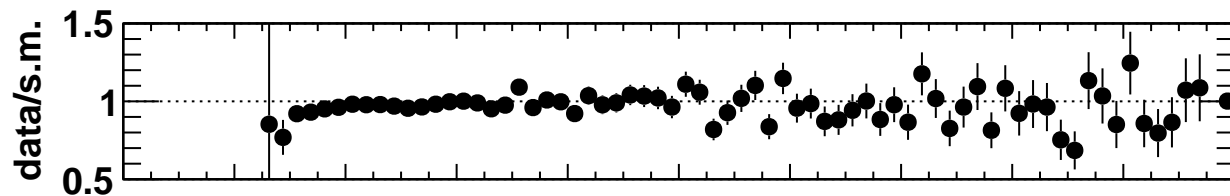
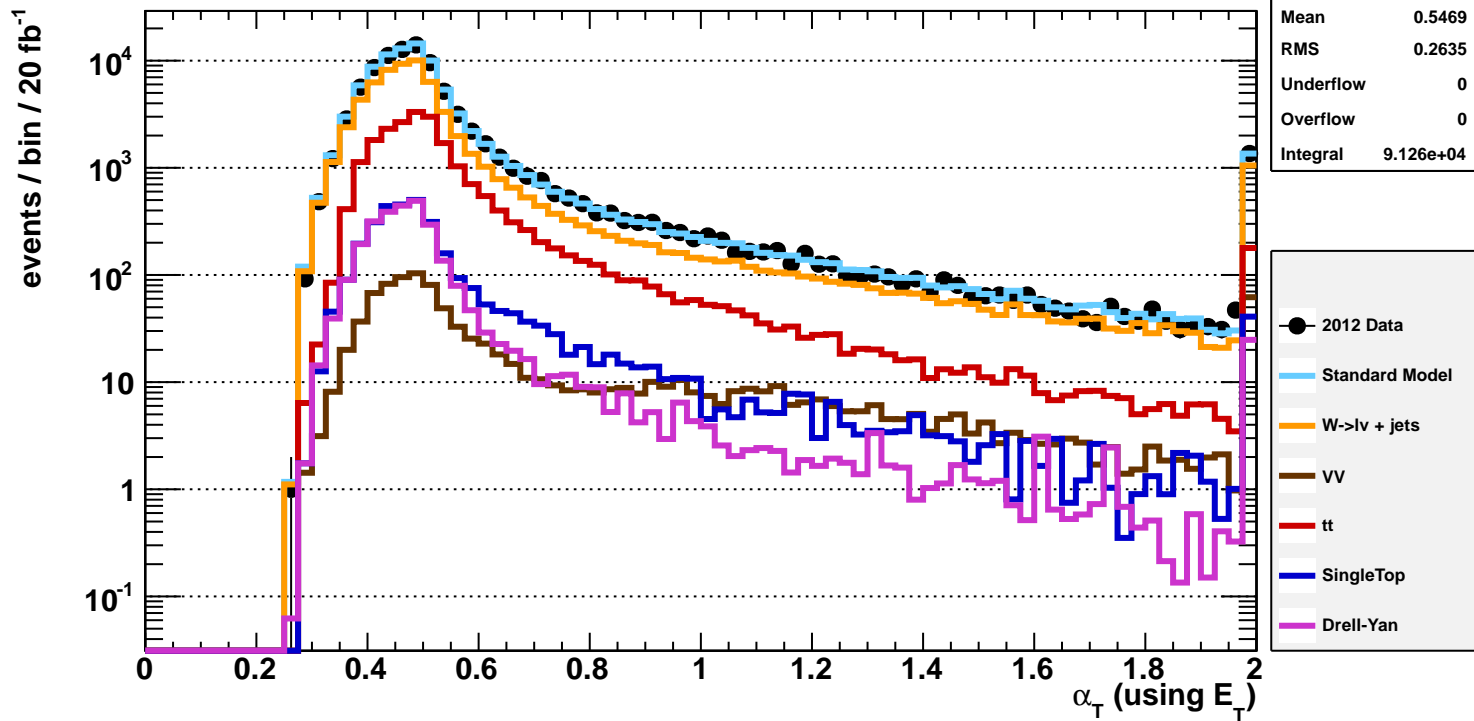


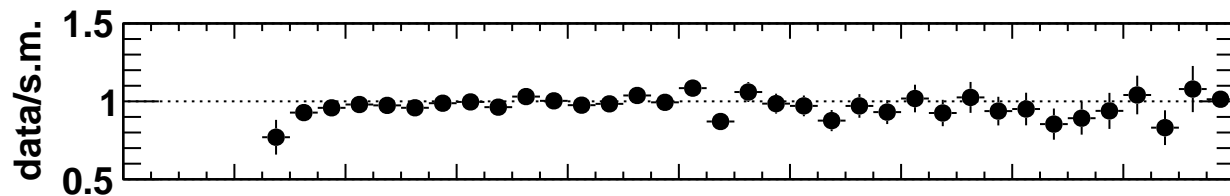
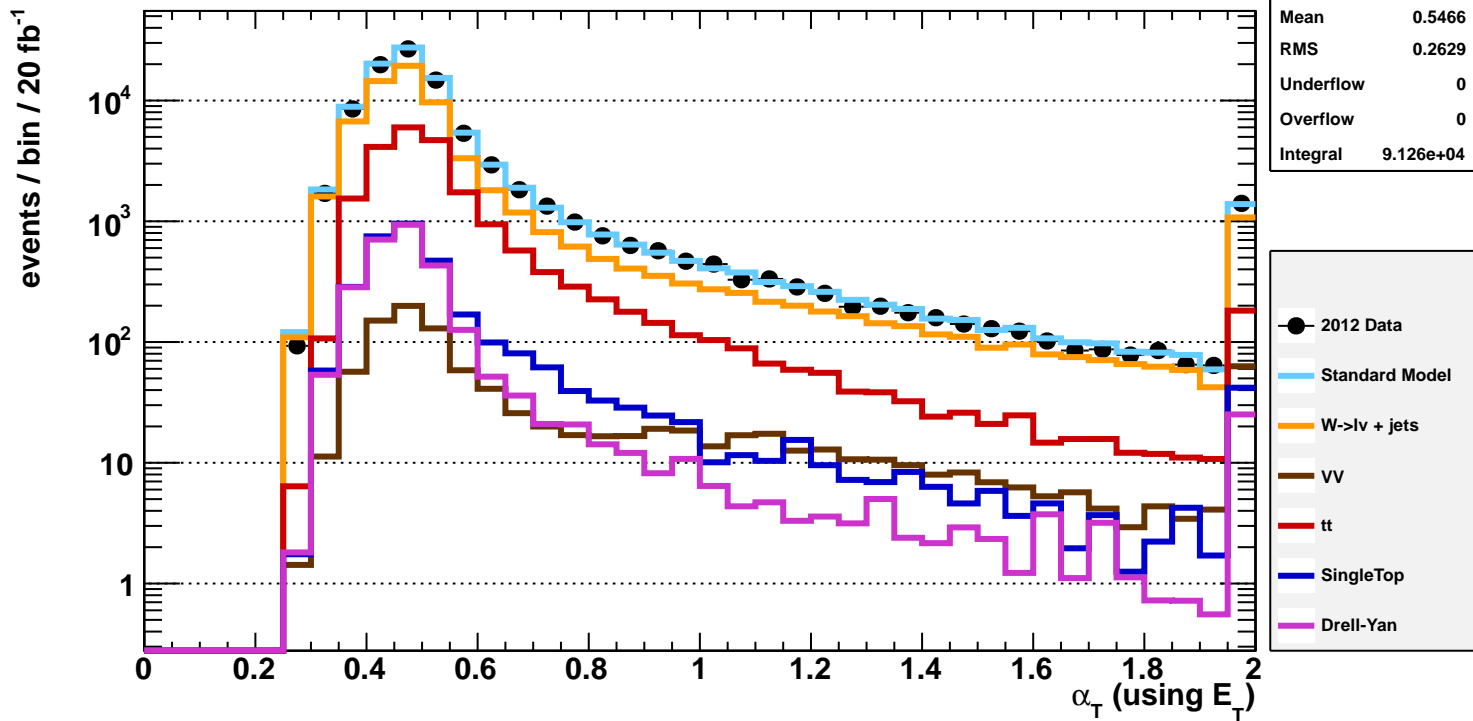
xcak5JetmPat	
Entries	91256
Mean	337.4
RMS	167.7
Underflow	0
Overflow	0
Integral	9.126e+04

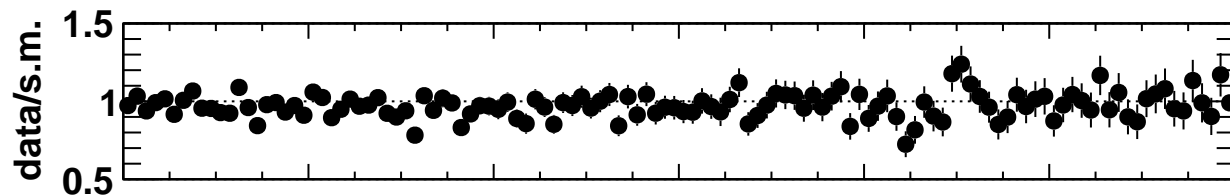
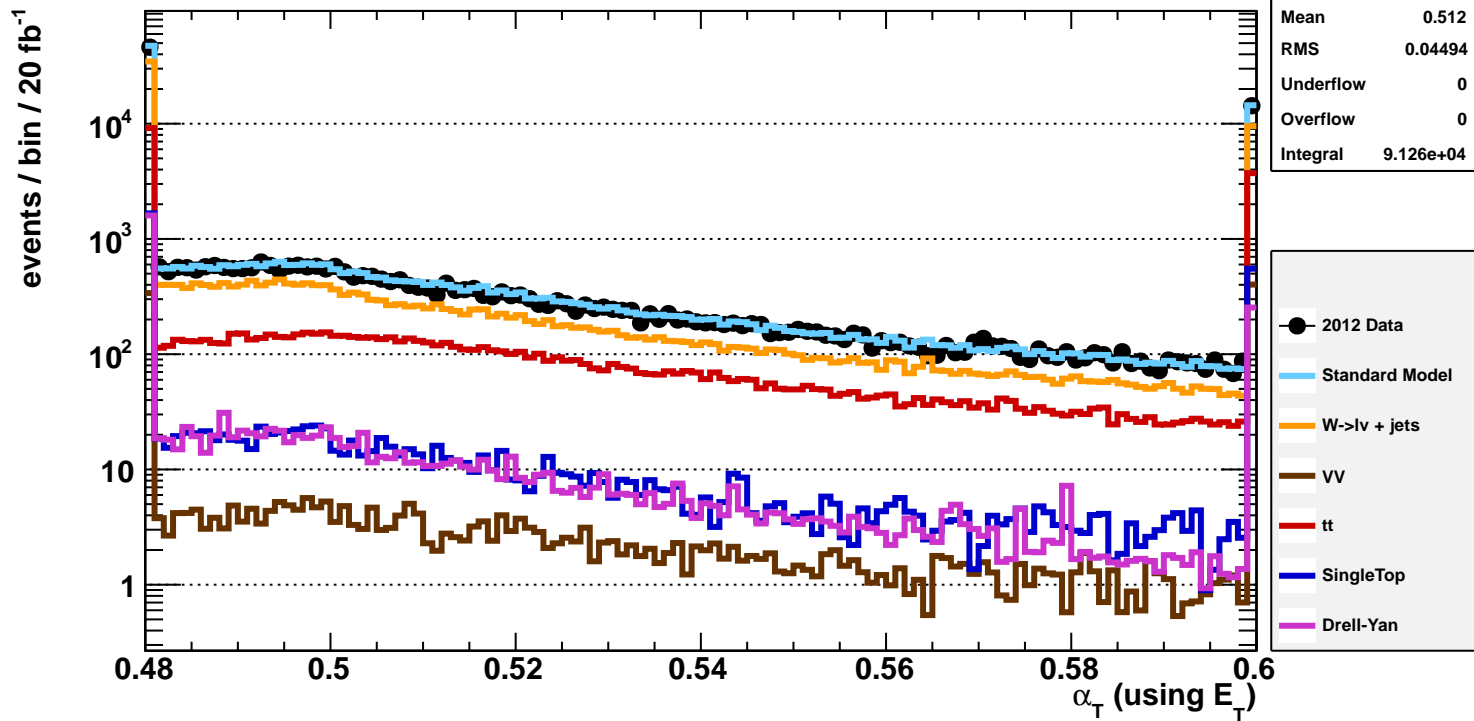


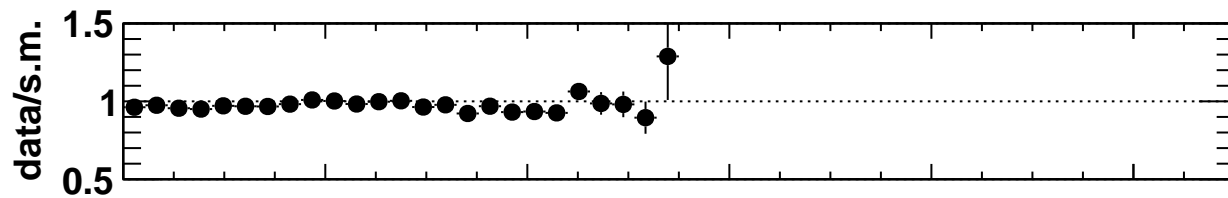
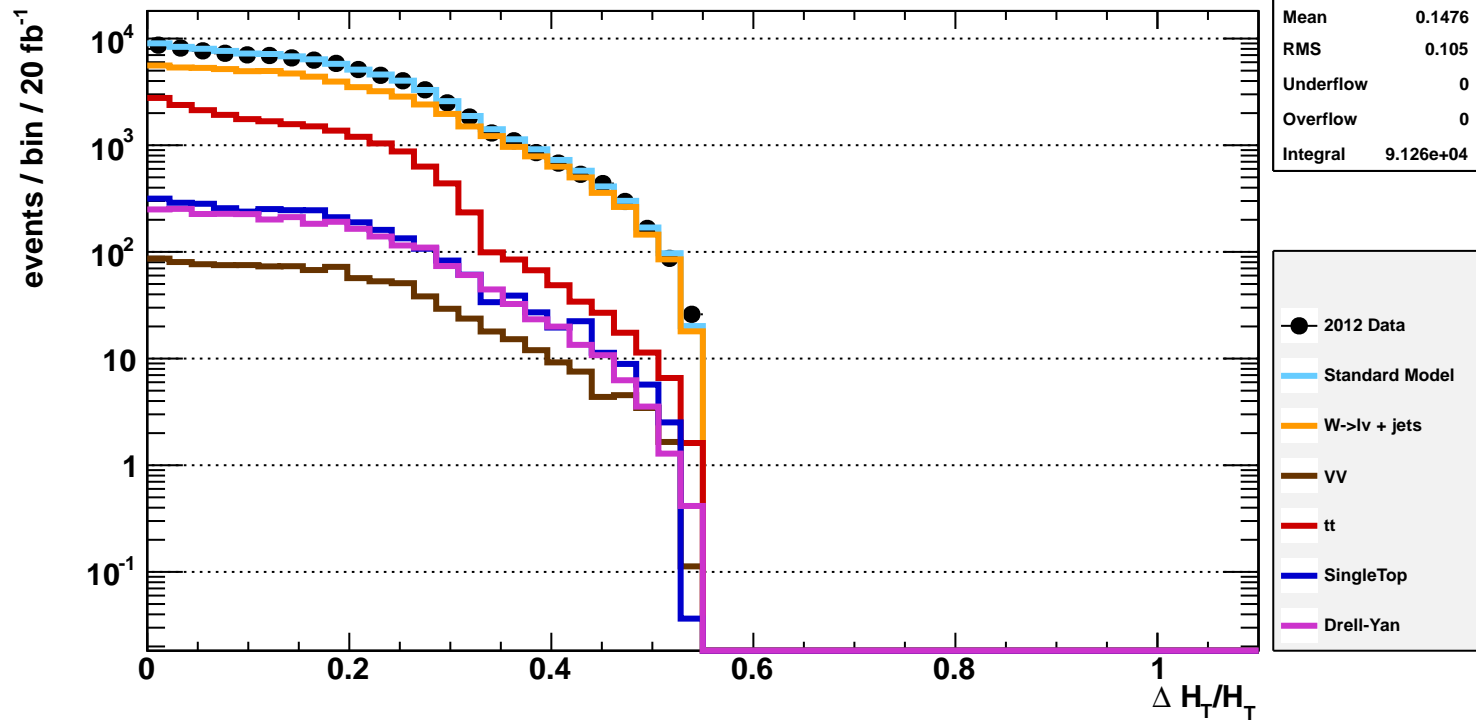
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**



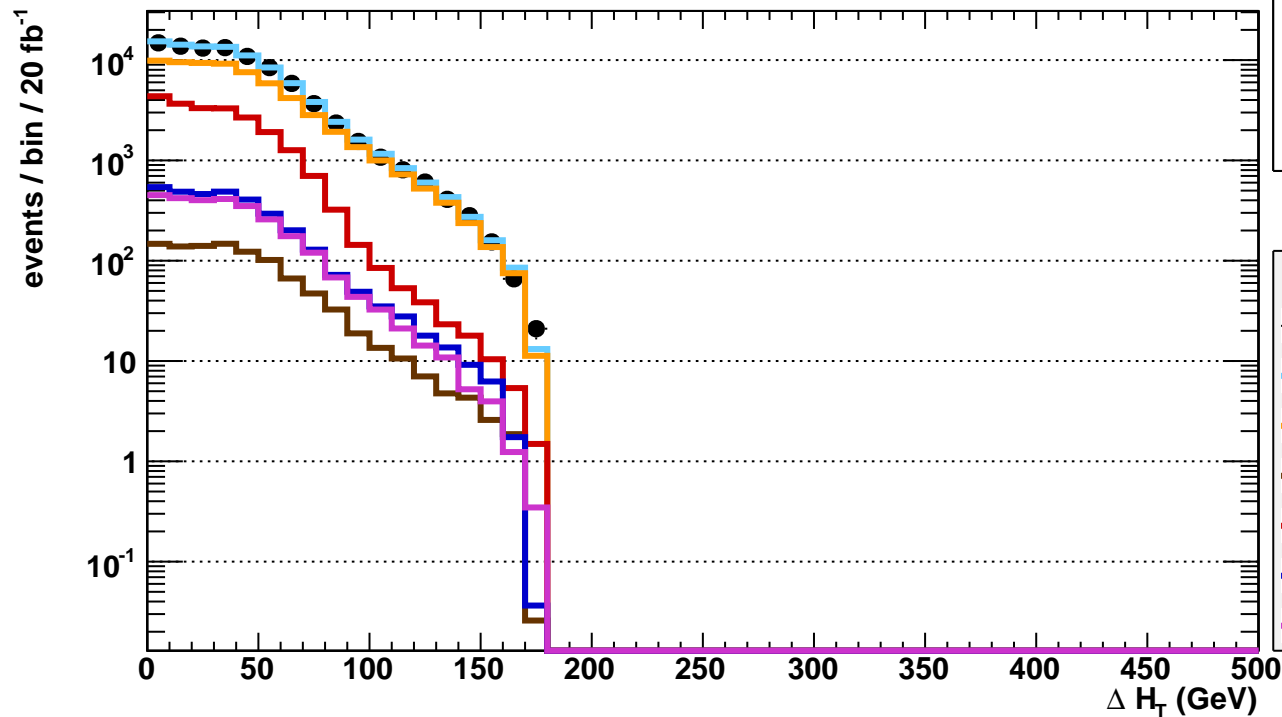




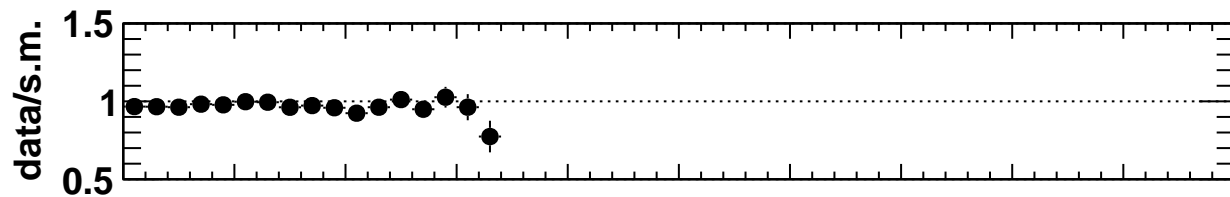
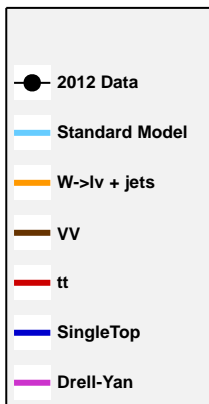


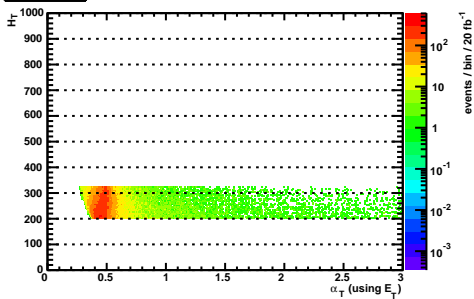
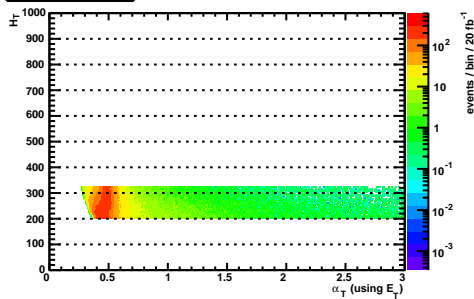
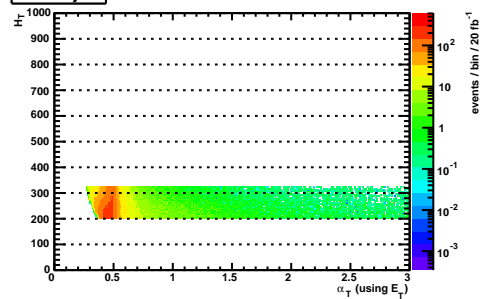
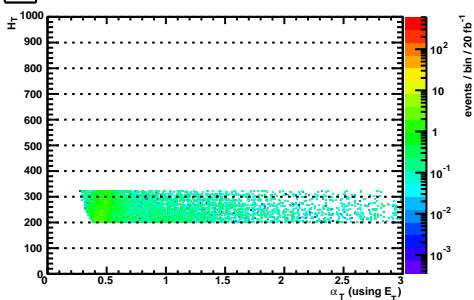
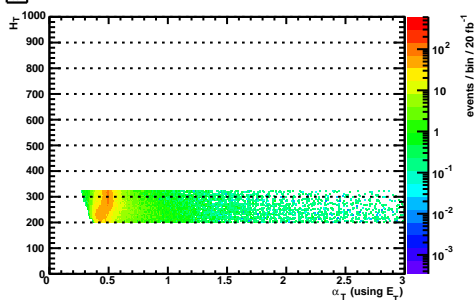
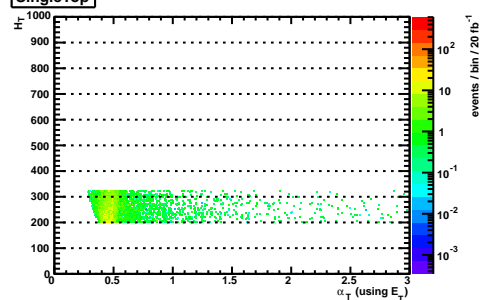
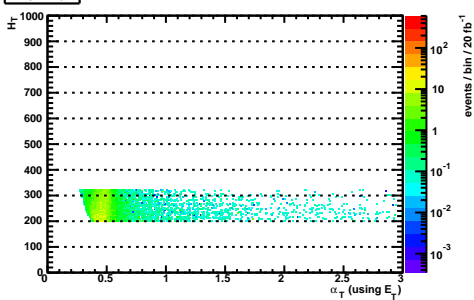


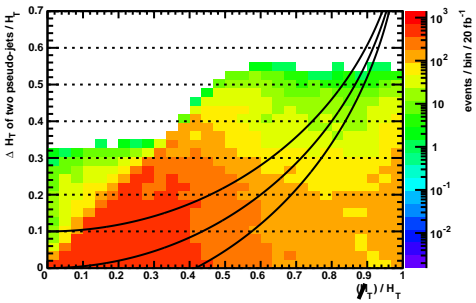
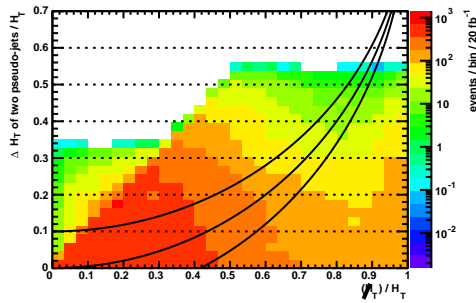
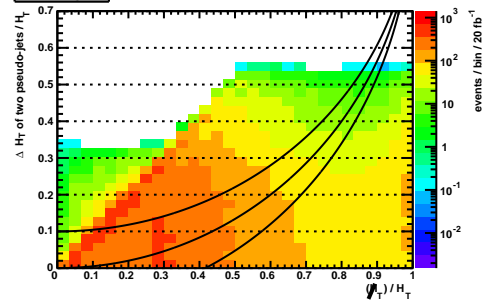
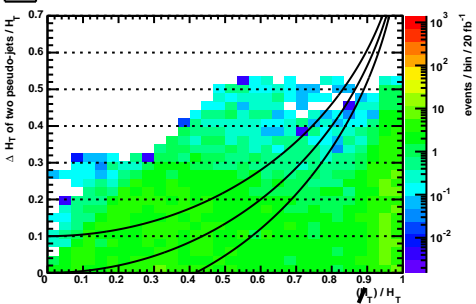
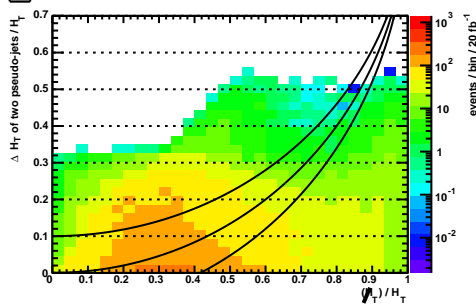
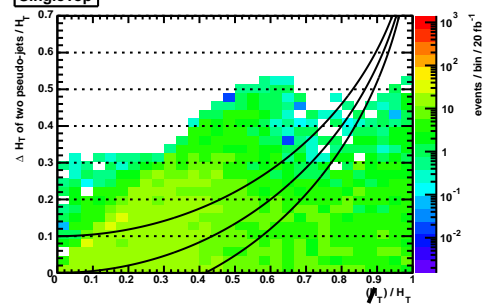
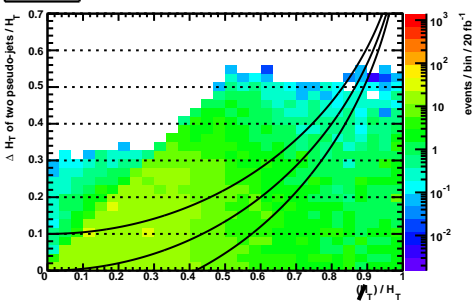


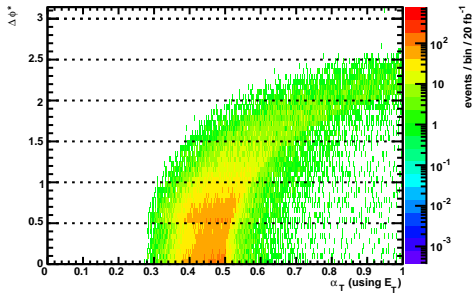
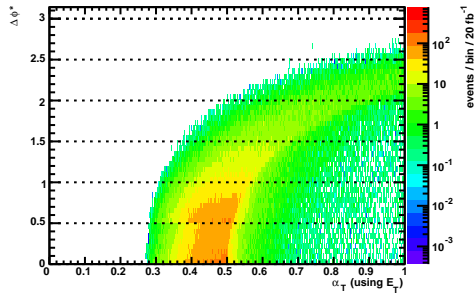
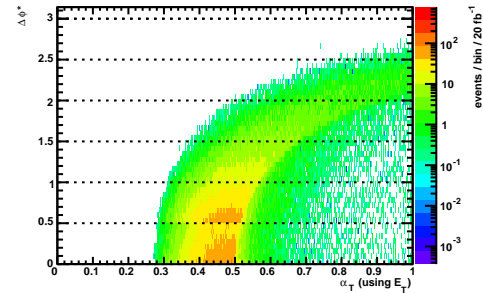
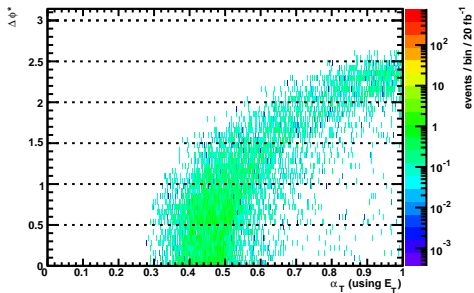
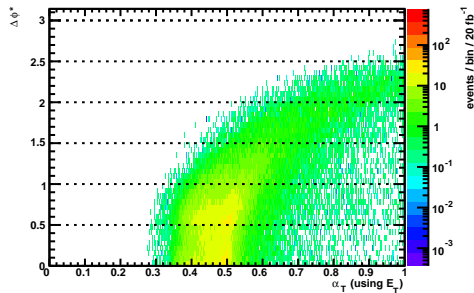
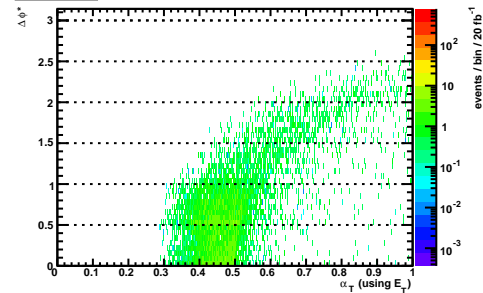
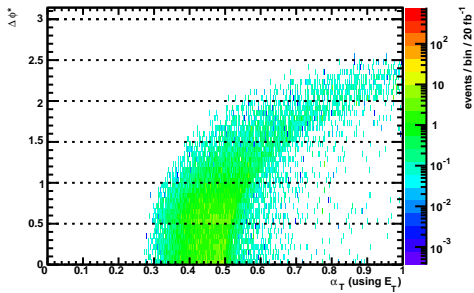


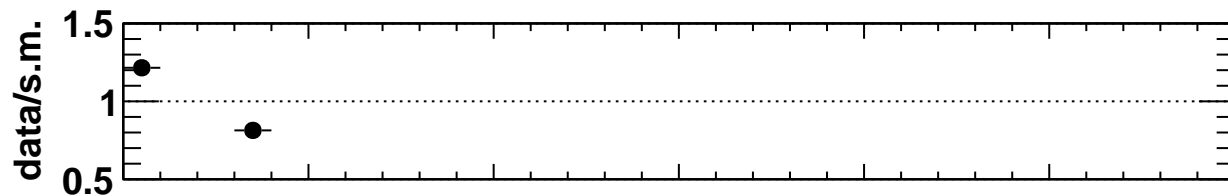
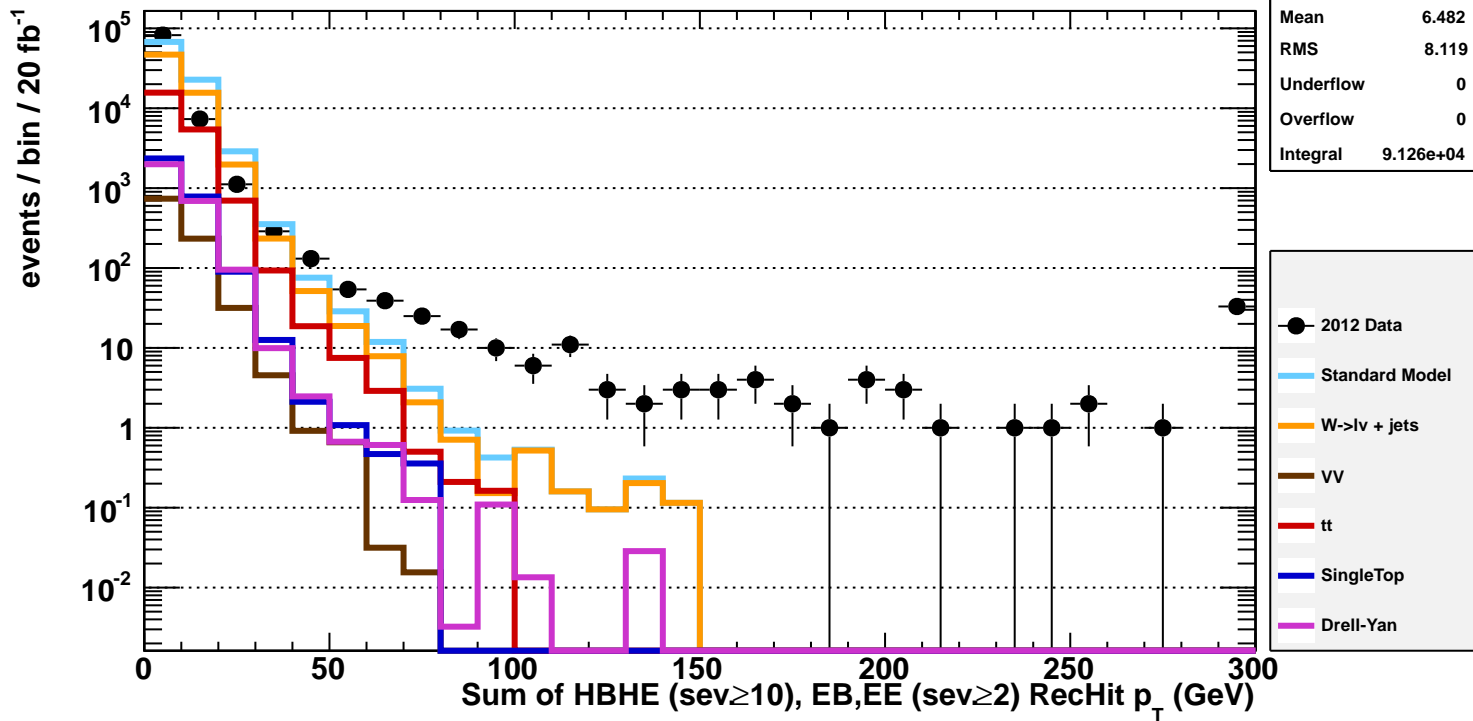
xcak5JetDeltaHtPat	
Entries	91256
Mean	37.64
RMS	28.35
Underflow	0
Overflow	0
Integral	9.126e+04



**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

**2012 Data****Standard Model****W- $\rightarrow$ lv + jets****VV****tt****SingleTop****Drell-Yan**

**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**



```

s: value                200.00<=xcak5JetSumEtPat
t: value                xcak5JetSumEtPat<=325.00

u: multiplicity         2 <= xcak5JetIndicesPat
v: multiplicity         0 <= xcak5JetIndicesOtherPat <= 0
w: multiplicity         0 <= xcak5JetIndicesWithOddMuonPat <= 0
x: uniquelyMatchedNonisoMuons xcak5JetPat
y: multiplicity         0 <= electronIndicesPat <= 0

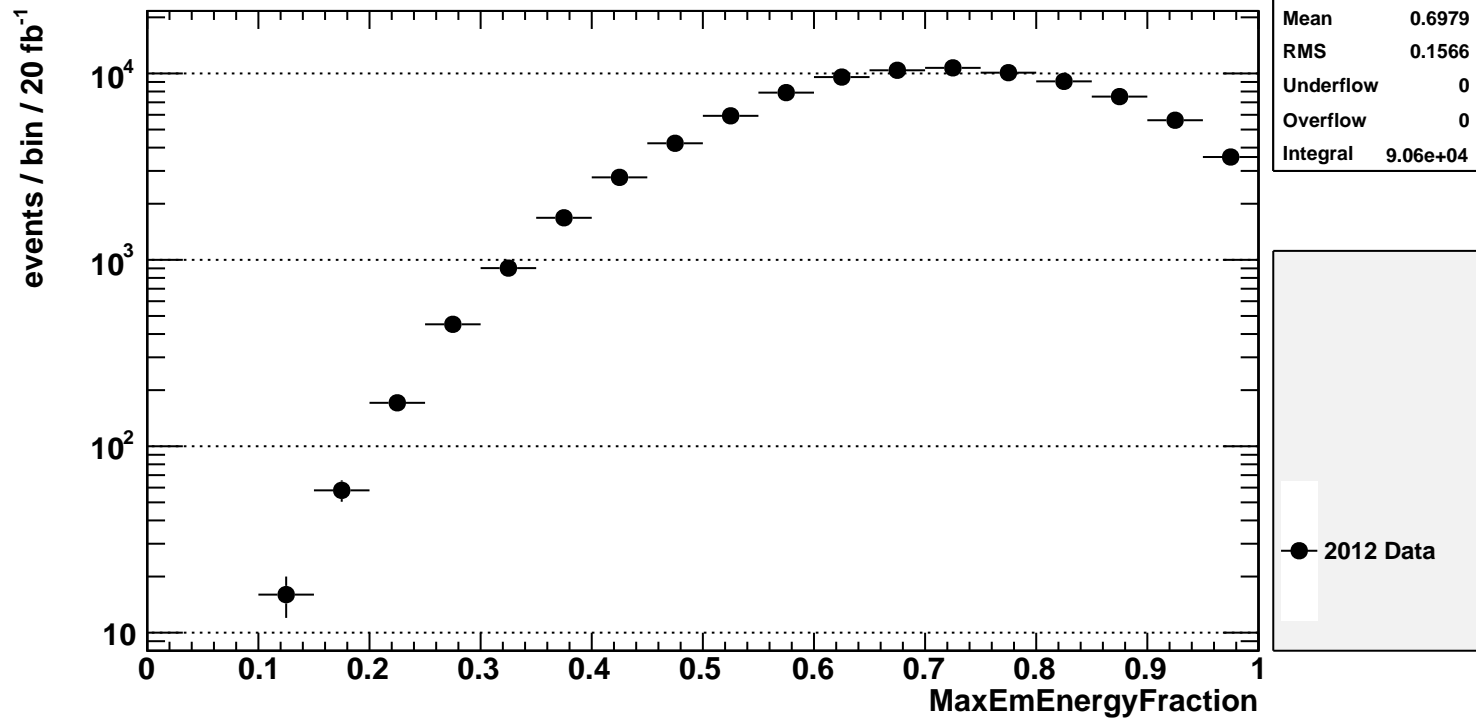
z: multiplicity         0 <= photonIndicesPat <= 0
A: multiplicity         0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity         0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter       xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: multiplicity         1 <= muonIndicesPat <= 1

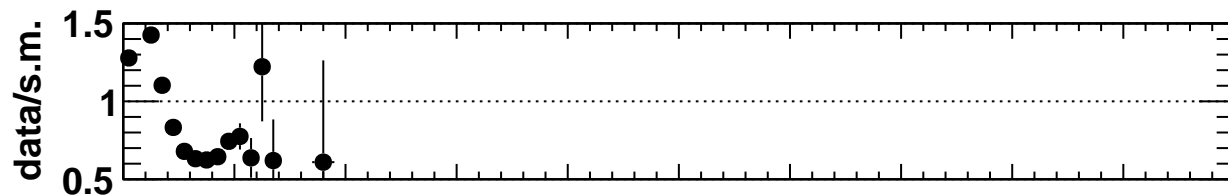
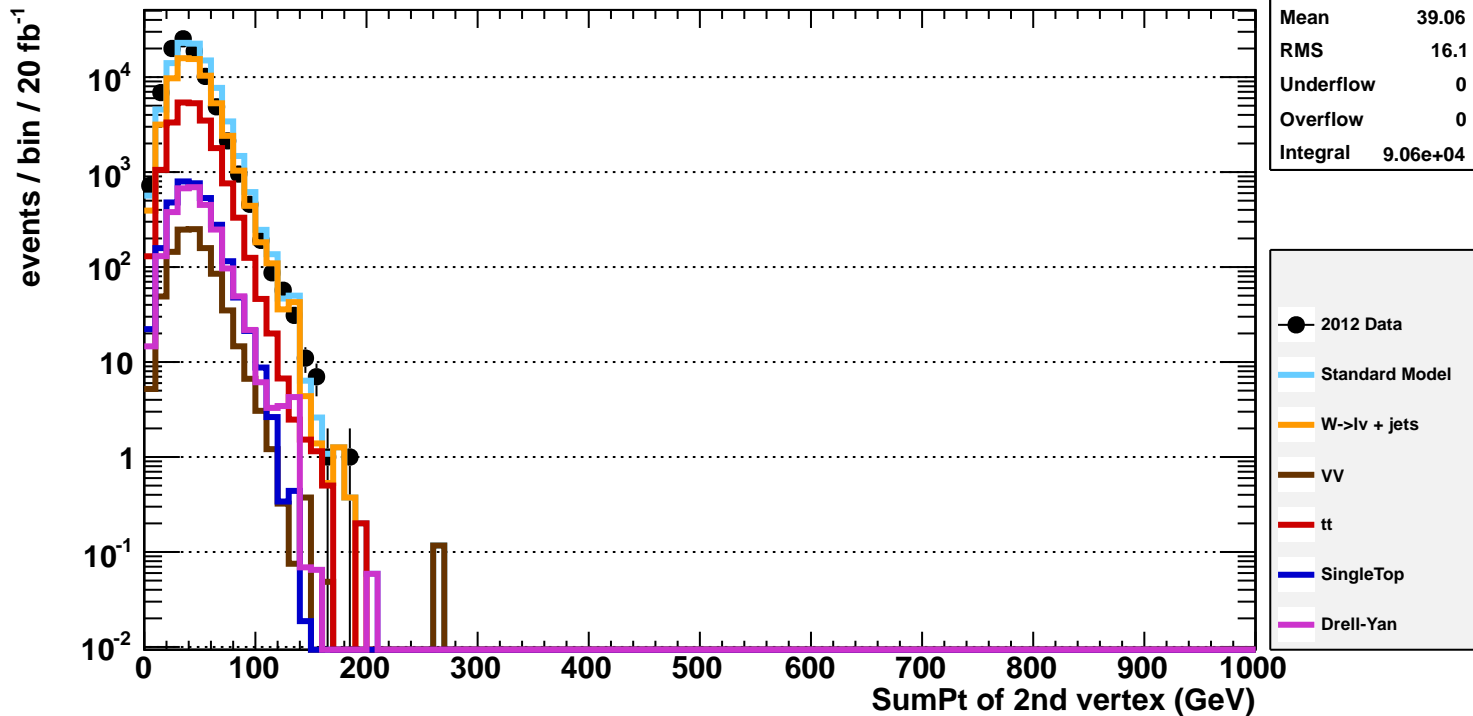
E: pt                  30.00<=muonP4Pat[i[0]].pt; muonIndicesPat
F: eta                -2.10<=muonP4Pat[i[0]].eta<=2.10; muonIndicesPat
G: value              30.00<=muonMtPatmetP4TypeIPF<=125.00
H: value              xcak5JetMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPat<=1.25
I: value              CaloRecHitSumPt<=30.00

J: value              0.10<=xcak5JetMaxEmEnergyFractionPat

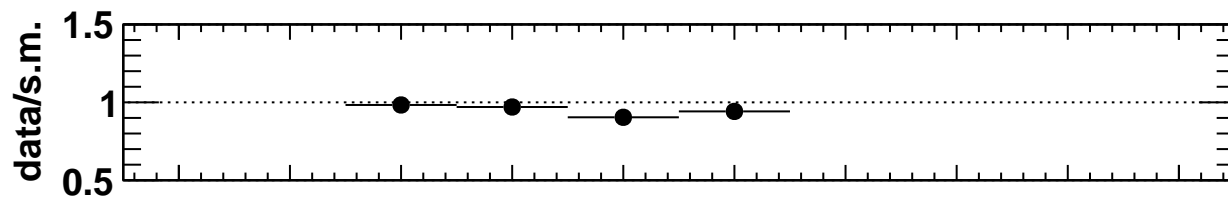
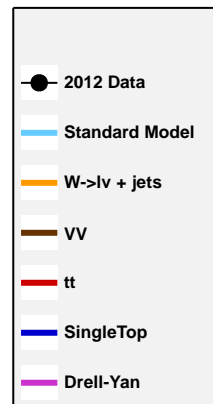
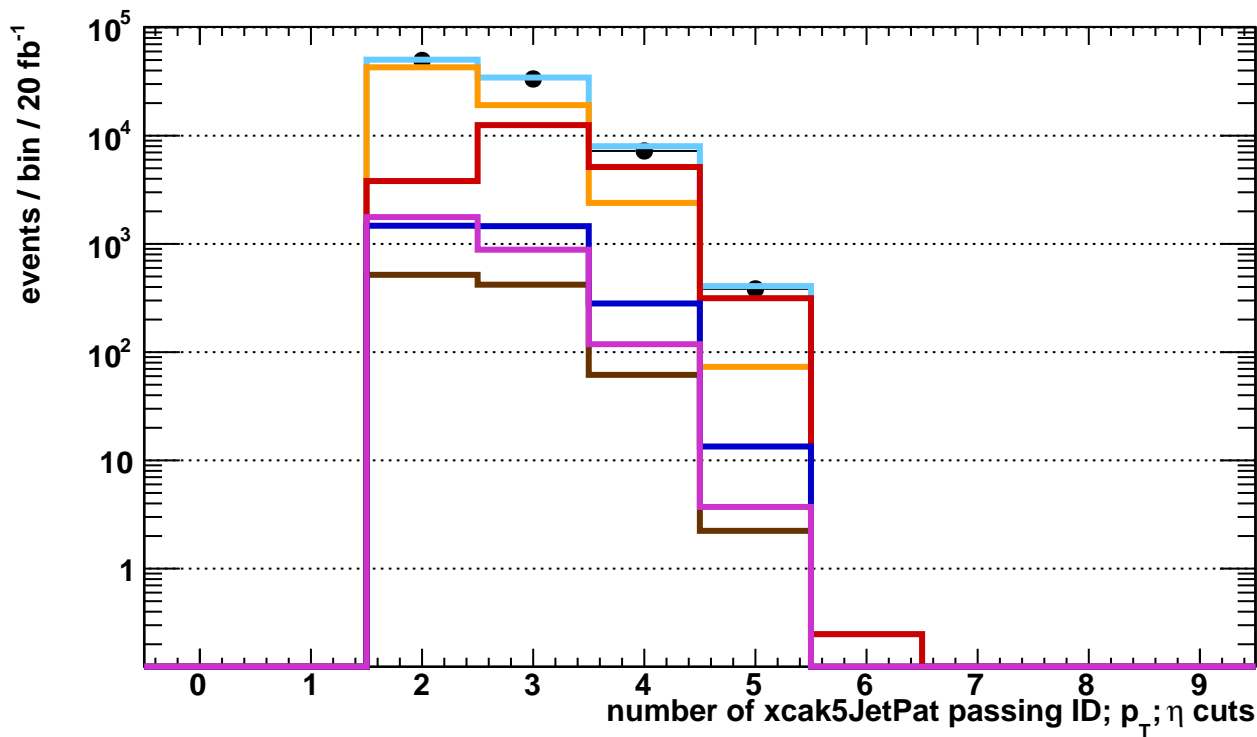
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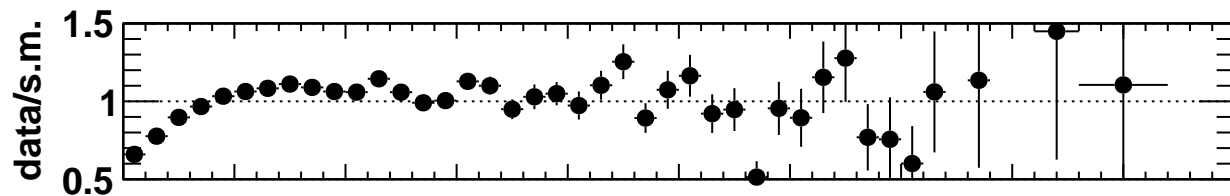
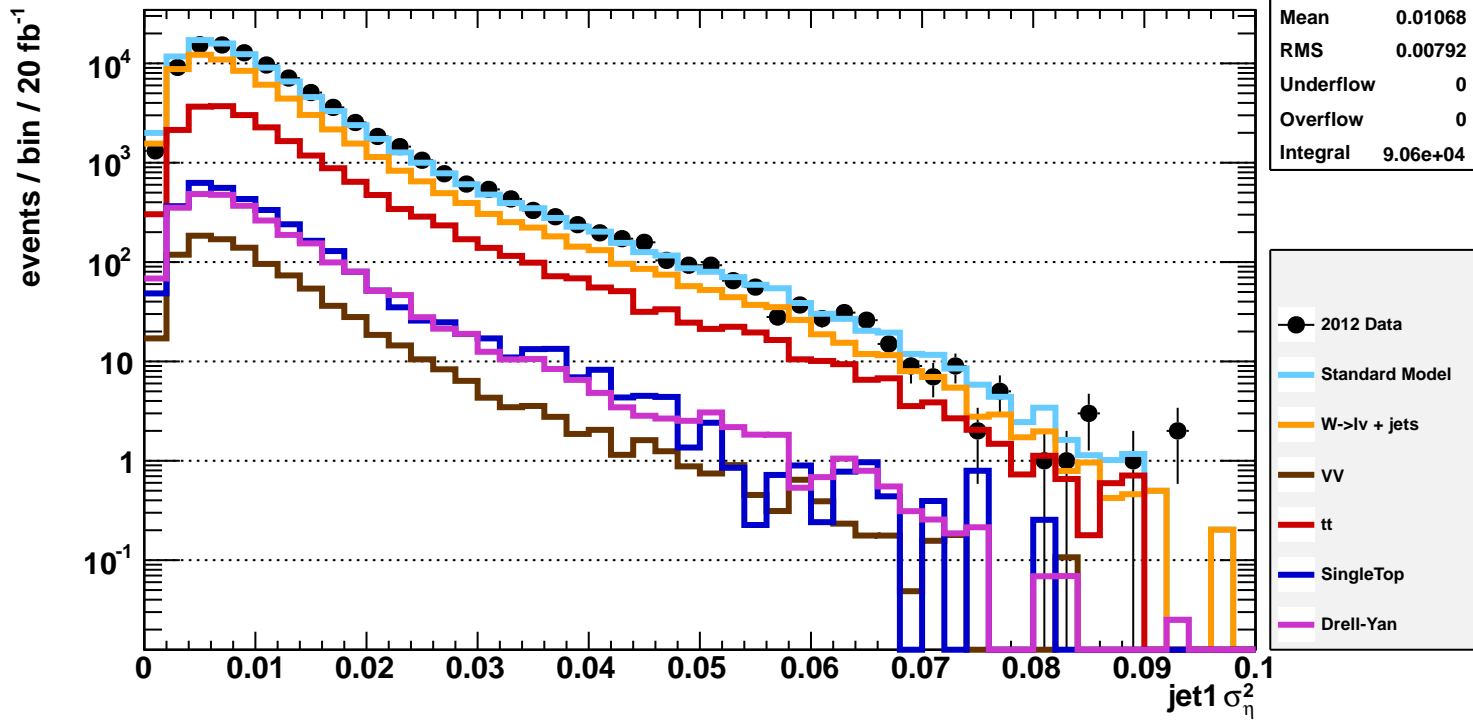
	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
s:	616848	4.192(1)e+6	1.678(1)e+6	1.199(1)e+5	1.8209(6)e+6	3.624(4)e+5	2.106(4)e+5	0.1472(2)
t:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
u:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
v:	359231	1.996(1)e+6	1.035(1)e+6	6.663(8)e+4	5.888(4)e+5	1.785(3)e+5	1.266(3)e+5	0.1800(3)
w:	351218	1.983(1)e+6	1.032(1)e+6	6.650(8)e+4	5.811(4)e+5	1.772(2)e+5	1.259(3)e+5	0.1771(3)
x:	344418	1.971(1)e+6	1.027(1)e+6	6.641(8)e+4	5.755(3)e+5	1.763(2)e+5	1.249(3)e+5	0.1748(3)
y:	338715	1.569(1)e+6	7.82(1)e+5	6.283(8)e+4	4.768(3)e+5	1.630(2)e+5	8.42(3)e+4	0.2159(4)
z:	337589	1.549(1)e+6	7.68(1)e+5	6.252(8)e+4	4.740(3)e+5	1.625(2)e+5	8.22(3)e+4	0.2180(4)
A:	337320	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
B:	337302	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
C:	212357	8.122(8)e+5	4.428(7)e+5	2.576(5)e+4	2.320(2)e+5	6.83(2)e+4	4.34(2)e+4	0.2614(6)
D:	184117	2.402(3)e+5	1.606(2)e+5	2.30(2)e+3	5.85(1)e+4	8.53(6)e+3	1.022(7)e+4	0.767(2)
E:	162789	1.784(2)e+5	1.197(2)e+5	1.87(1)e+3	4.363(9)e+4	6.00(5)e+3	7.20(5)e+3	0.913(3)
F:	162768	1.653(2)e+5	1.093(2)e+5	1.74(1)e+3	4.221(9)e+4	5.83(5)e+3	6.22(5)e+3	0.985(3)
G:	122374	1.271(2)e+5	8.52(2)e+4	1.28(1)e+3	3.234(8)e+4	4.52(4)e+3	3.80(4)e+3	0.962(3)
H:	91256	9.38(2)e+4	6.48(1)e+4	1.01(1)e+3	2.191(7)e+4	3.24(4)e+3	2.79(3)e+3	0.973(4)
I:	90611	9.33(2)e+4	6.45(1)e+4	1.00(1)e+3	2.179(7)e+4	3.23(4)e+3	2.78(3)e+3	0.971(4)
J:	90605	-	-	-	-	-	-	-

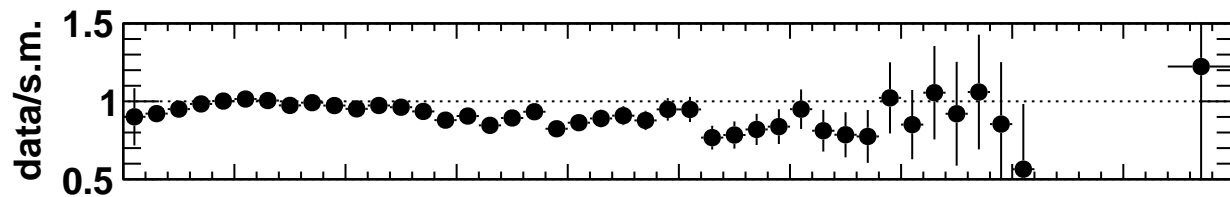
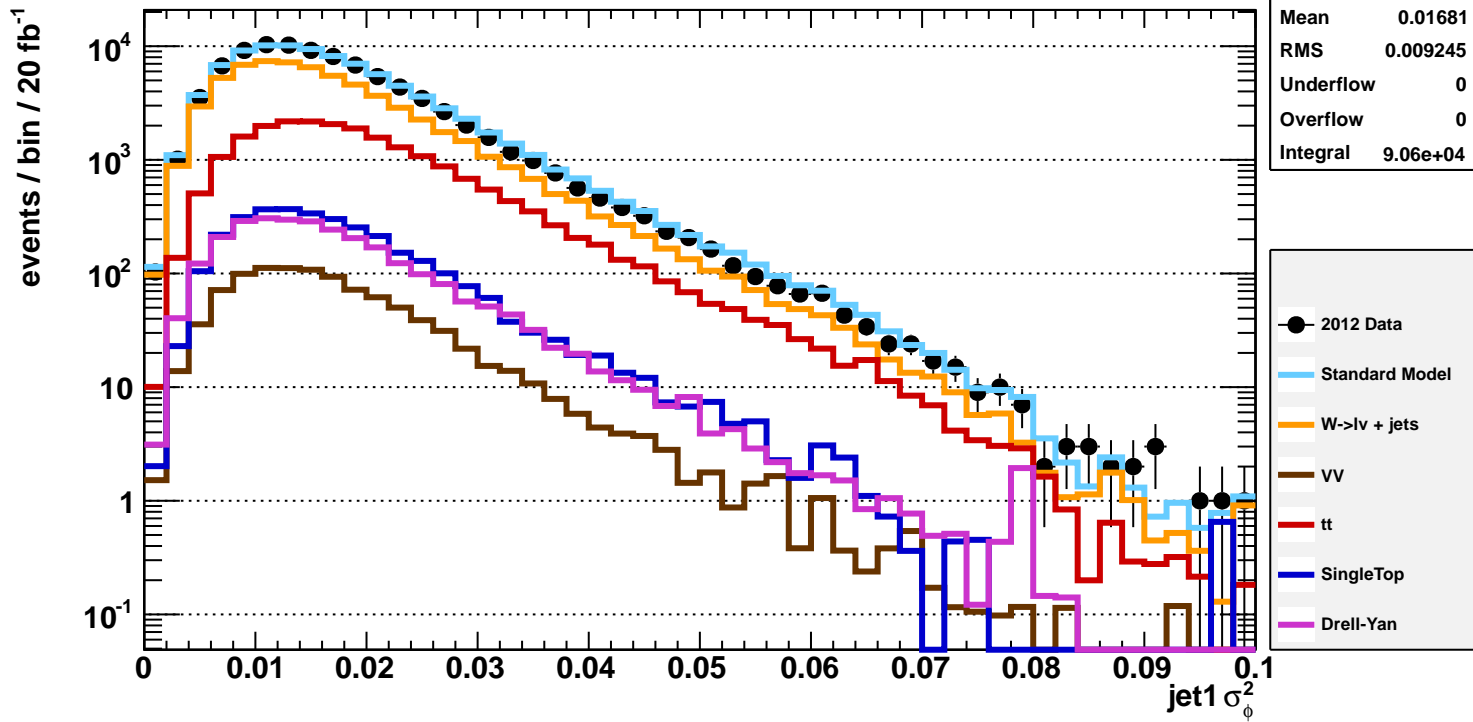


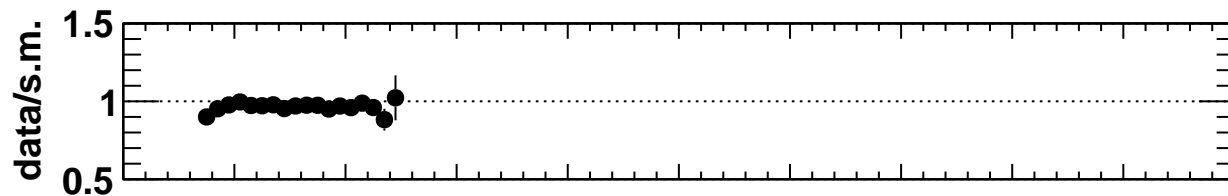
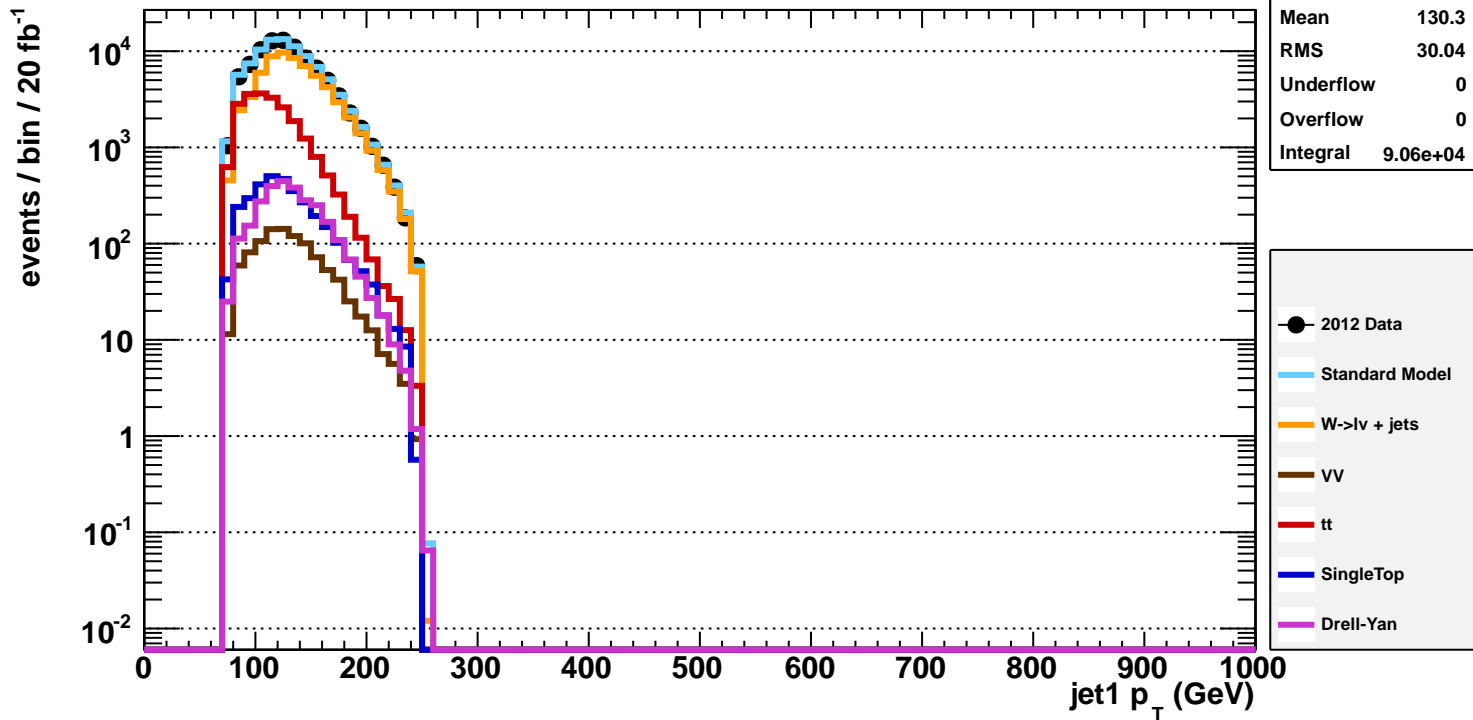


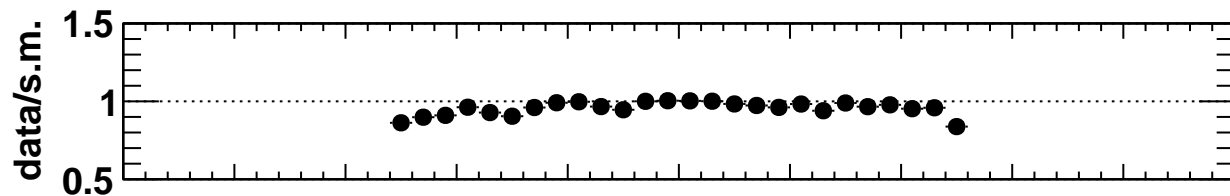
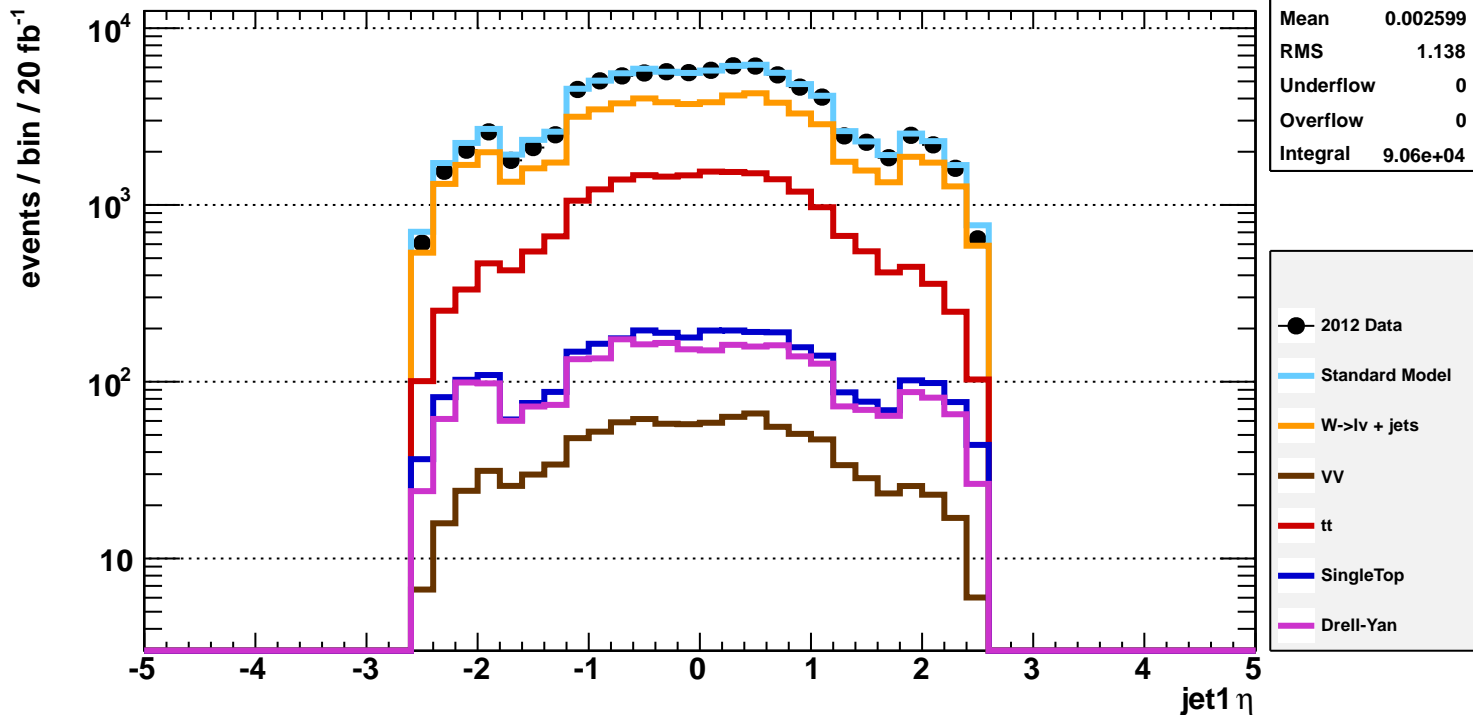


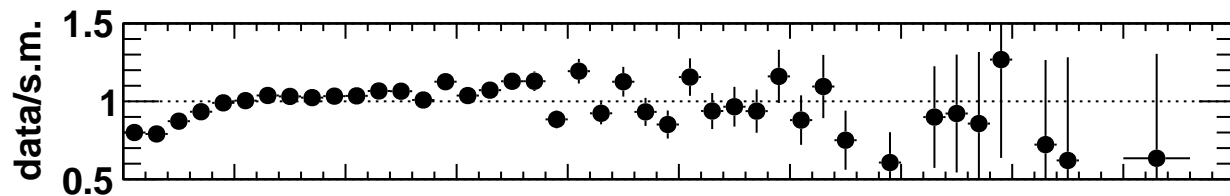
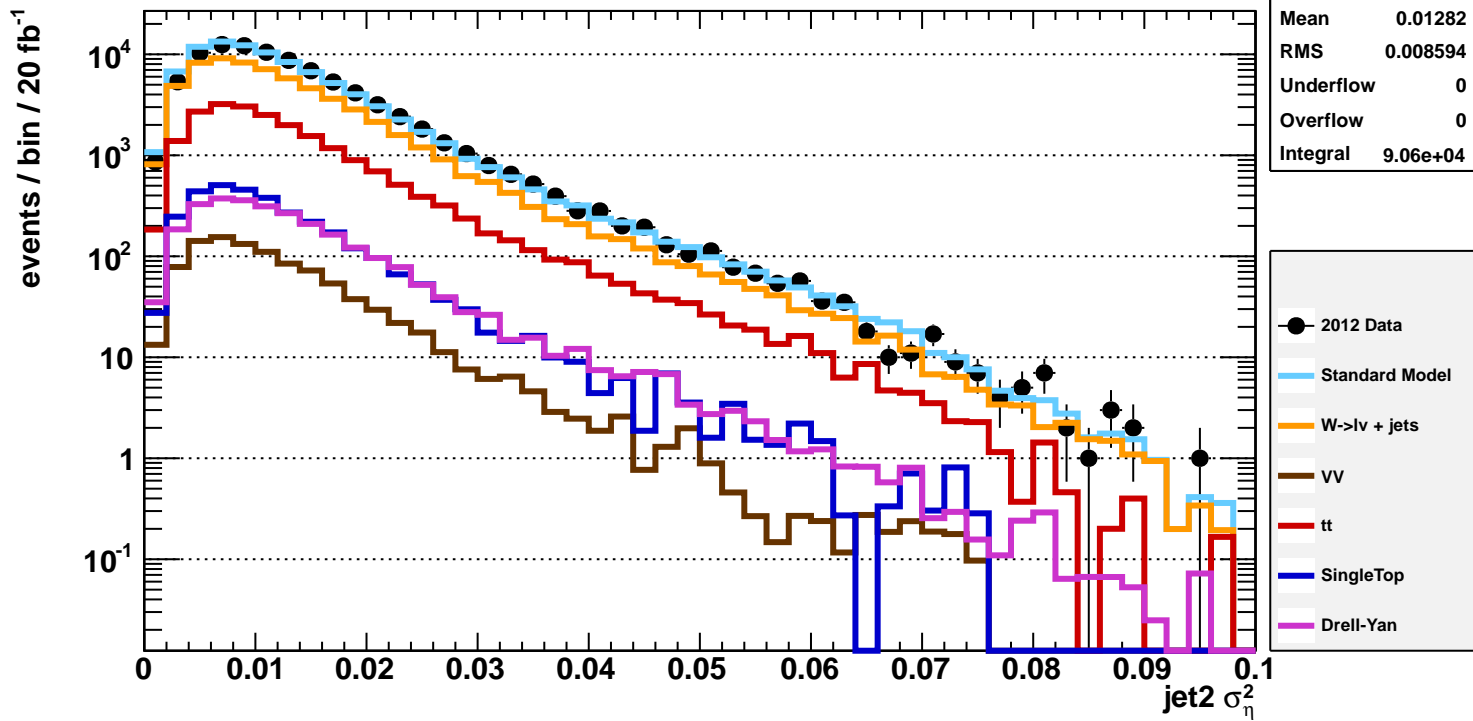


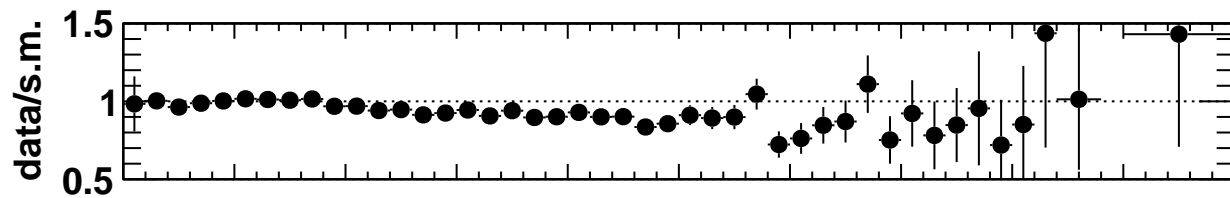
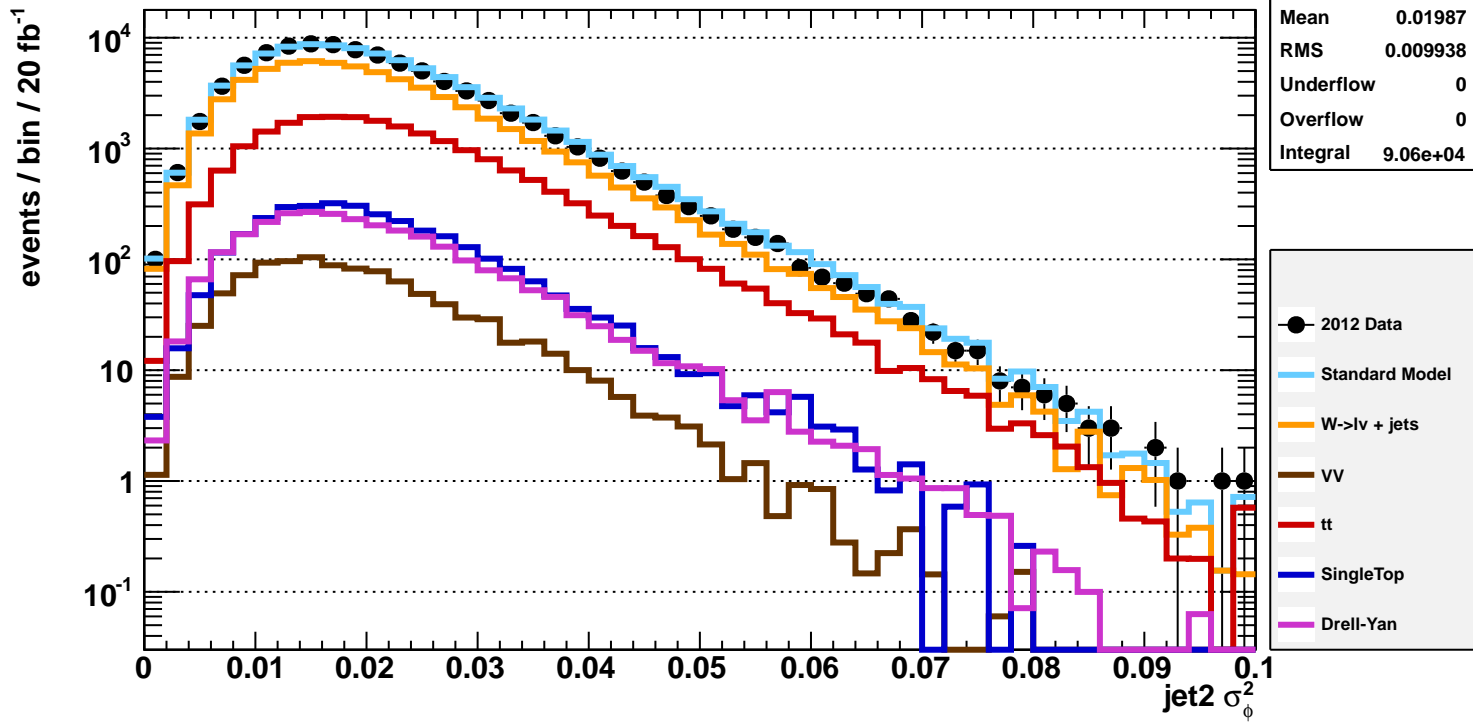


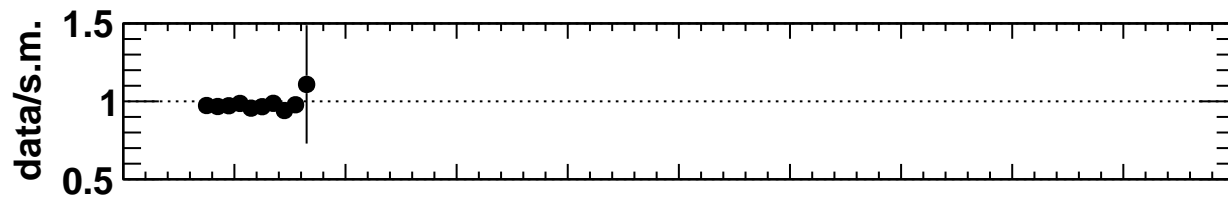
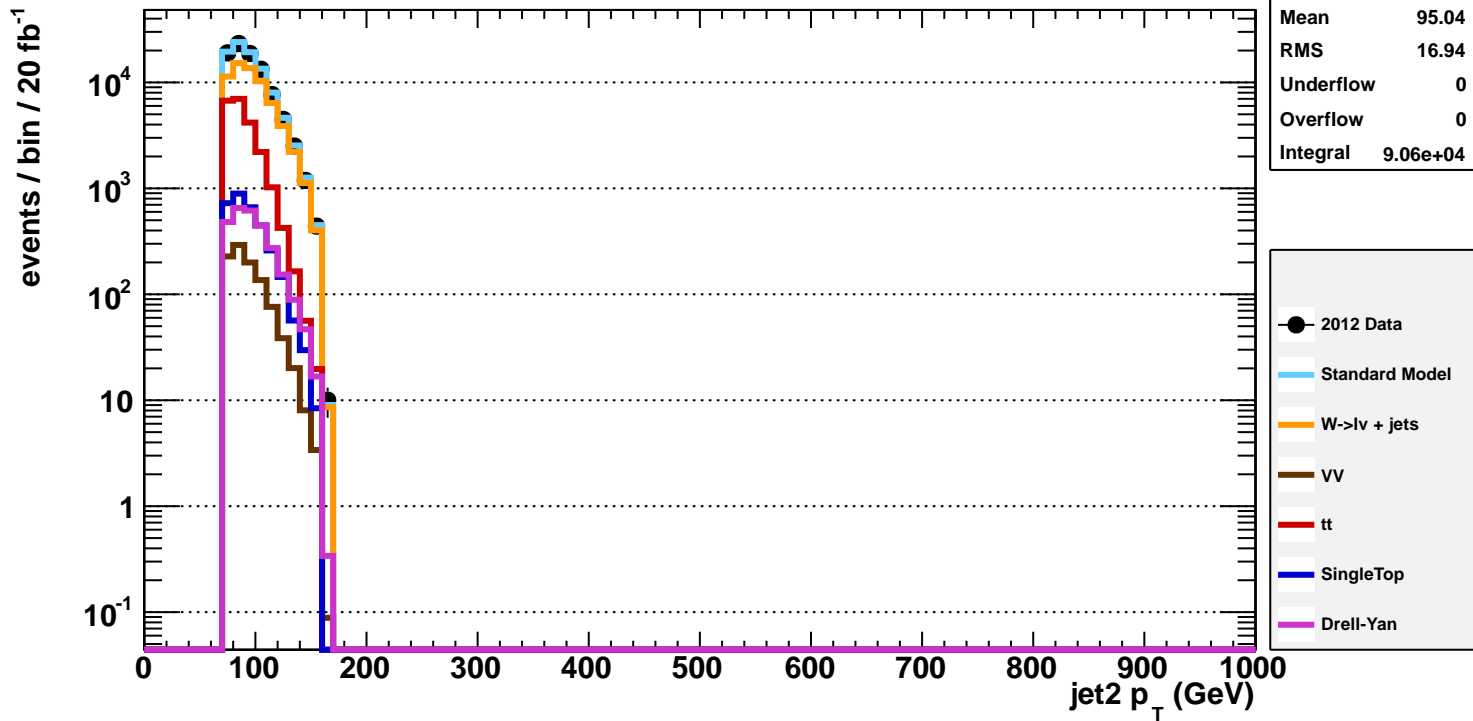






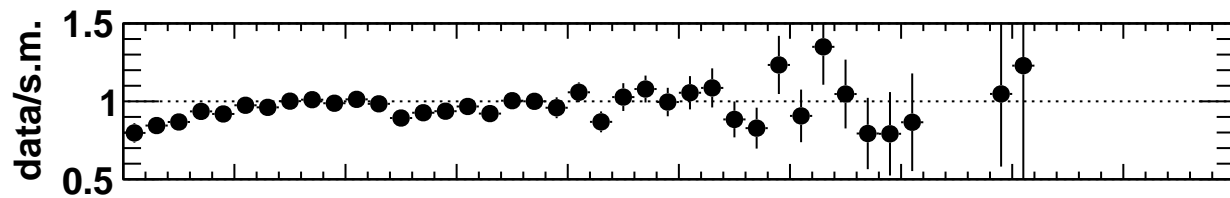
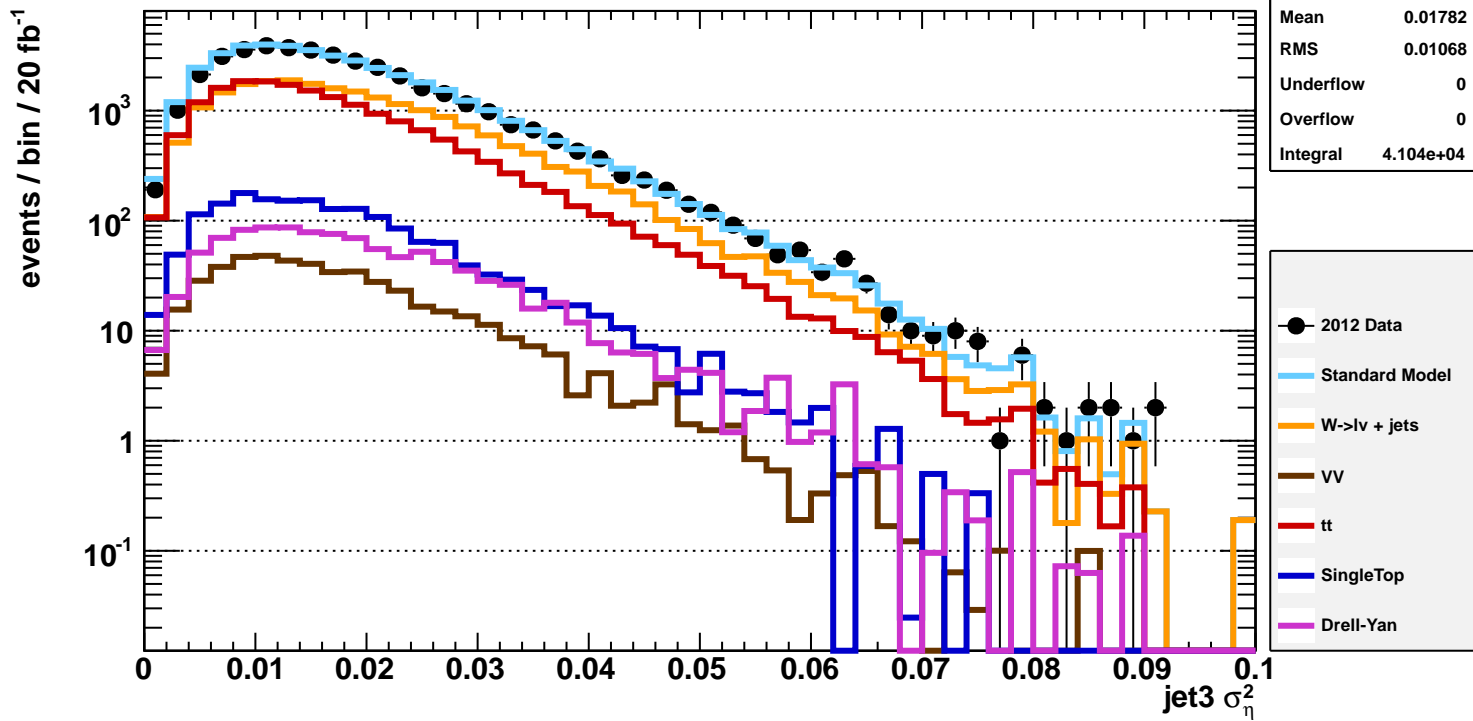


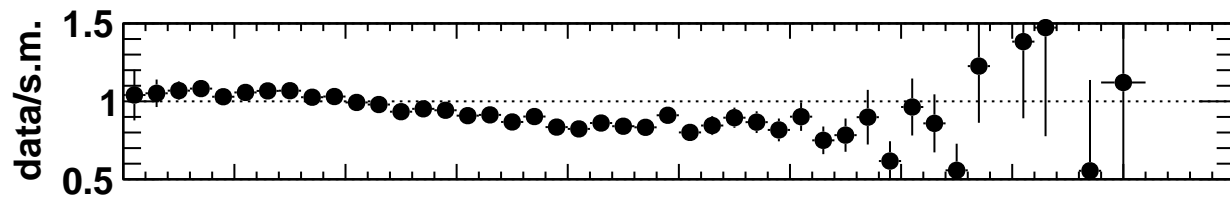
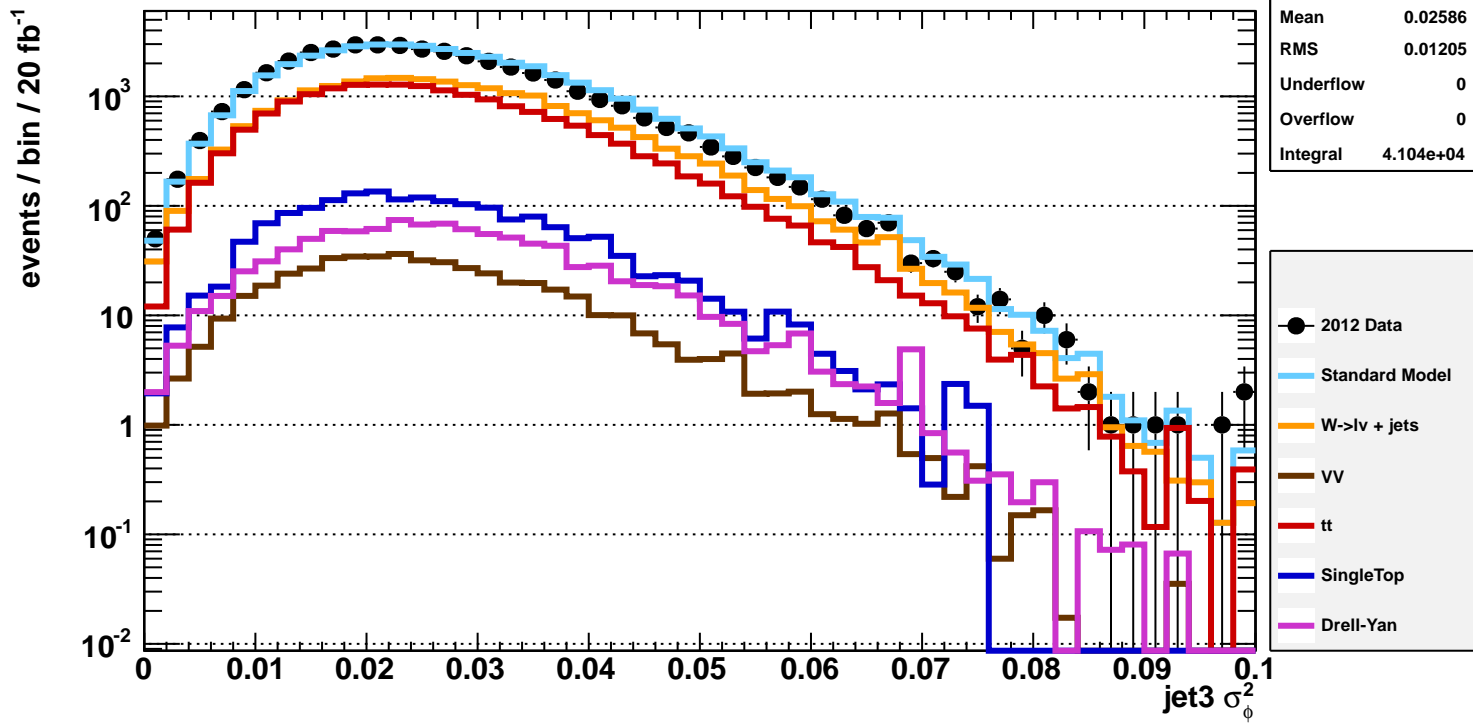


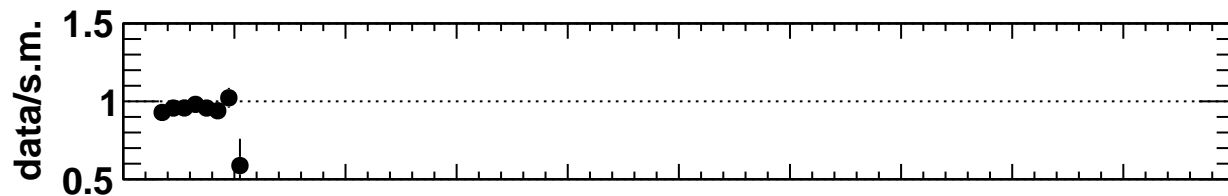
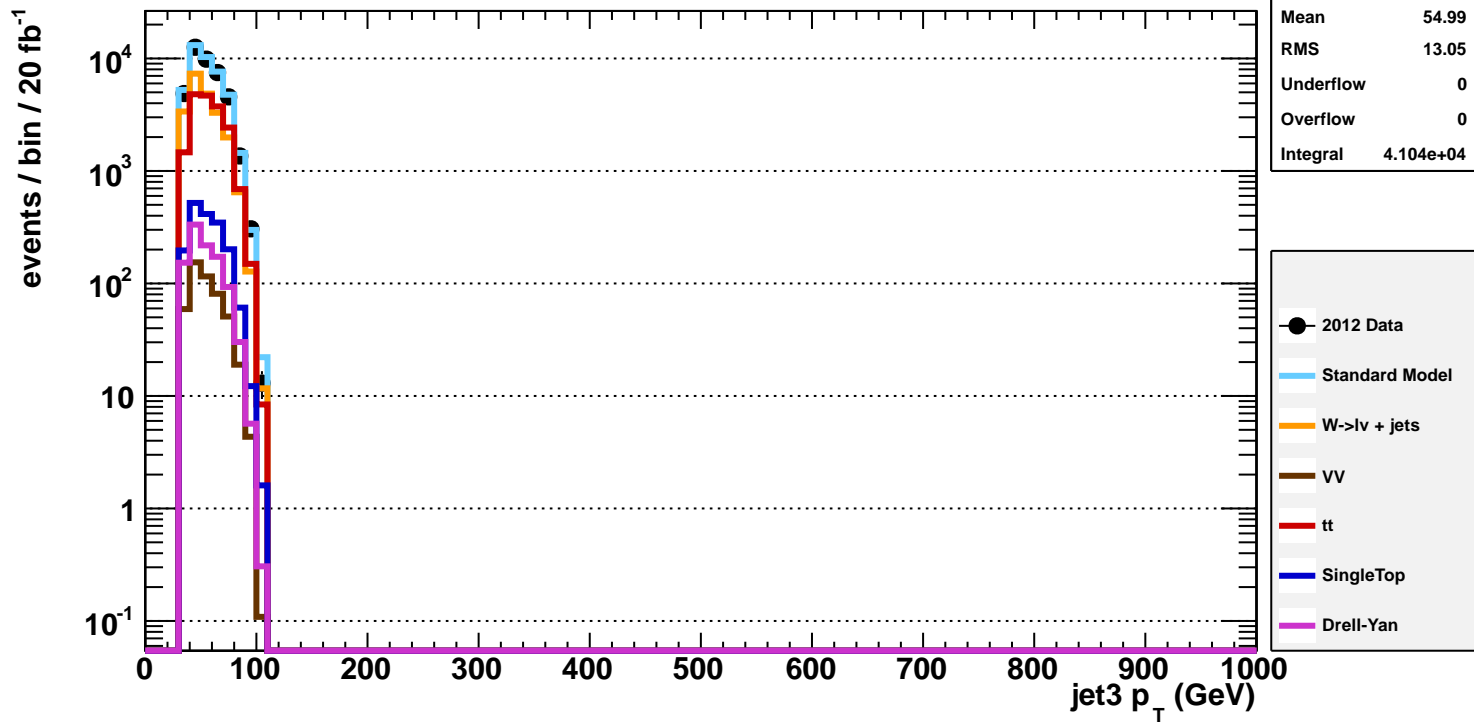


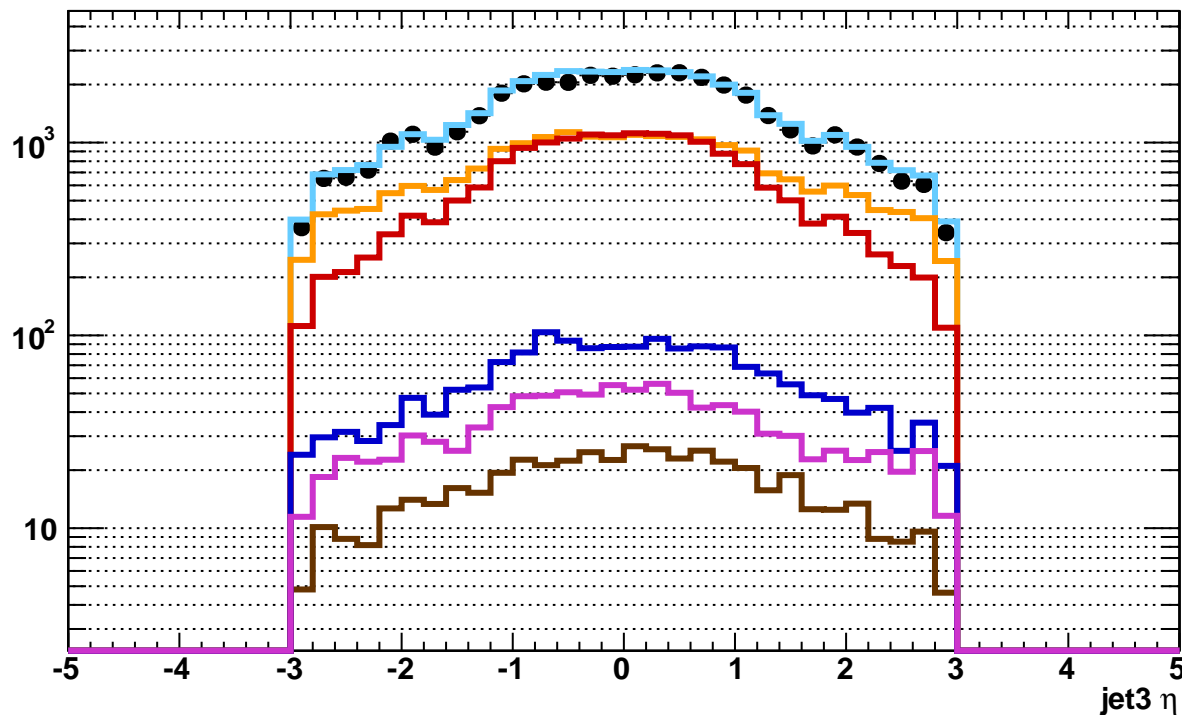




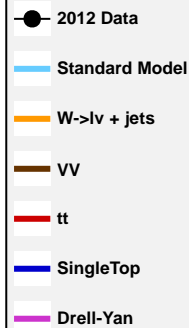




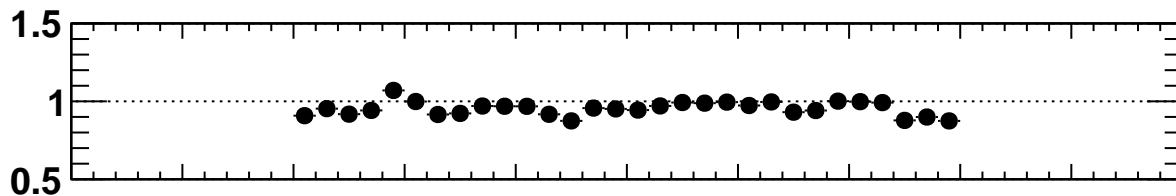


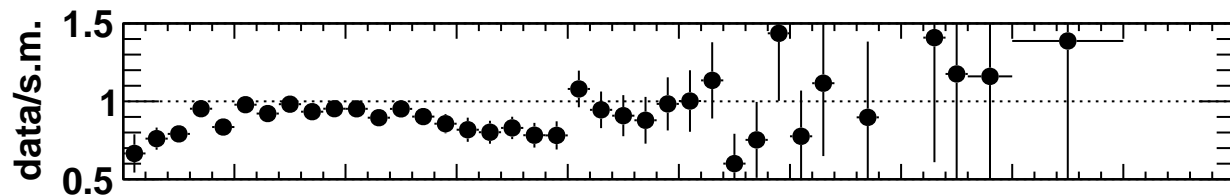
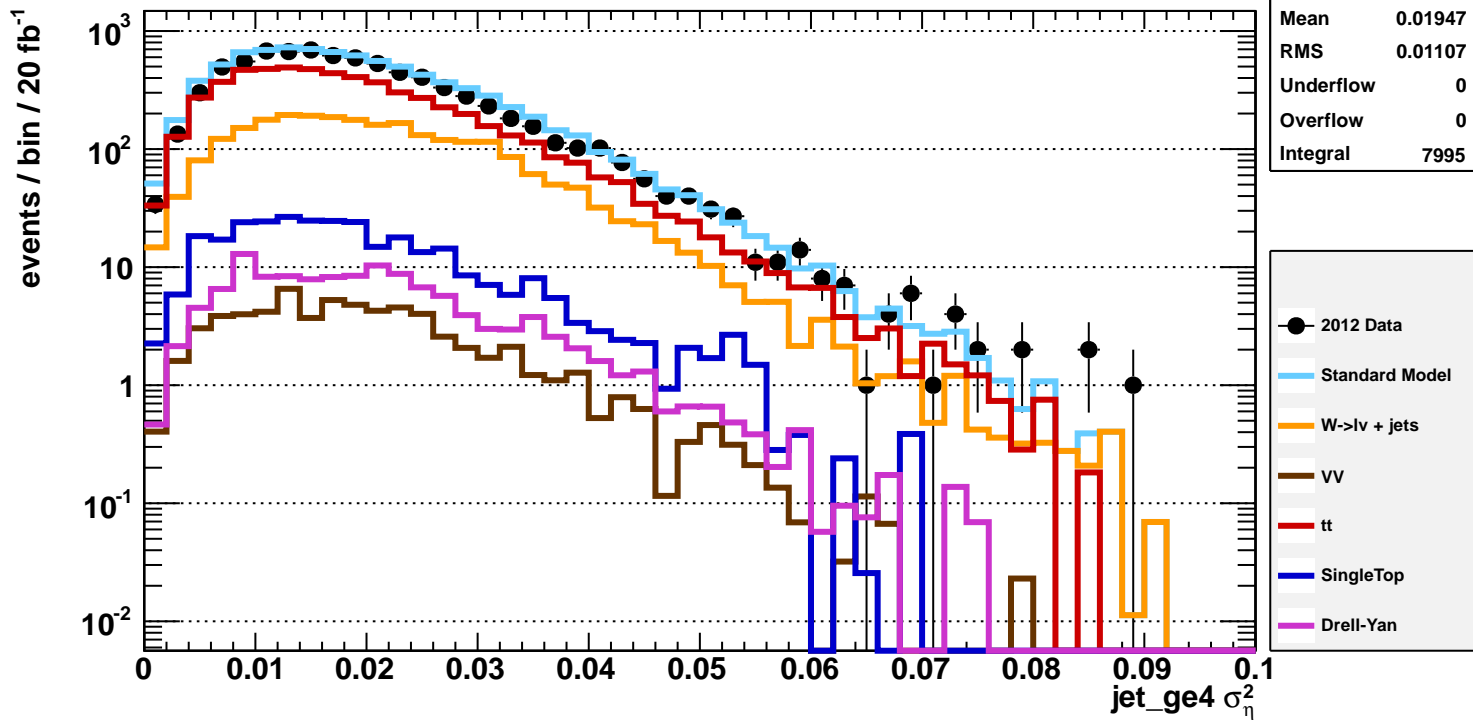
events / bin / 20 fb<sup>-1</sup>**xcak5JetPat3eta**

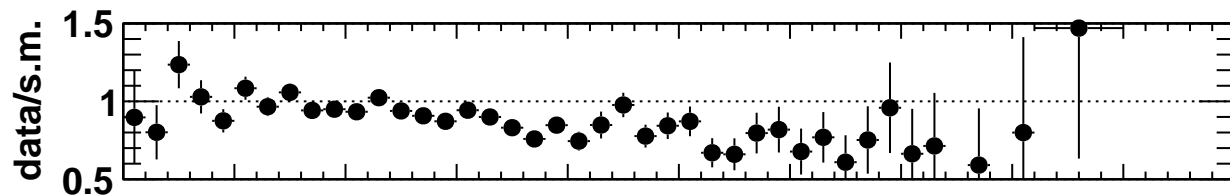
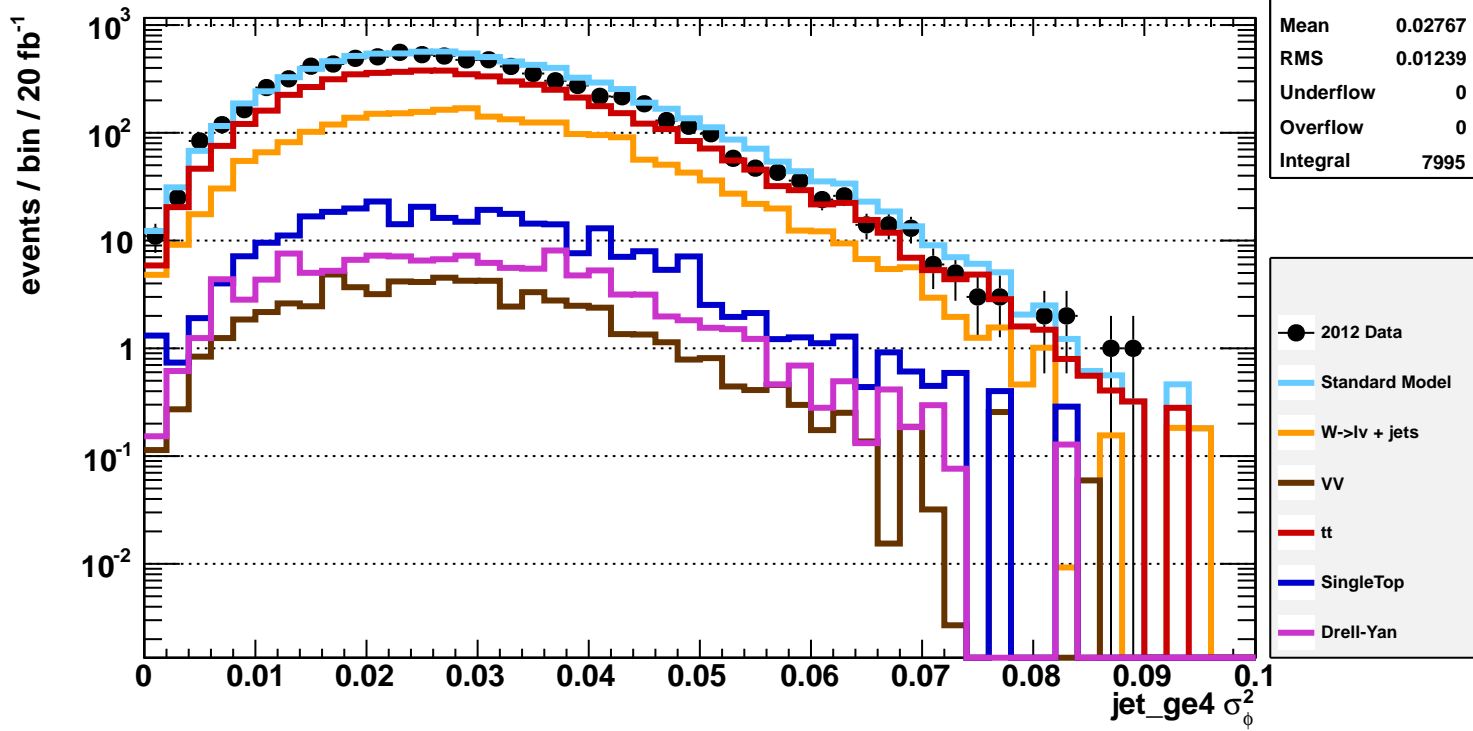
Entries	41040
Mean	-0.0009388
RMS	1.344
Underflow	0
Overflow	0
Integral	4.104e+04

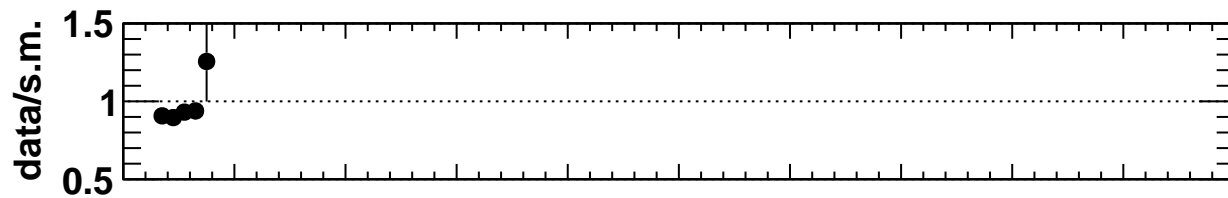
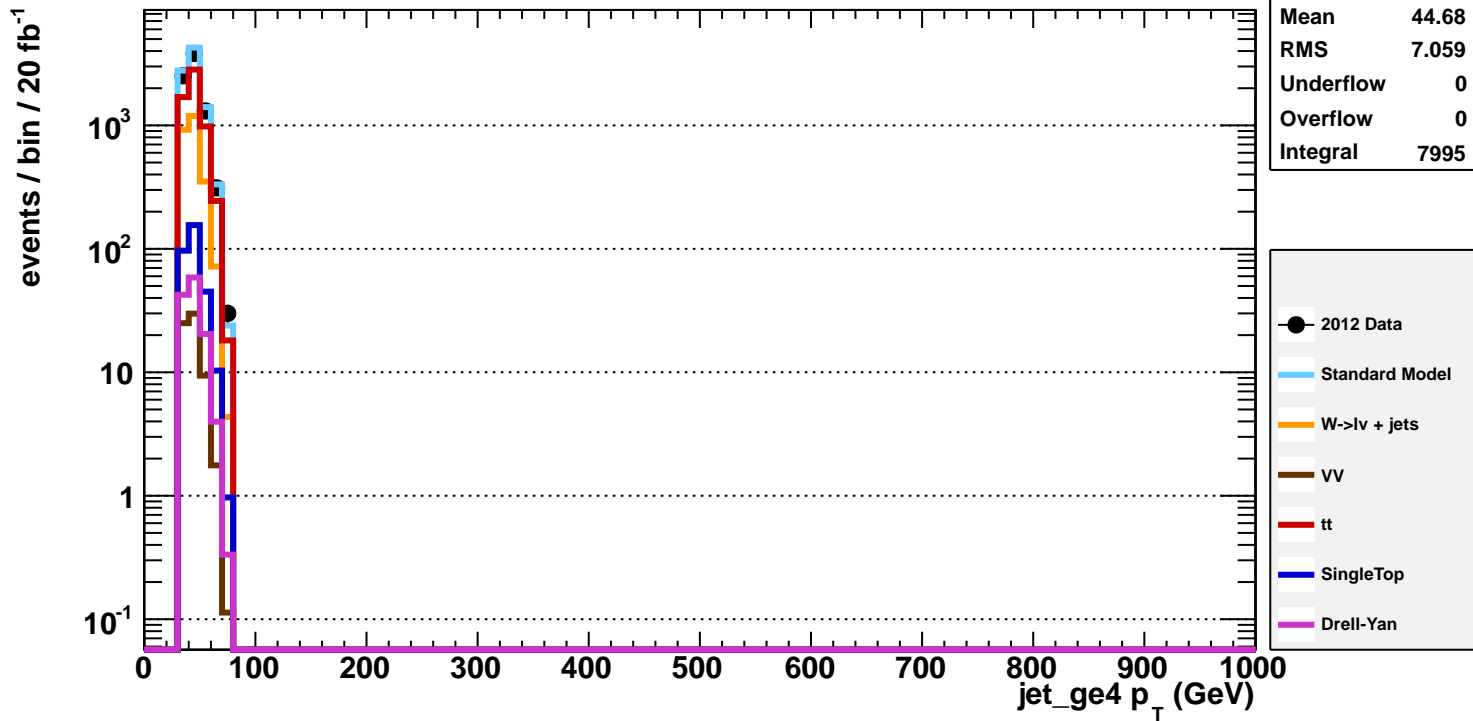


data/s.m.

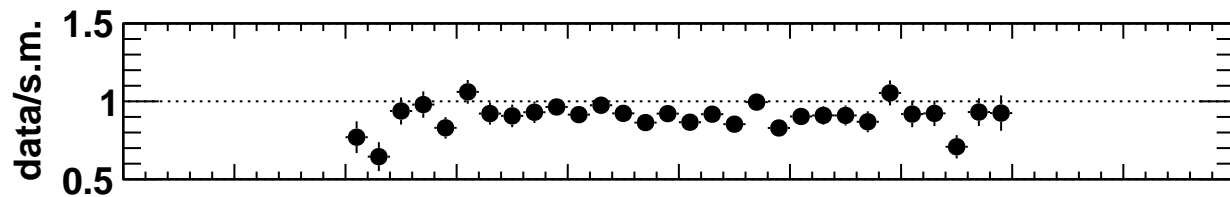
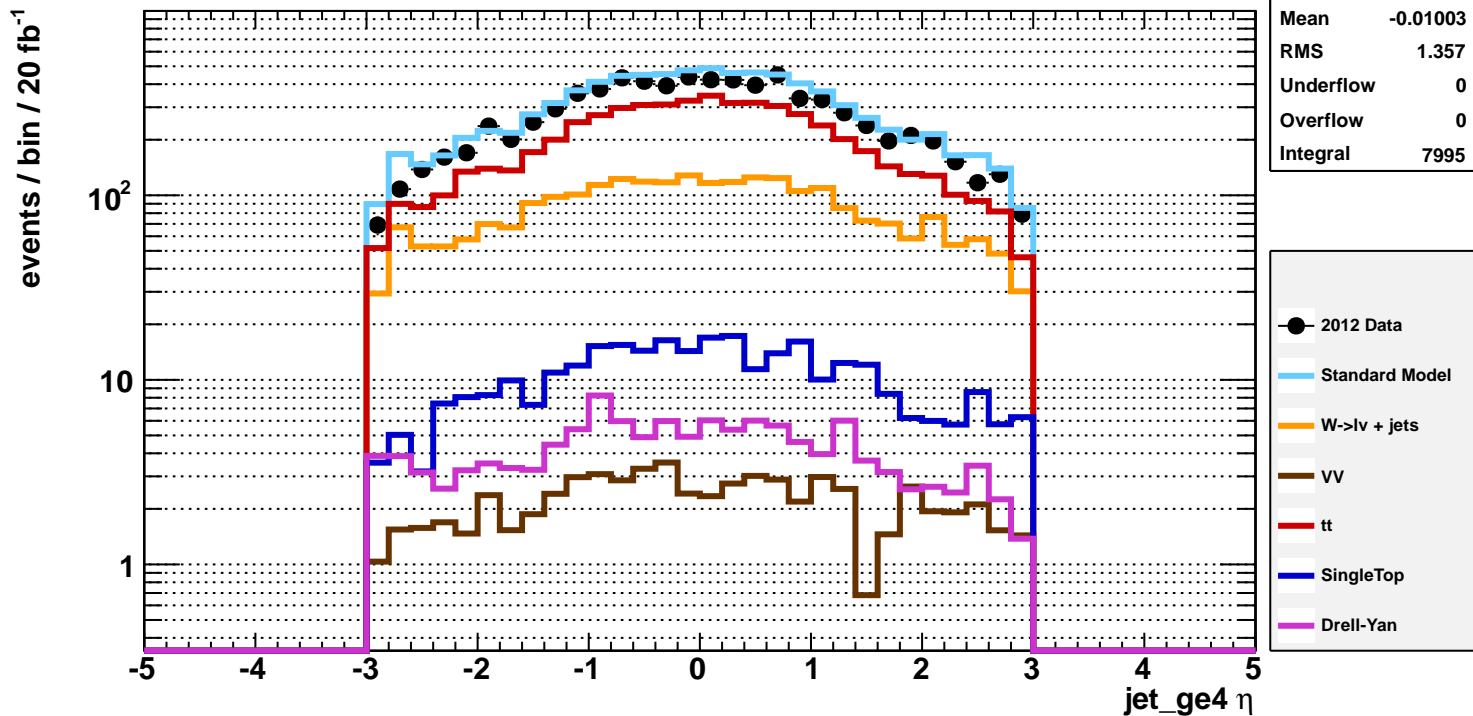


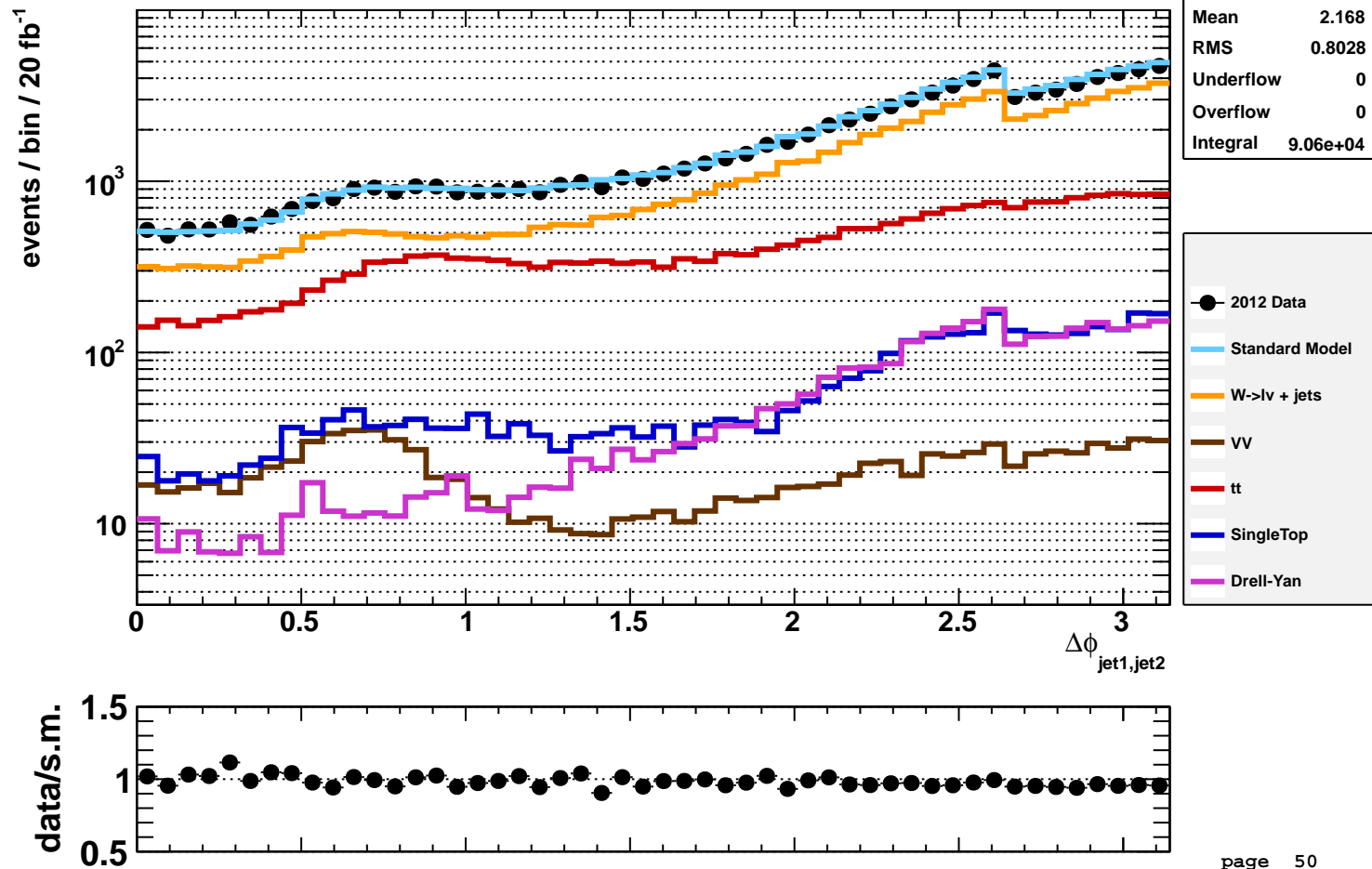


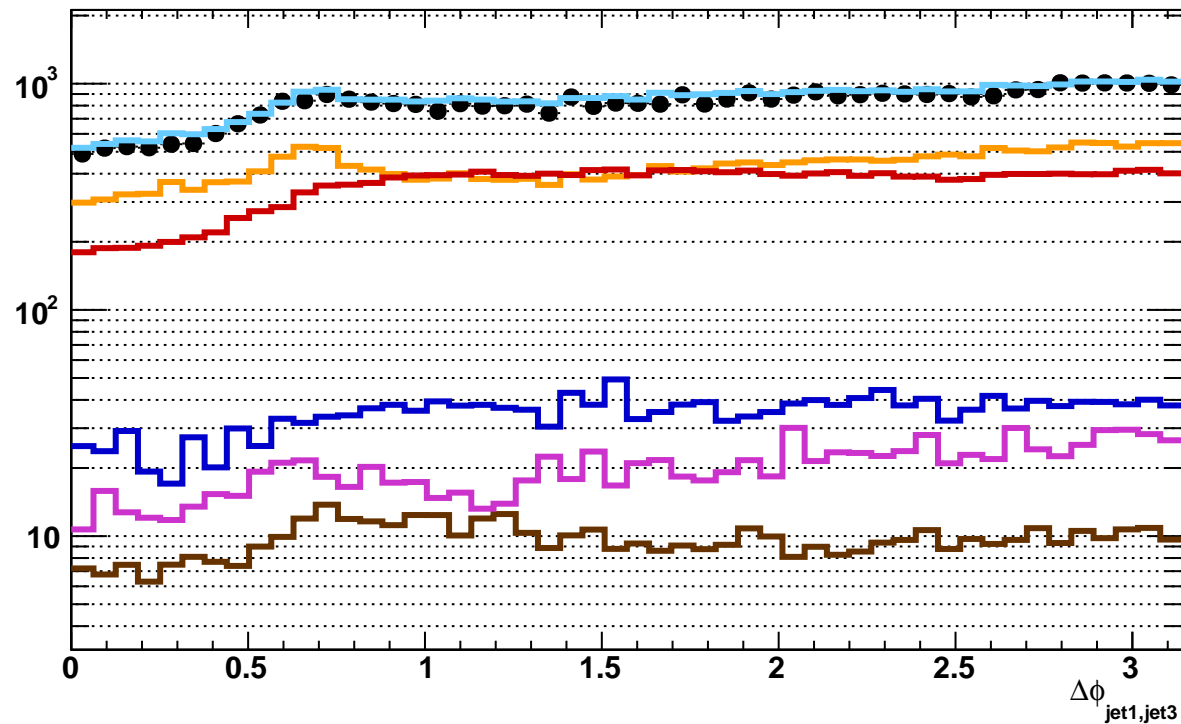




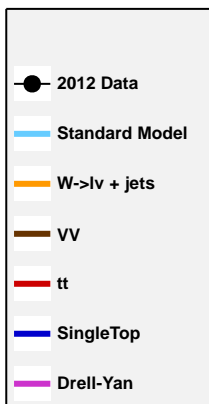




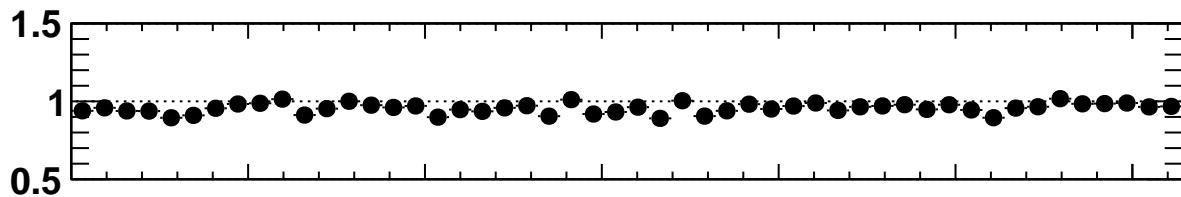


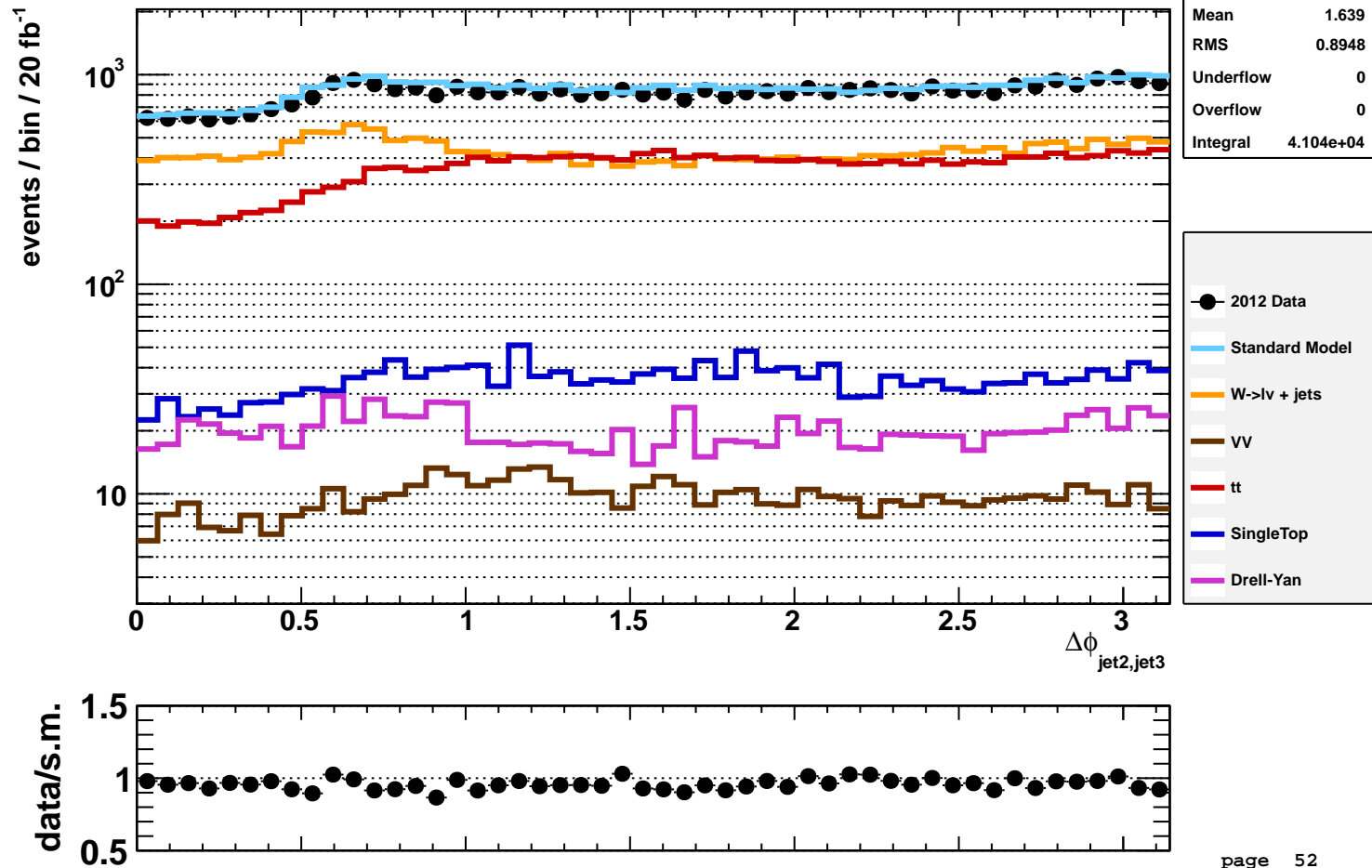
events / bin / 20 fb<sup>-1</sup>

xcak5JetPatdphi13	
Entries	41040
Mean	1.701
RMS	0.8824
Underflow	0
Overflow	0
Integral	4.104e+04



data/s.m.





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t:  value                                xcak5JetSumEtPat<=325.00
u:  multiplicity                        2 <= xcak5JetIndicesPat
v:  multiplicity                        0 <= xcak5JetIndicesOtherPat <= 0
w:  multiplicity                        0 <= xcak5JetIndicesWithOddMuonPat <= 0
x:  uniquelyMatchedNonisoMuons         xcak5JetPat
y:  multiplicity                        0 <= electronIndicesPat <= 0

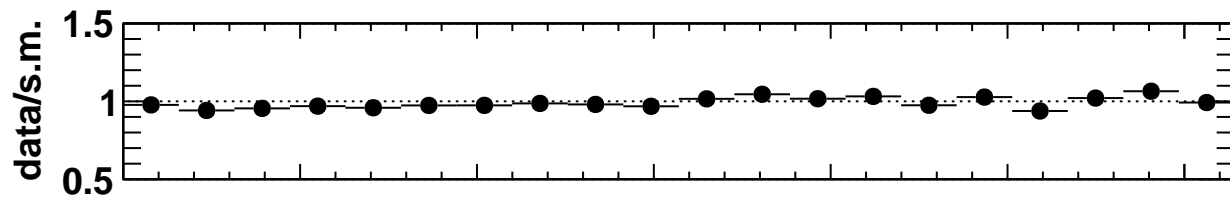
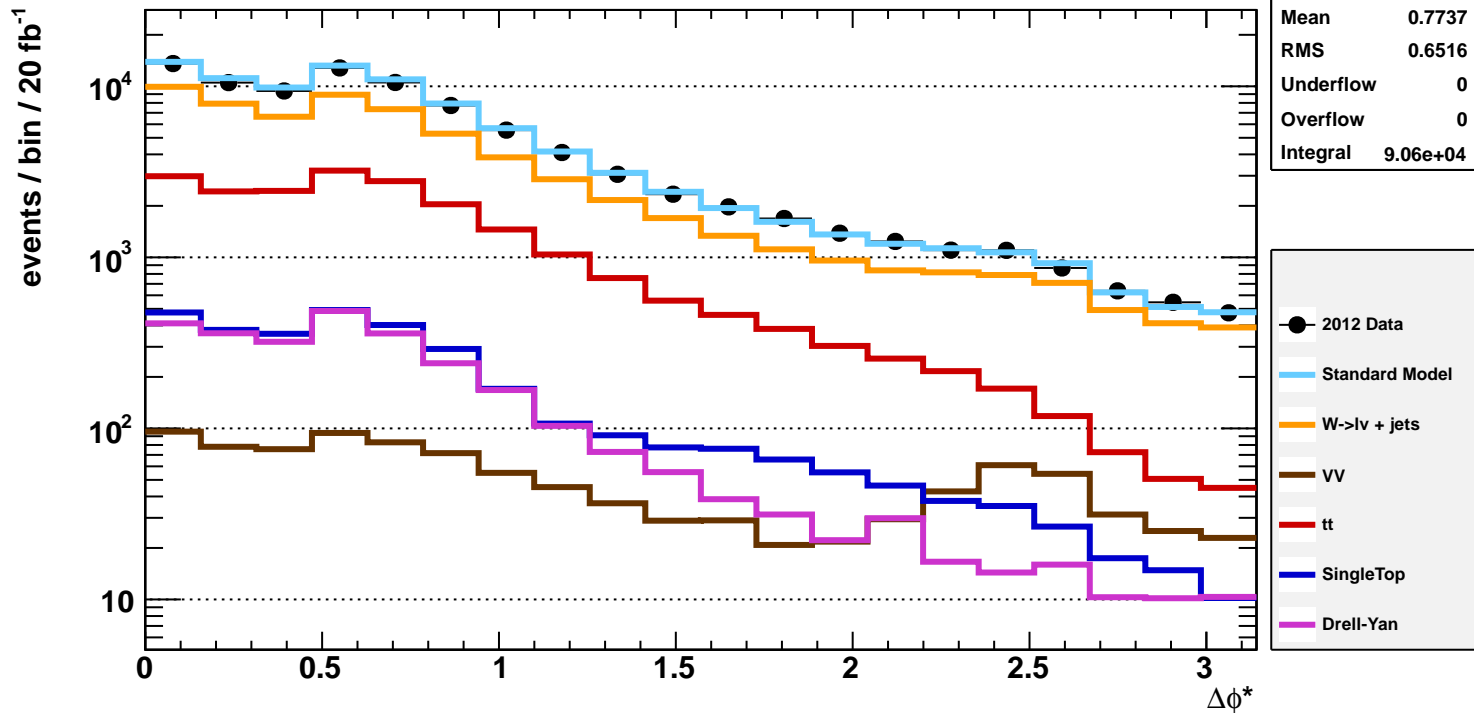
z:  multiplicity                        0 <= photonIndicesPat <= 0
A:  multiplicity                        0 <= electronIndicesUnmatchedPat <= 0
B:  multiplicity                        0 <= photonIndicesUnmatchedPat <= 0
C:  deadEcalFilter                      xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D:  multiplicity                        1 <= muonIndicesPat <= 1

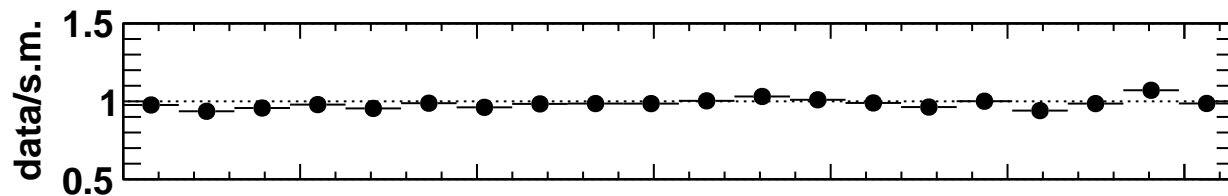
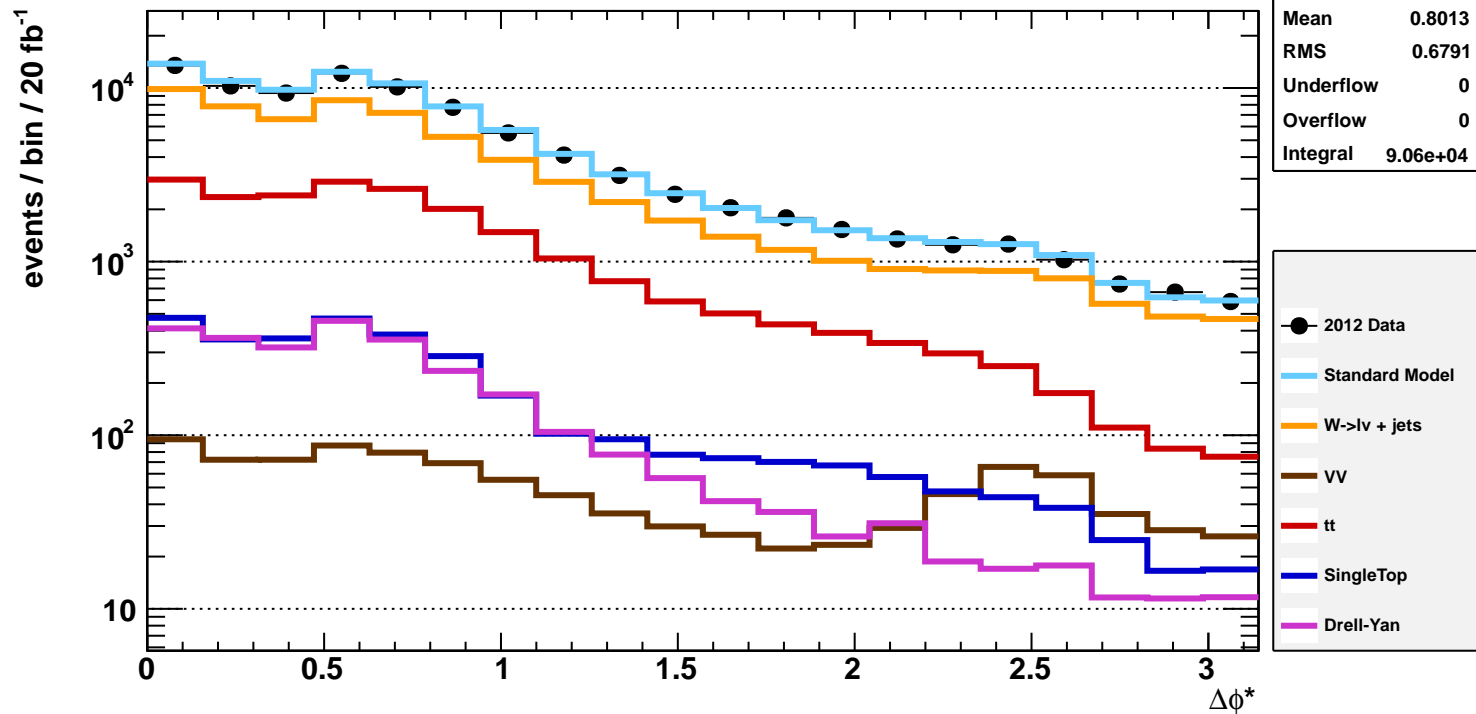
E:  pt                                 30.00<=muonP4Pat[i[0]].pt; muonIndicesPat
F:  eta                                -2.10<=muonP4Pat[i[0]].eta<=2.10; muonIndicesPat
G:  value                              30.00<=muonMtPatmetP4TypeIPF<=125.00
H:  value                              xcak5JetMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPat<=1.25
I:  value                              CaloRecHitSumPt<=30.00

J:  value                              0.10<=xcak5JetMaxEmEnergyFractionPat
[ jetSumPlots1 ]

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
t:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
u:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
v:	359231	1.996(1)e+6	1.035(1)e+6	6.663(8)e+4	5.888(4)e+5	1.785(3)e+5	1.266(3)e+5	0.1800(3)
w:	351218	1.983(1)e+6	1.032(1)e+6	6.650(8)e+4	5.811(4)e+5	1.772(2)e+5	1.259(3)e+5	0.1771(3)
x:	344418	1.971(1)e+6	1.027(1)e+6	6.641(8)e+4	5.755(3)e+5	1.763(2)e+5	1.249(3)e+5	0.1748(3)
y:	338715	1.569(1)e+6	7.82(1)e+5	6.283(8)e+4	4.768(3)e+5	1.630(2)e+5	8.42(3)e+4	0.2159(4)
z:	337589	1.549(1)e+6	7.68(1)e+5	6.252(8)e+4	4.740(3)e+5	1.625(2)e+5	8.22(3)e+4	0.2180(4)
A:	337320	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
B:	337302	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
C:	212357	8.122(8)e+5	4.428(7)e+5	2.576(5)e+4	2.320(2)e+5	6.83(2)e+4	4.34(2)e+4	0.2614(6)
D:	184117	2.402(3)e+5	1.606(2)e+5	2.30(2)e+3	5.85(1)e+4	8.53(6)e+3	1.022(7)e+4	0.767(2)
E:	162789	1.784(2)e+5	1.197(2)e+5	1.87(1)e+3	4.363(9)e+4	6.00(5)e+3	7.20(5)e+3	0.913(3)
F:	162768	1.653(2)e+5	1.093(2)e+5	1.74(1)e+3	4.221(9)e+4	5.83(5)e+3	6.22(5)e+3	0.985(3)
G:	122374	1.271(2)e+5	8.52(2)e+4	1.28(1)e+3	3.234(8)e+4	4.52(4)e+3	3.80(4)e+3	0.962(3)
H:	91256	9.38(2)e+4	6.48(1)e+4	1.01(1)e+3	2.191(7)e+4	3.24(4)e+3	2.79(3)e+3	0.973(4)
I:	90611	9.33(2)e+4	6.45(1)e+4	1.00(1)e+3	2.179(7)e+4	3.23(4)e+3	2.78(3)e+3	0.971(4)
J:	90605	-	-	-	-	-	-	-
[ jetSumPlots1 ]								





```

u: multiplicity                2 <= xcak5JetIndicesPat
v: multiplicity                0 <= xcak5JetIndicesOtherPat <= 0
w: multiplicity                0 <= xcak5JetIndicesWithOddMuonPat <= 0
x: uniquelyMatchedNonisoMuons xcak5JetPat
y: multiplicity                0 <= electronIndicesPat <= 0

z: multiplicity                0 <= photonIndicesPat <= 0
A: multiplicity                0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity                0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter              xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: multiplicity                1 <= muonIndicesPat <= 1

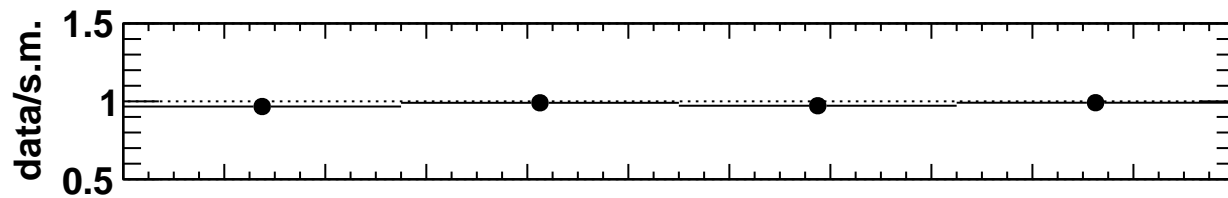
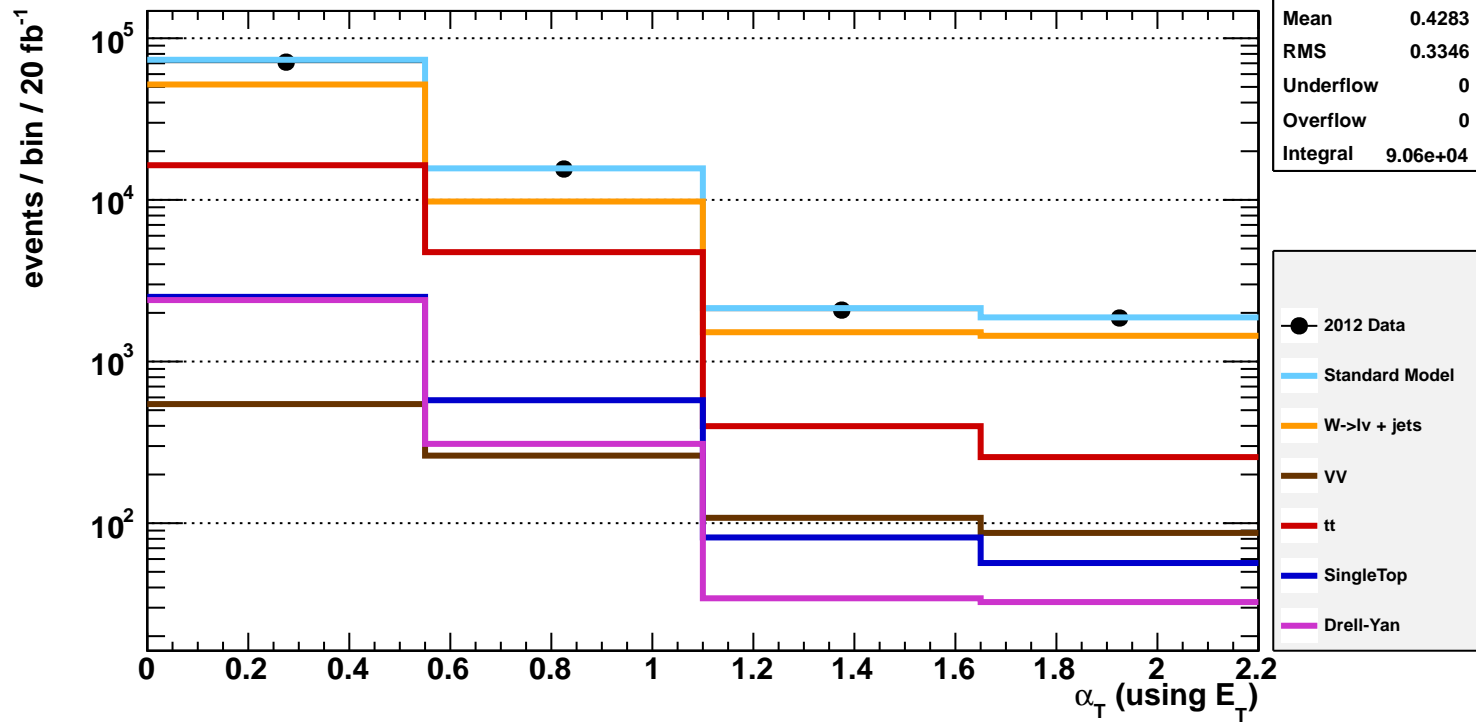
E: pt                          30.00<=muonP4Pat[i[0]].pt; muonIndicesPat
F: eta                         -2.10<=muonP4Pat[i[0]].eta<=2.10; muonIndicesPat
G: value                       30.00<=muonMtPatmetP4TypeIPF<=125.00
H: value                       xcak5JetMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPat<=1.25
I: value                       CaloRecHitSumPt<=30.00

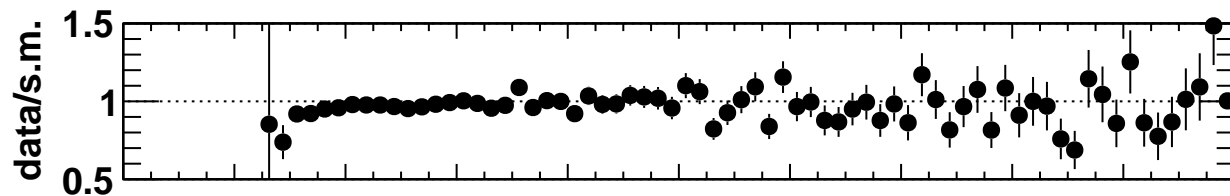
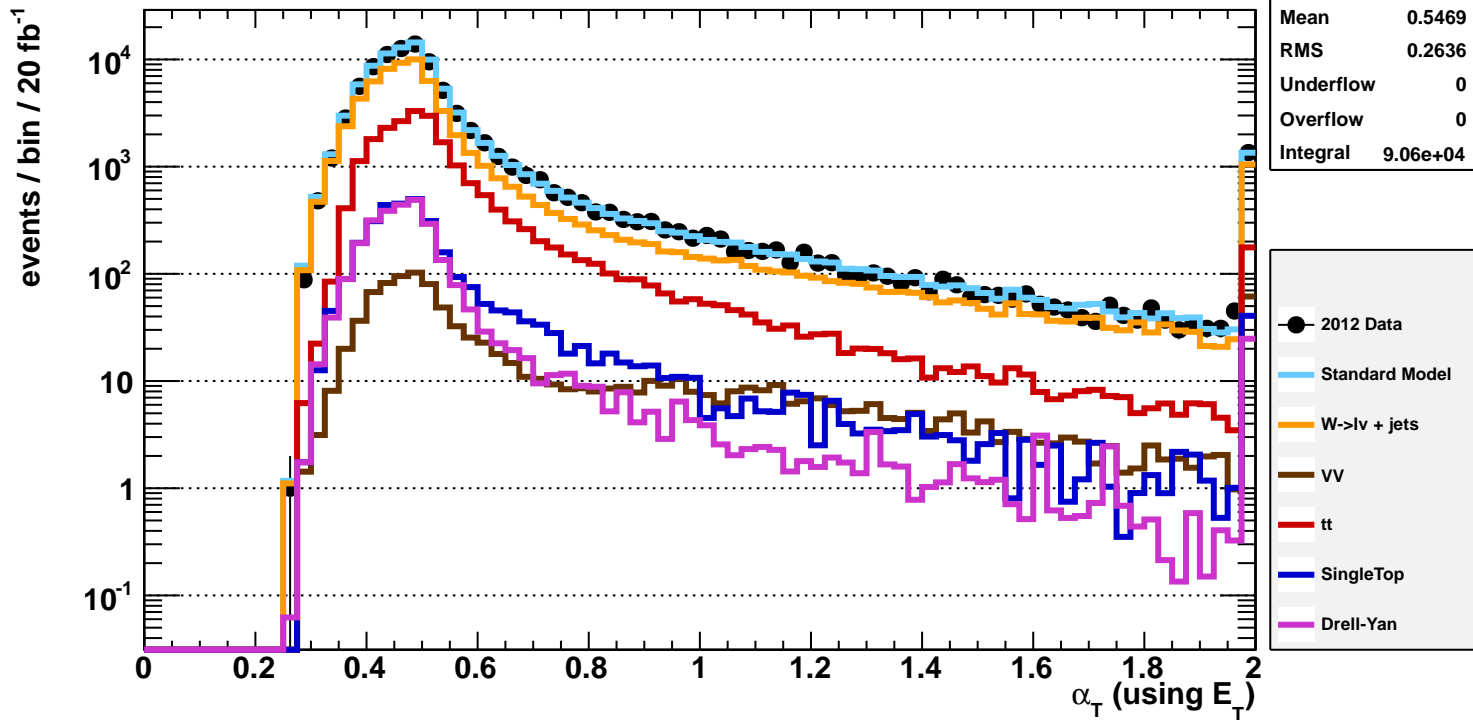
J: value                       0.10<=xcak5JetMaxEmEnergyFractionPat
[ jetSumPlots1 ]
[ kinematicPlots1 ]

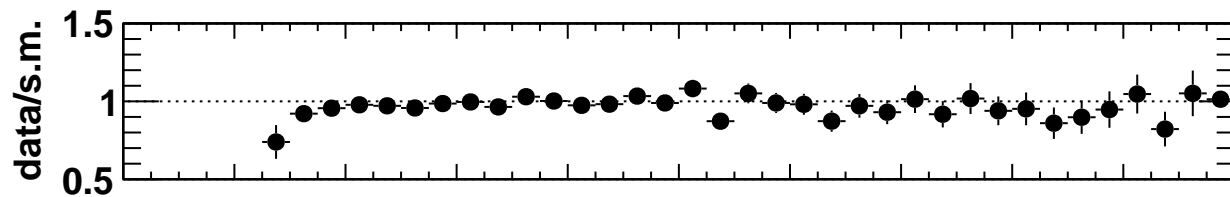
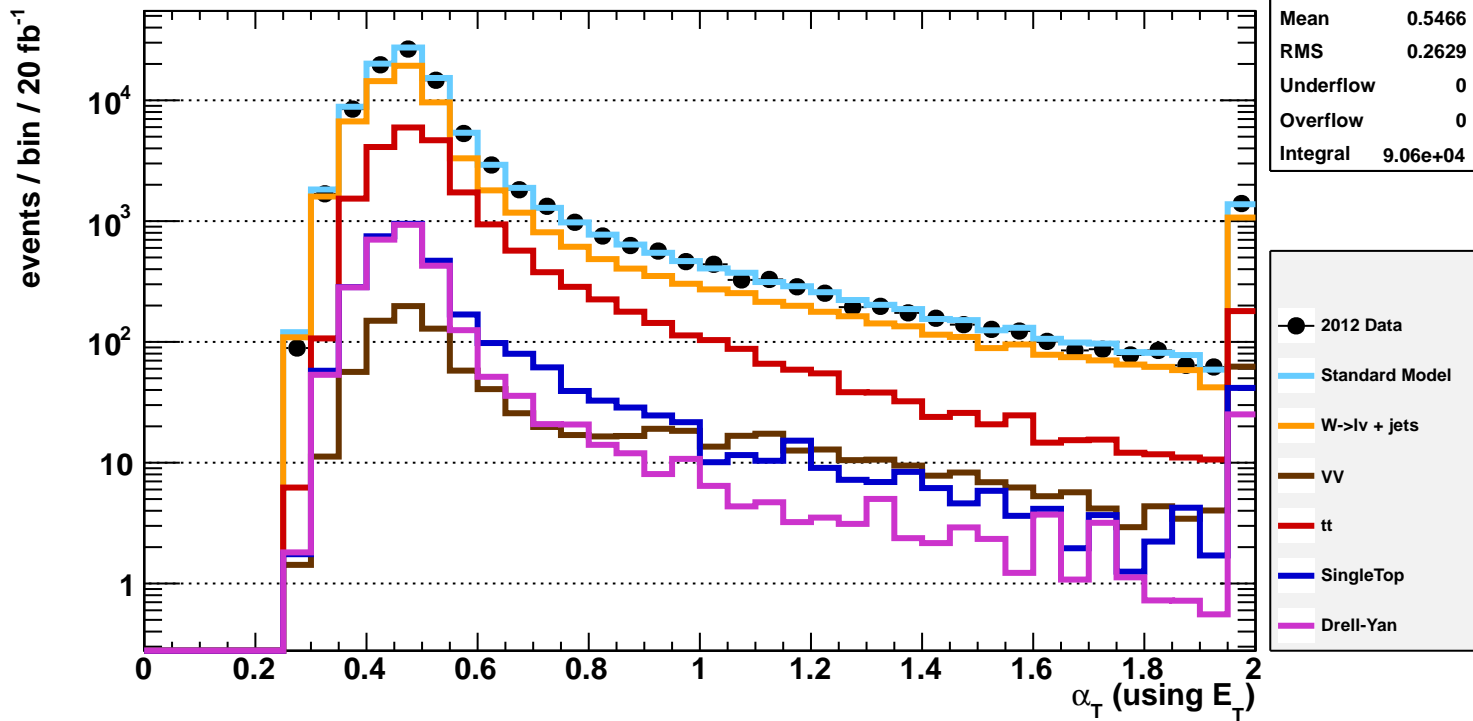
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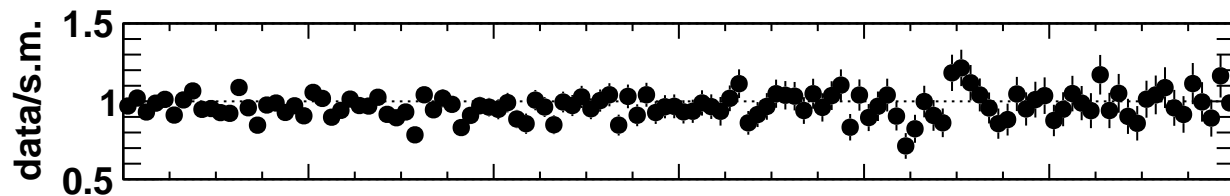
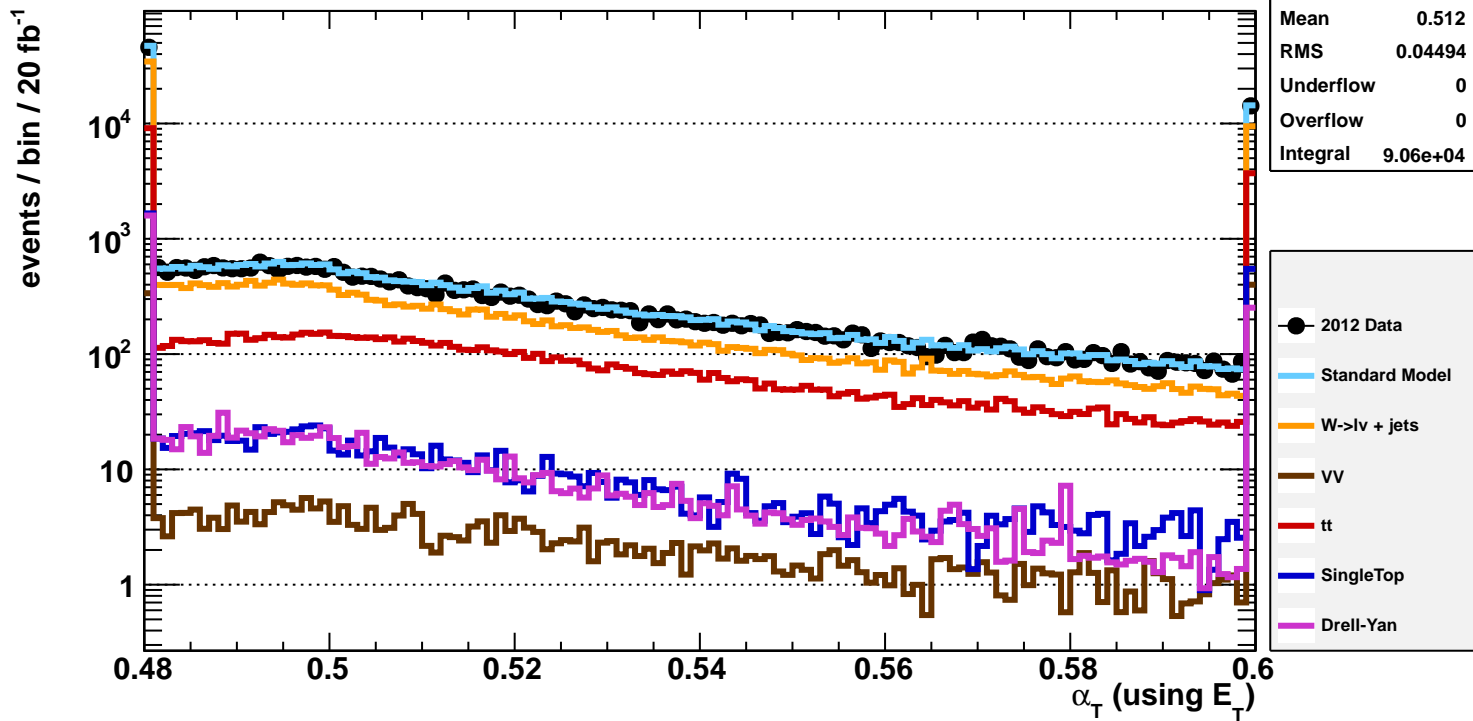
	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
u:	371364	2.101(1)e+6	1.079(1)e+6	6.964(8)e+4	6.271(4)e+5	1.908(3)e+5	1.347(3)e+5	0.1767(3)
v:	359231	1.996(1)e+6	1.035(1)e+6	6.663(8)e+4	5.888(4)e+5	1.785(3)e+5	1.266(3)e+5	0.1800(3)
w:	351218	1.983(1)e+6	1.032(1)e+6	6.650(8)e+4	5.811(4)e+5	1.772(2)e+5	1.259(3)e+5	0.1771(3)
x:	344418	1.971(1)e+6	1.027(1)e+6	6.641(8)e+4	5.755(3)e+5	1.763(2)e+5	1.249(3)e+5	0.1748(3)
y:	338715	1.569(1)e+6	7.82(1)e+5	6.283(8)e+4	4.768(3)e+5	1.630(2)e+5	8.42(3)e+4	0.2159(4)
z:	337589	1.549(1)e+6	7.68(1)e+5	6.252(8)e+4	4.740(3)e+5	1.625(2)e+5	8.22(3)e+4	0.2180(4)
A:	337320	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
B:	337302	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
C:	212357	8.122(8)e+5	4.428(7)e+5	2.576(5)e+4	2.320(2)e+5	6.83(2)e+4	4.34(2)e+4	0.2614(6)
D:	184117	2.402(3)e+5	1.606(2)e+5	2.30(2)e+3	5.85(1)e+4	8.53(6)e+3	1.022(7)e+4	0.767(2)
E:	162789	1.784(2)e+5	1.197(2)e+5	1.87(1)e+3	4.363(9)e+4	6.00(5)e+3	7.20(5)e+3	0.913(3)
F:	162768	1.653(2)e+5	1.093(2)e+5	1.74(1)e+3	4.221(9)e+4	5.83(5)e+3	6.22(5)e+3	0.985(3)
G:	122374	1.271(2)e+5	8.52(2)e+4	1.28(1)e+3	3.234(8)e+4	4.52(4)e+3	3.80(4)e+3	0.962(3)
H:	91256	9.38(2)e+4	6.48(1)e+4	1.01(1)e+3	2.191(7)e+4	3.24(4)e+3	2.79(3)e+3	0.973(4)
I:	90611	9.33(2)e+4	6.45(1)e+4	1.00(1)e+3	2.179(7)e+4	3.23(4)e+3	2.78(3)e+3	0.971(4)
J:	90605	-	-	-	-	-	-	
[ jetSumPlots1 ]								
[ kinematicPlots1 ]								

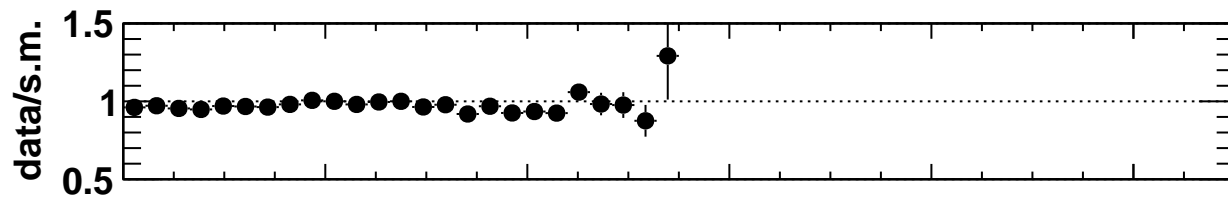
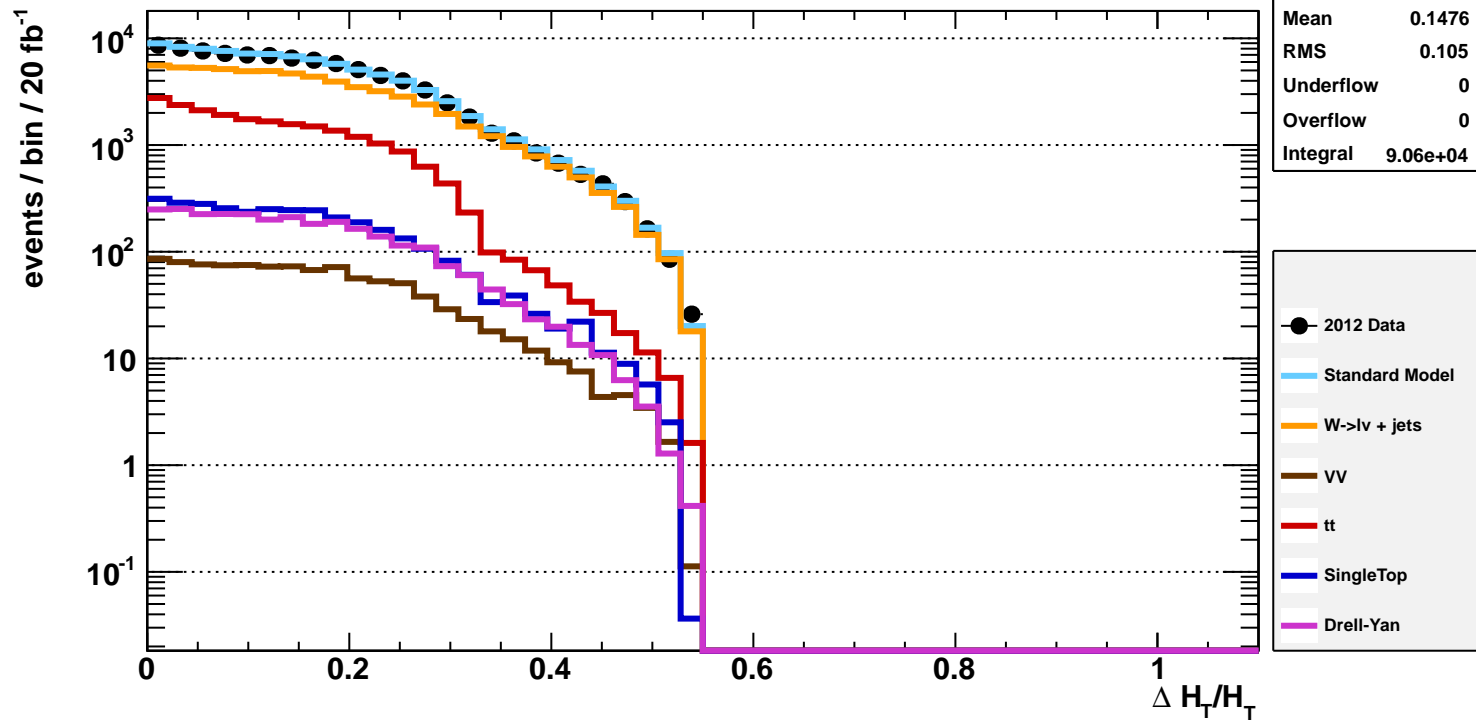


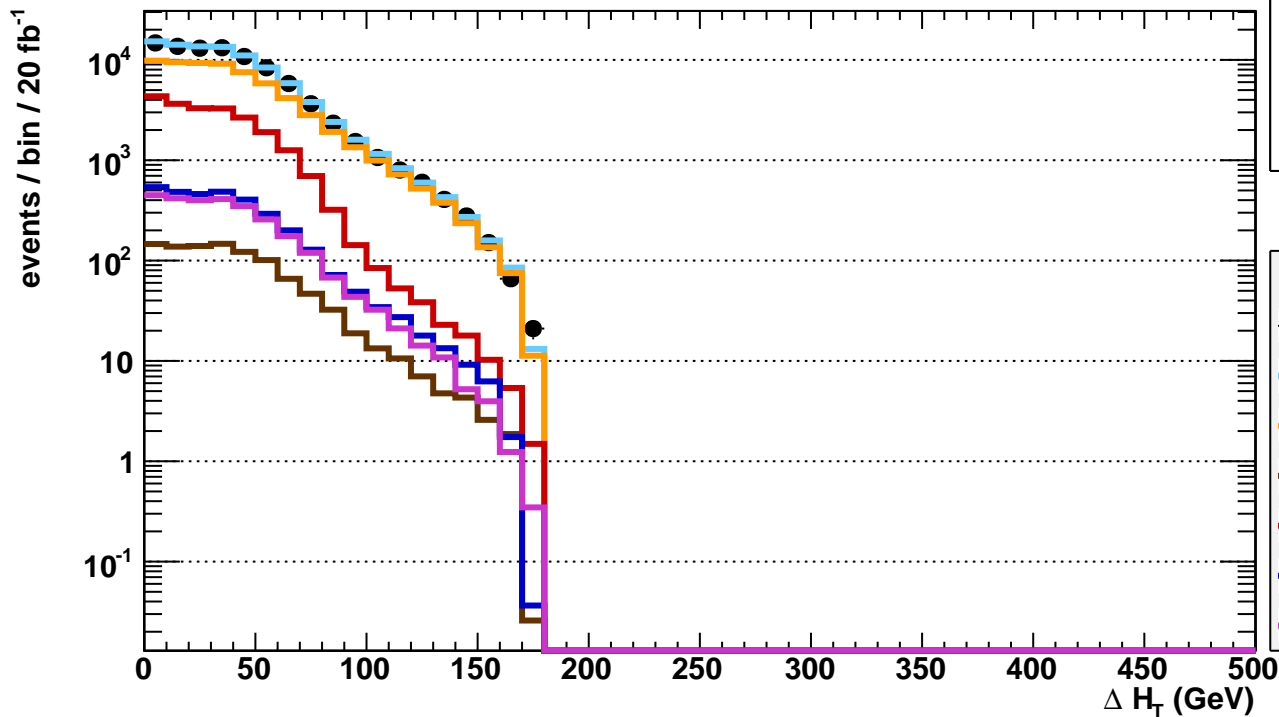




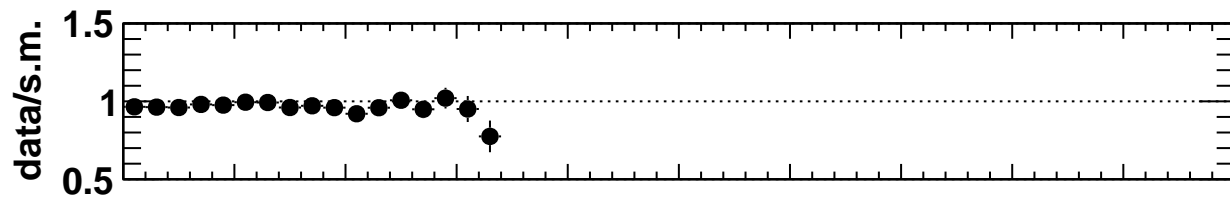
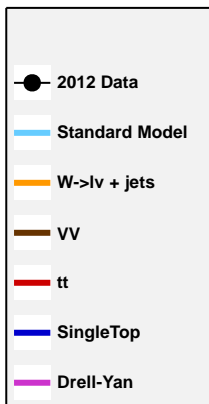


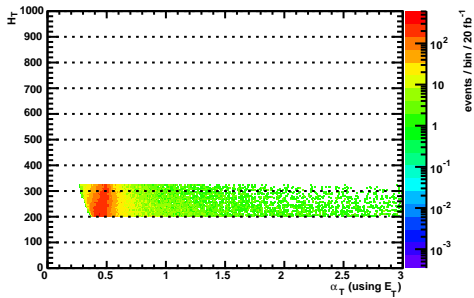
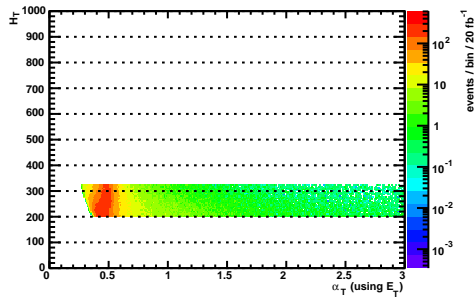
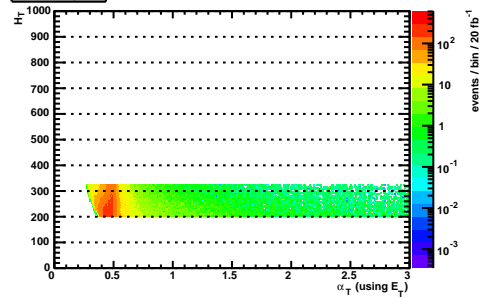
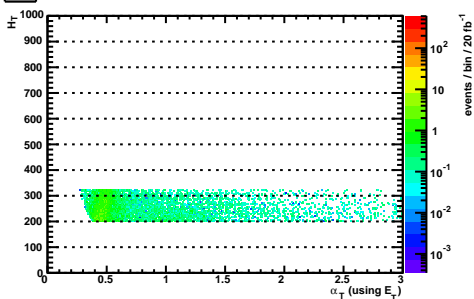
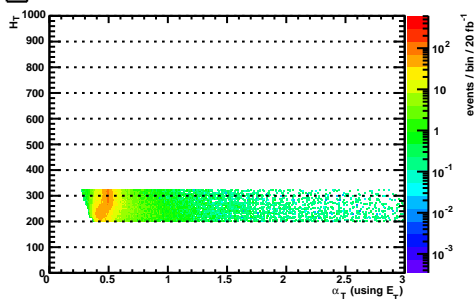
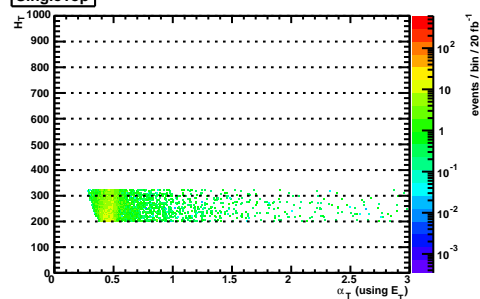
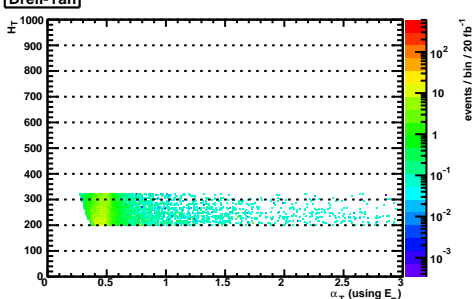


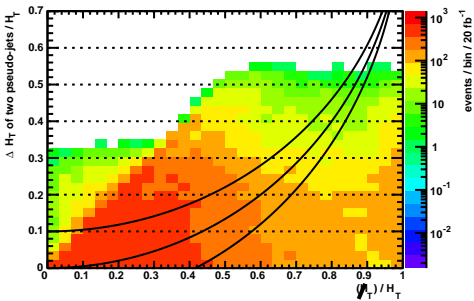
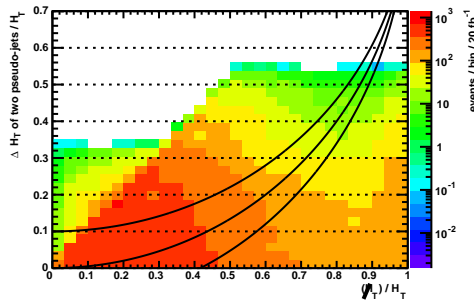
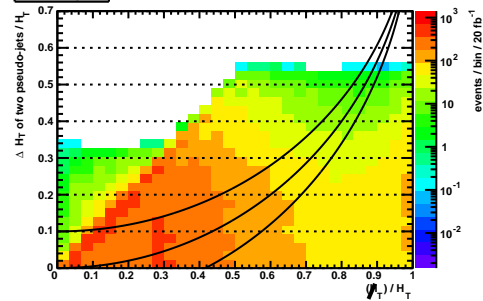
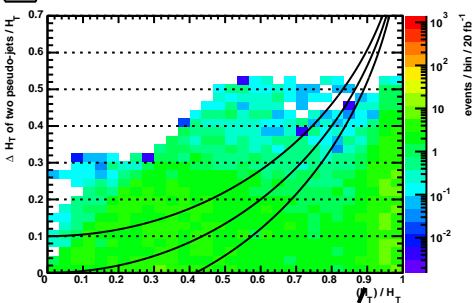
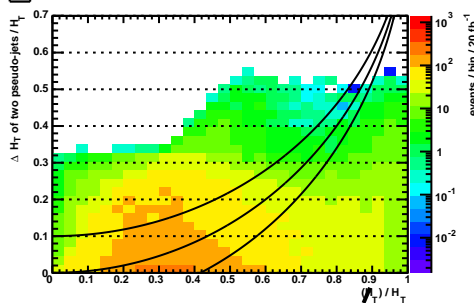
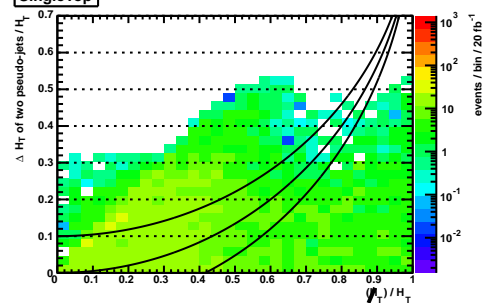
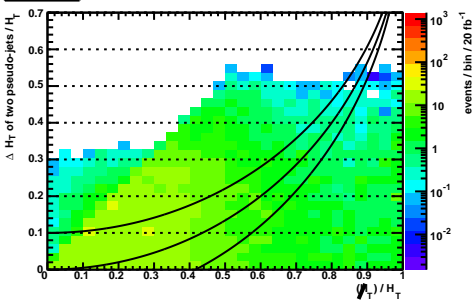




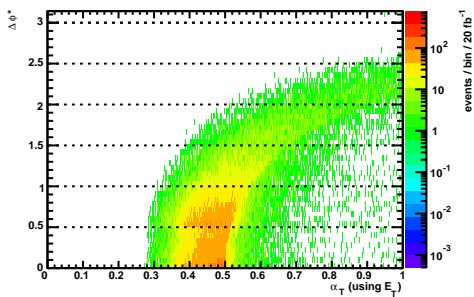
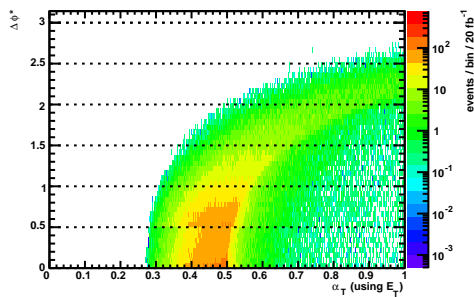
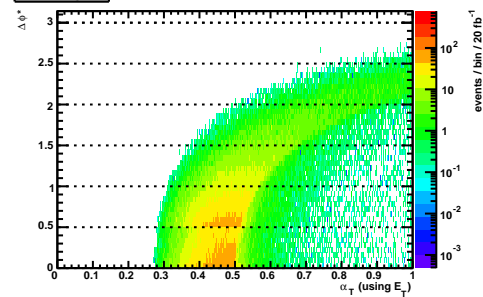
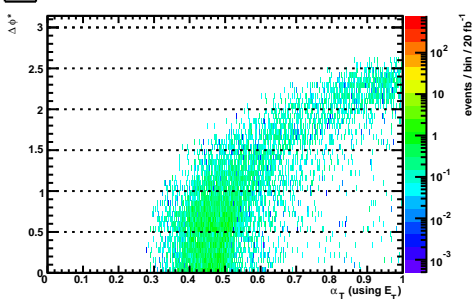
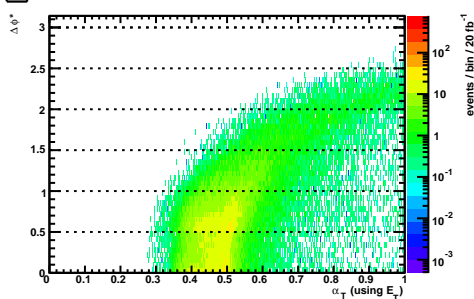
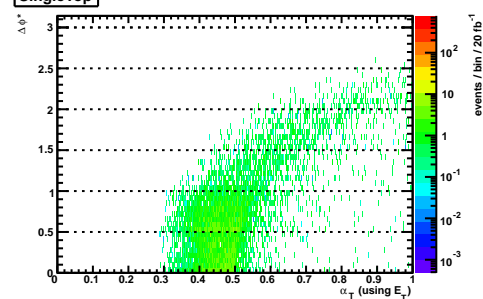
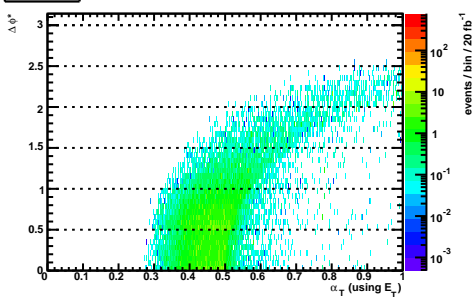
xcak5JetDeltaHtPat	
Entries	90605
Mean	37.63
RMS	28.34
Underflow	0
Overflow	0
Integral	9.06e+04

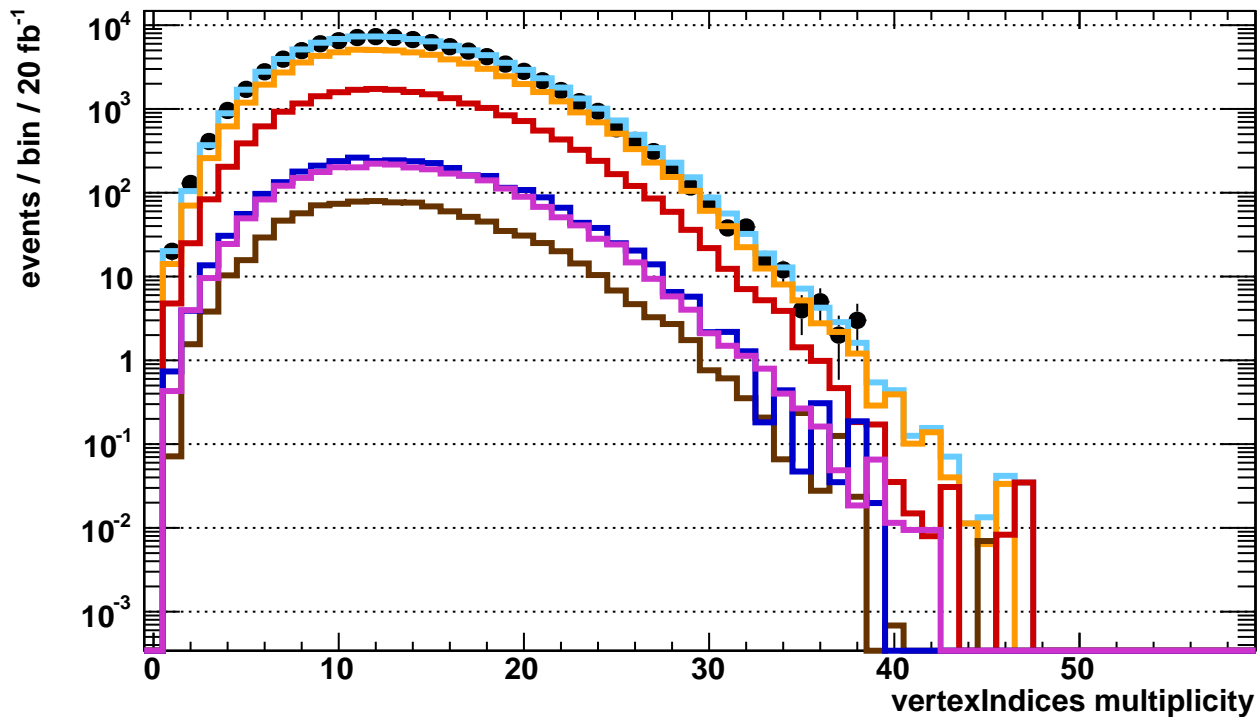


**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

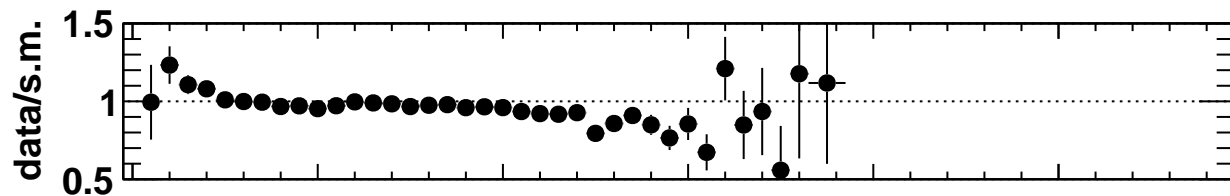
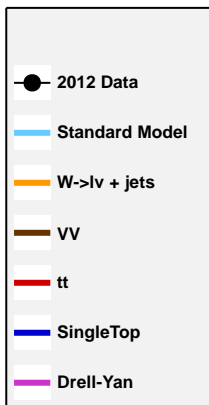
**2012 Data****Standard Model****W→lv + jets****VV****tt****SingleTop****Drell-Yan**

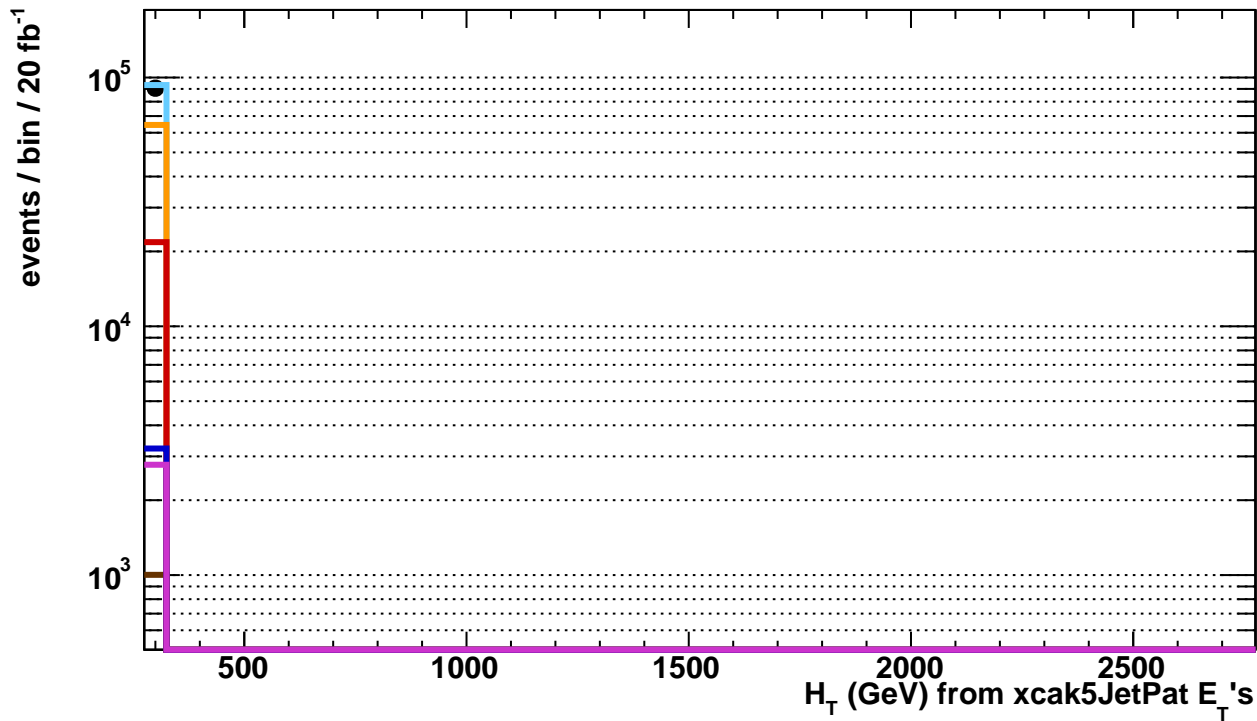


**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

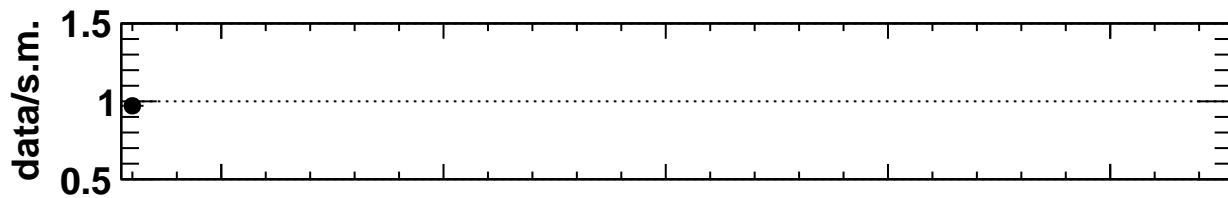
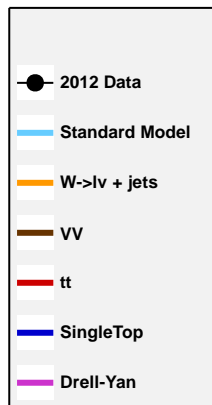


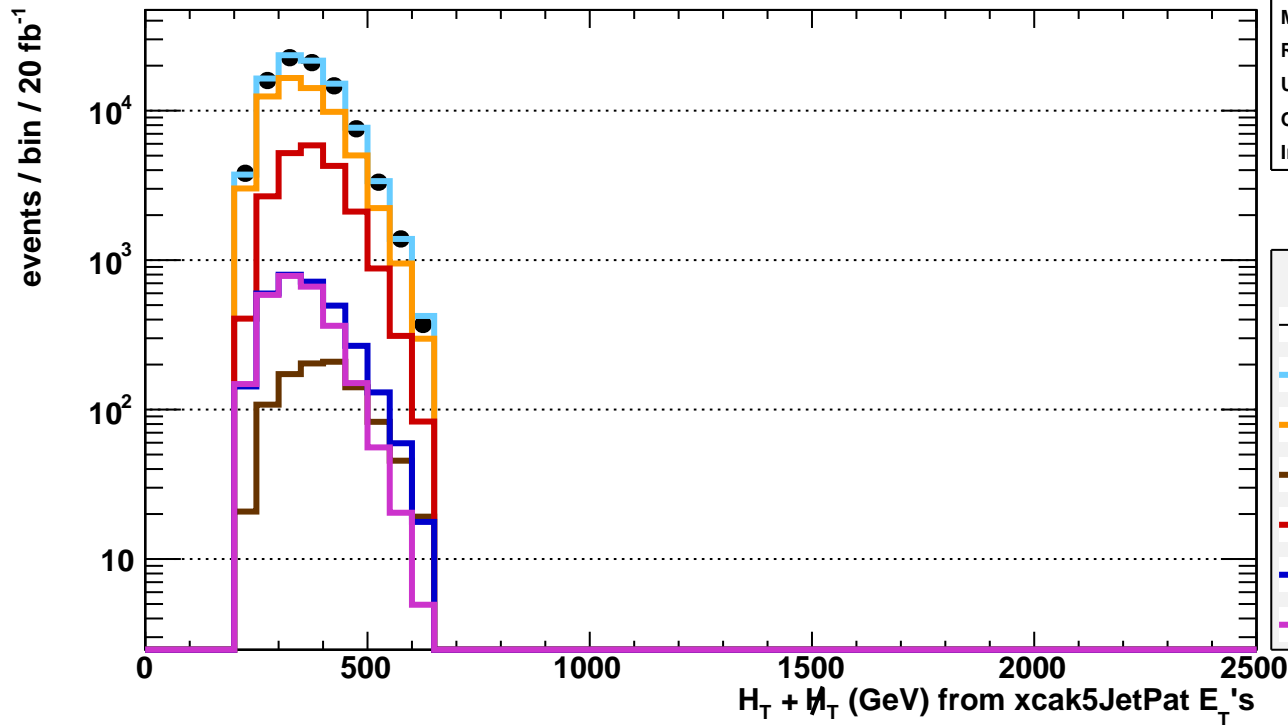
vertexIndicesMultiplicity	
Entries	90605
Mean	13.39
RMS	4.946
Underflow	0
Overflow	0
Integral	9.06e+04



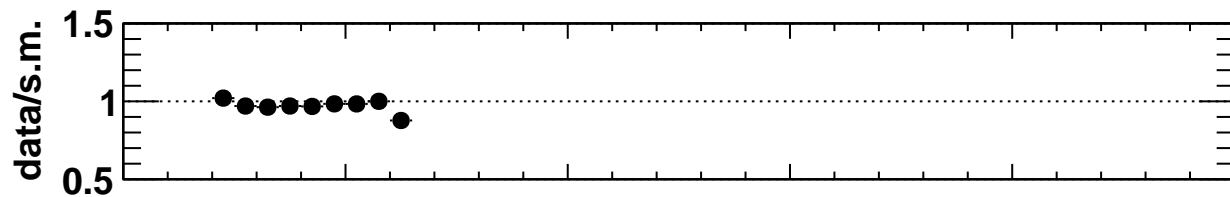
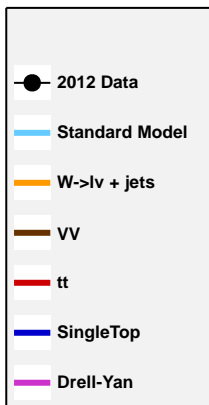


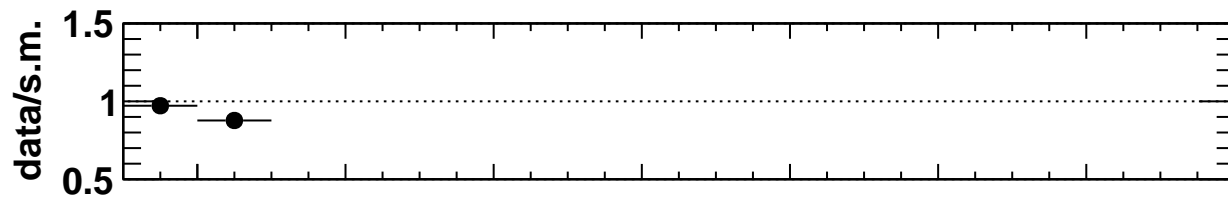
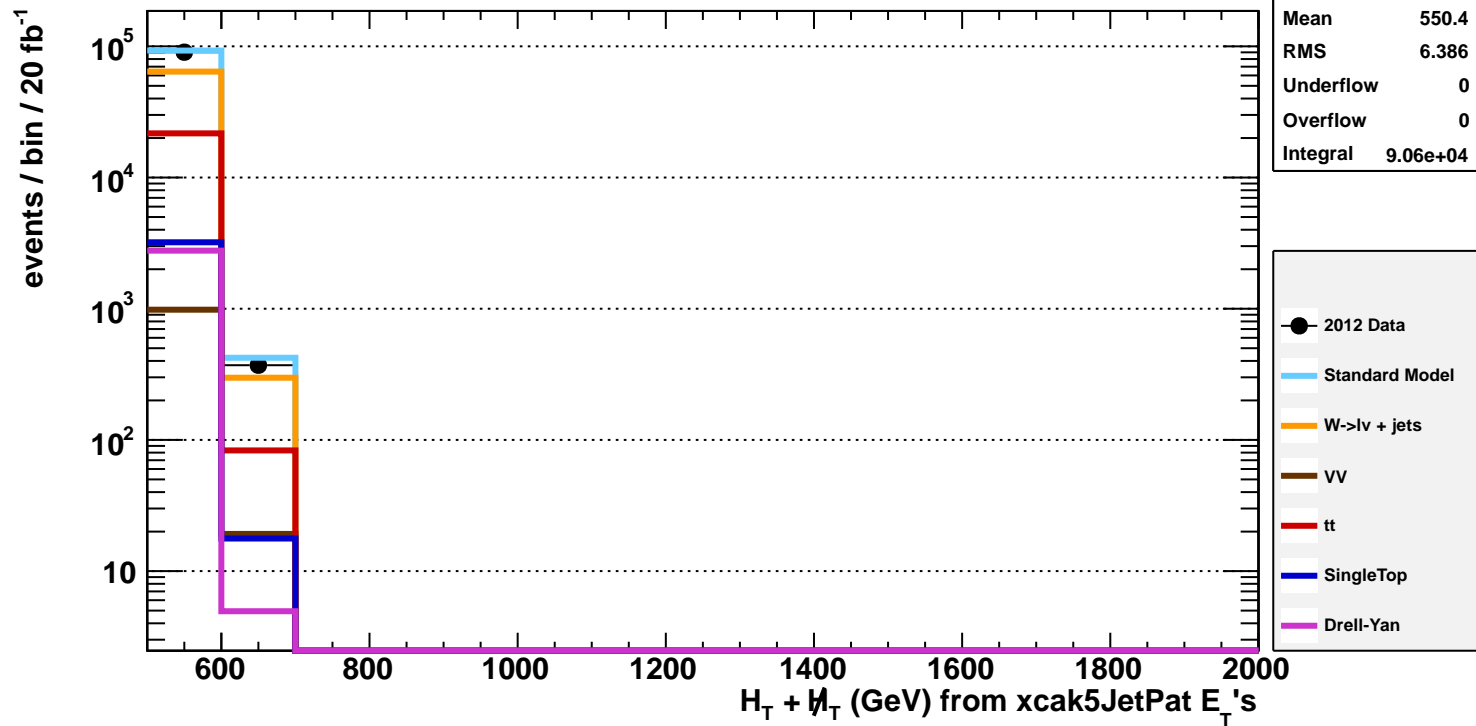
xcak5JetHtPat	
Entries	90605
Mean	300
RMS	0
Underflow	0
Overflow	0
Integral	9.06e+04

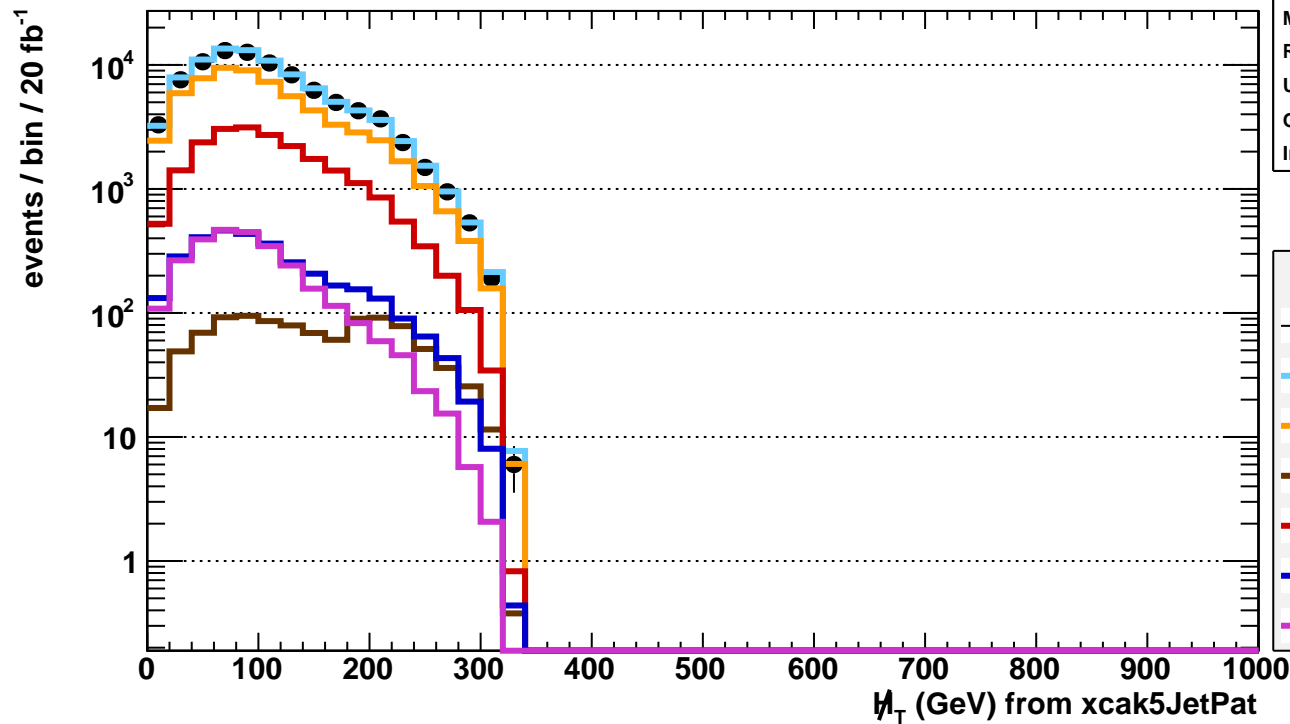




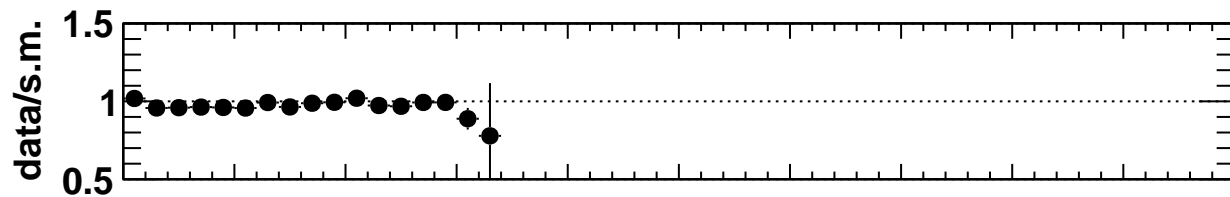
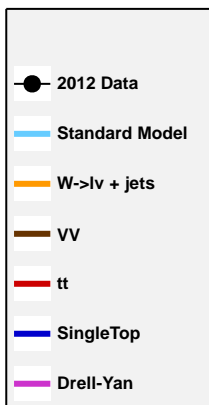
xcak5JetHtPlusMhtPat	
Entries	90605
Mean	364.6
RMS	77.09
Underflow	0
Overflow	0
Integral	9.06e+04

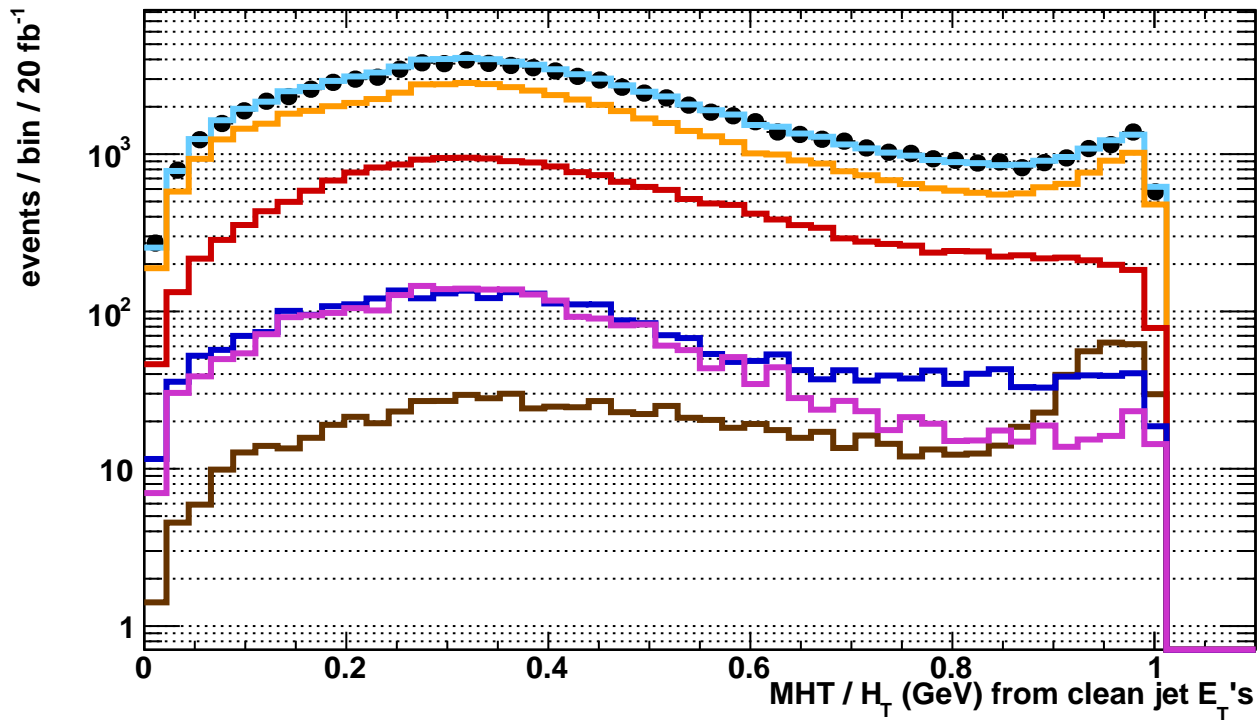




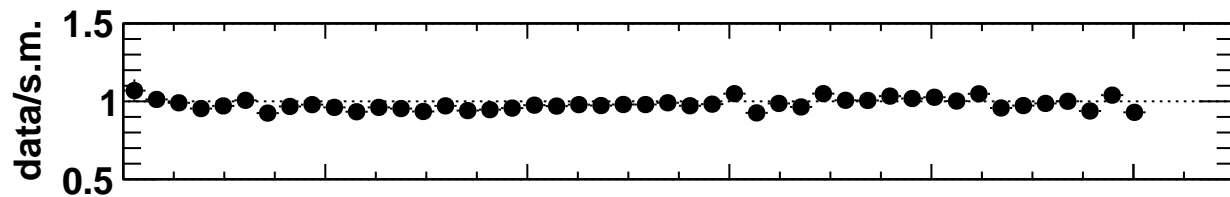


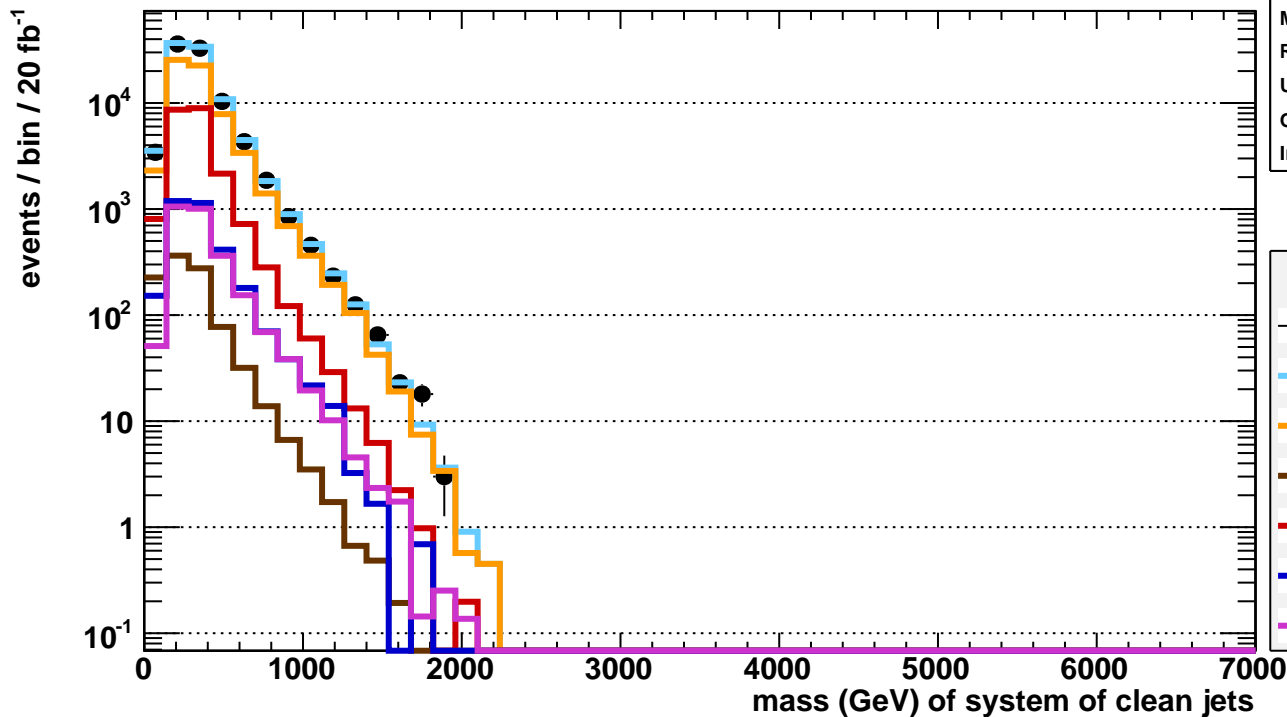
xcak5JetMhtPat	
Entries	90605
Mean	108.4
RMS	62.24
Underflow	0
Overflow	0
Integral	9.06e+04



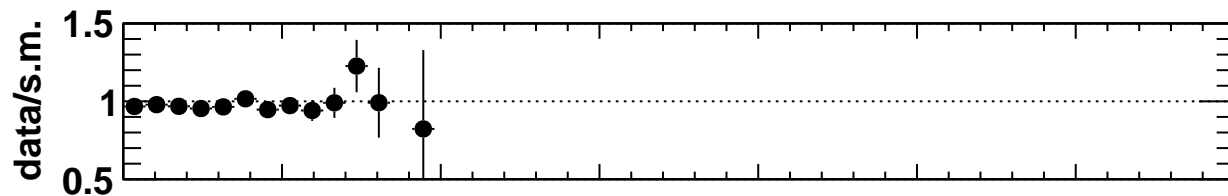
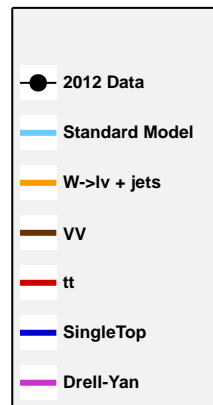


xcak5JetmHtOverHtPat	
Entries	90605
Mean	0.4247
RMS	0.2391
Underflow	0
Overflow	0
Integral	9.06e+04

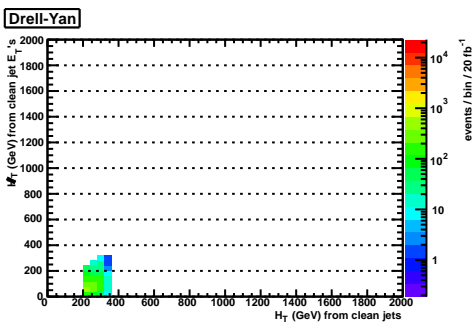
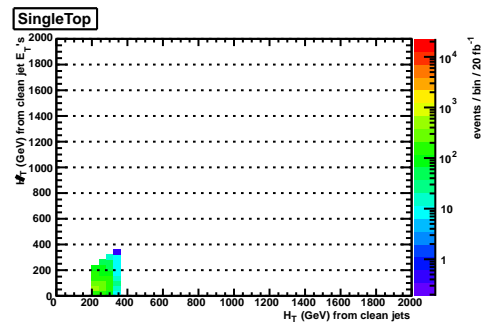
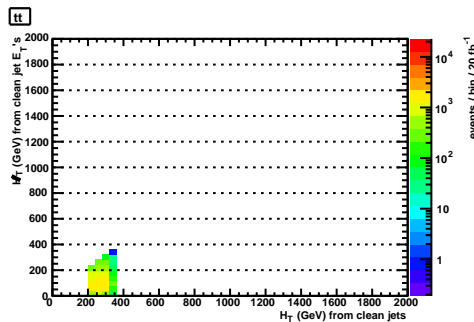
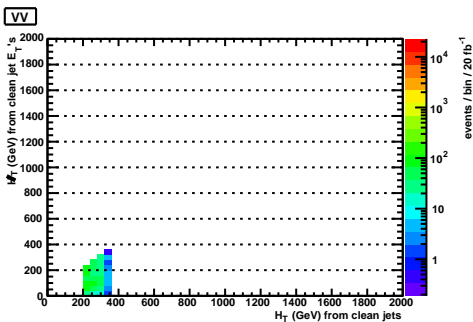
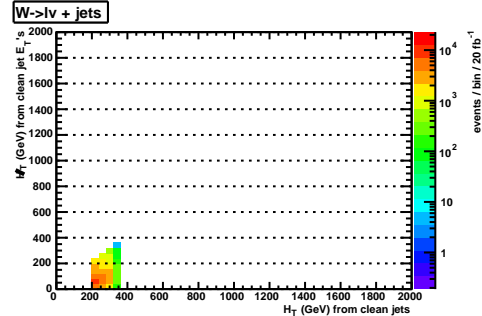
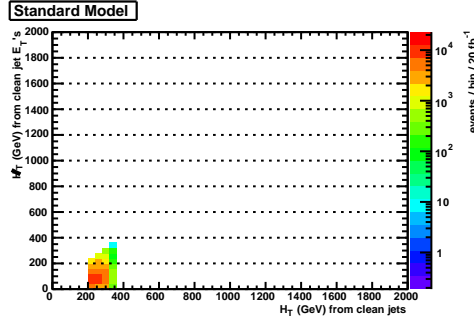
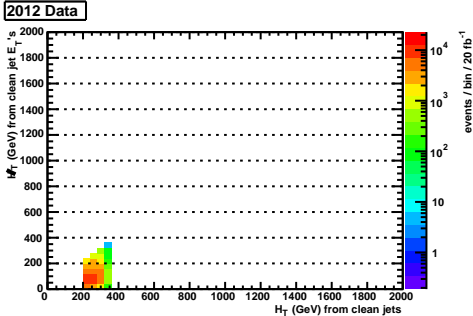


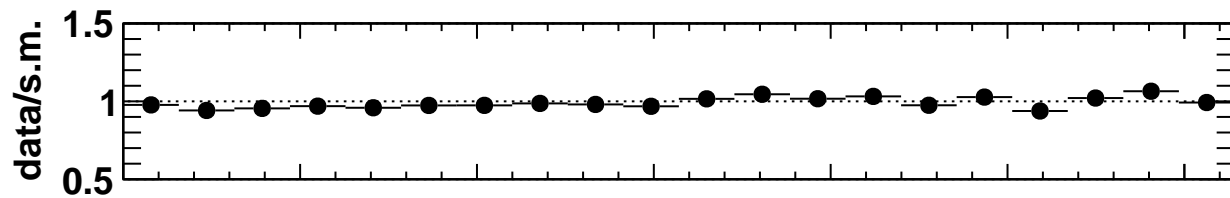
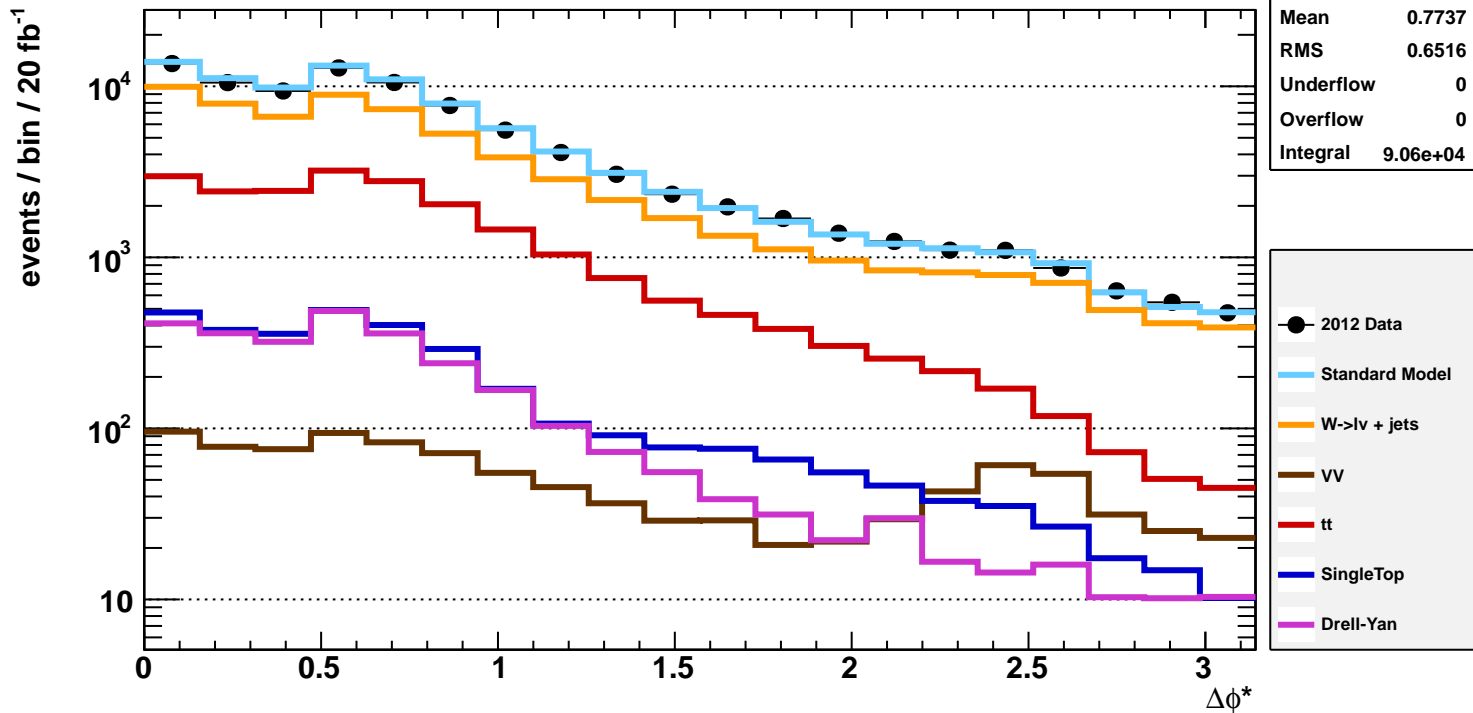


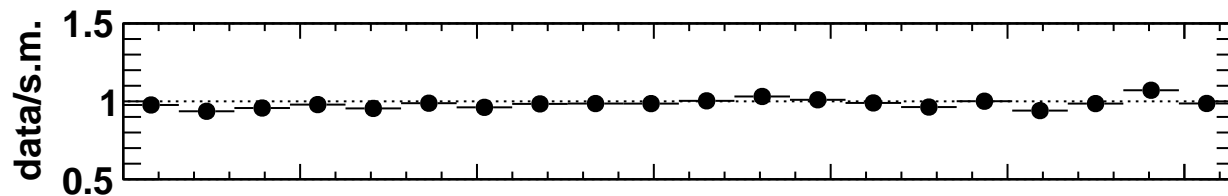
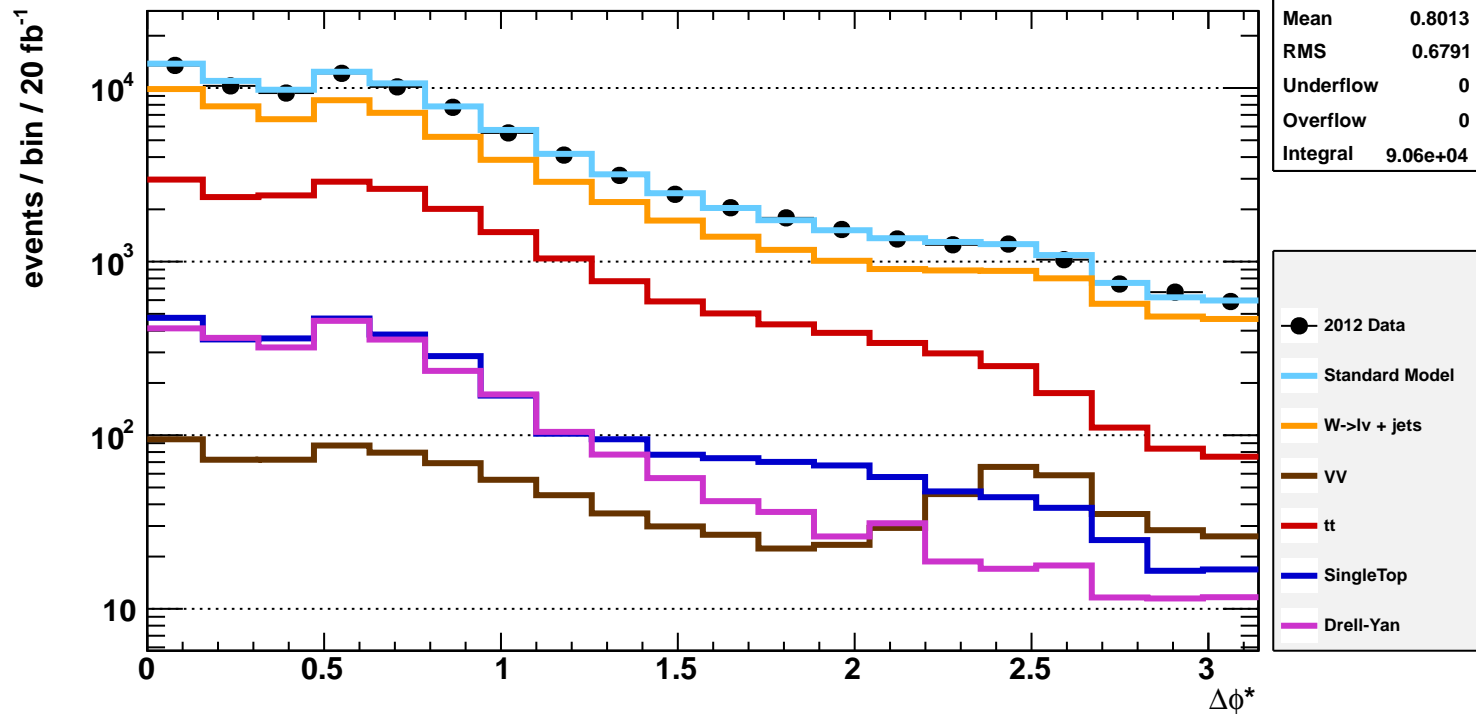
xcak5JetmPat	
Entries	90605
Mean	337.4
RMS	167.8
Underflow	0
Overflow	0
Integral	9.06e+04

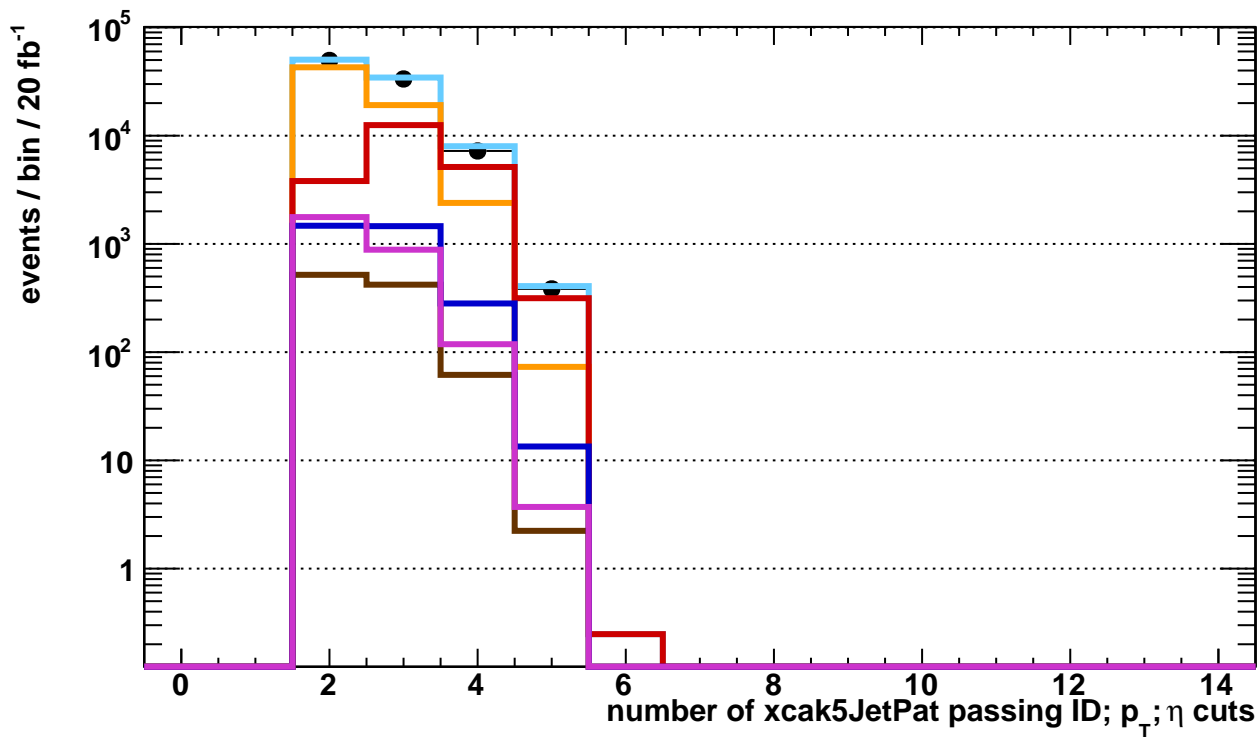




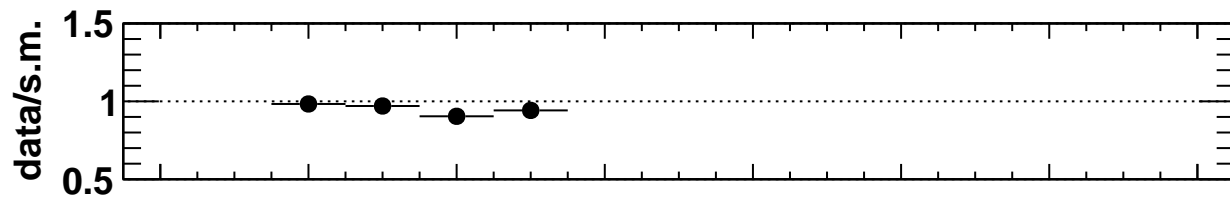
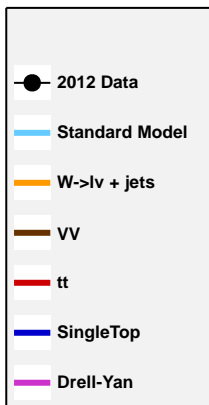




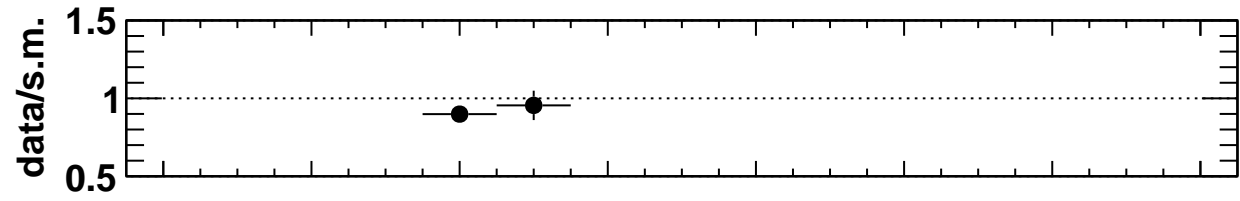
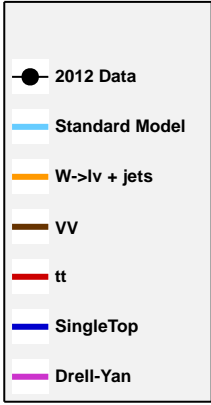
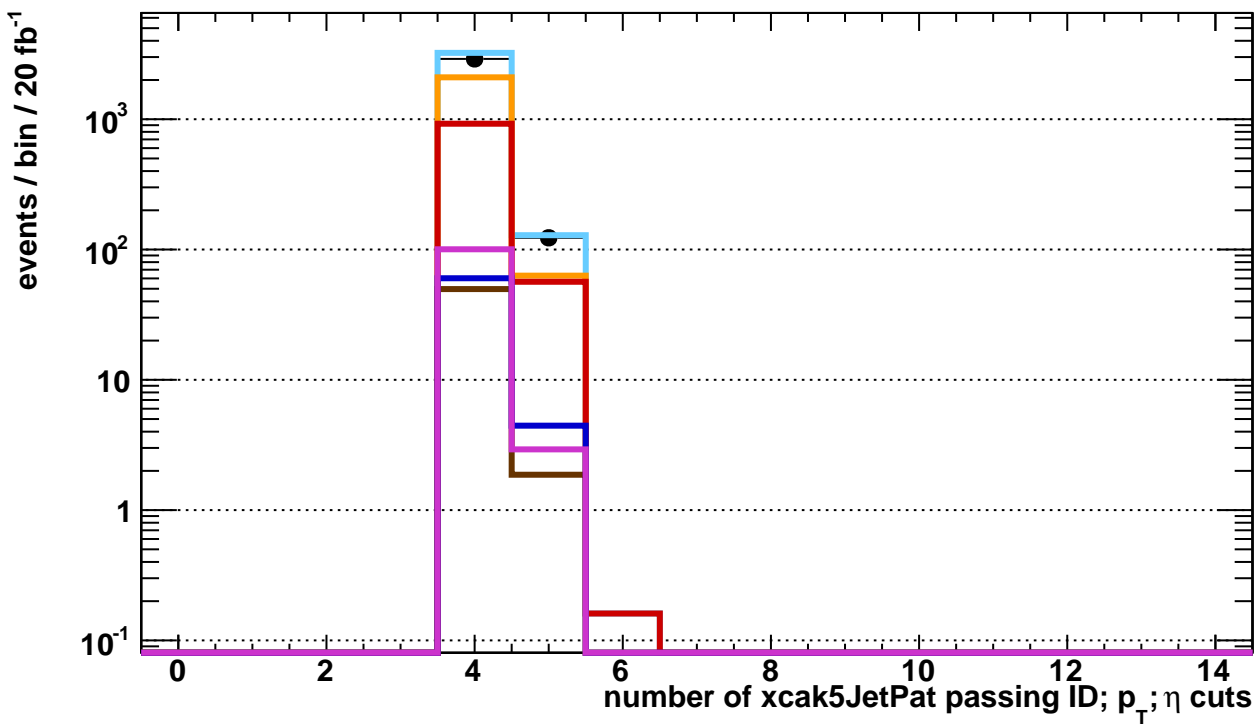


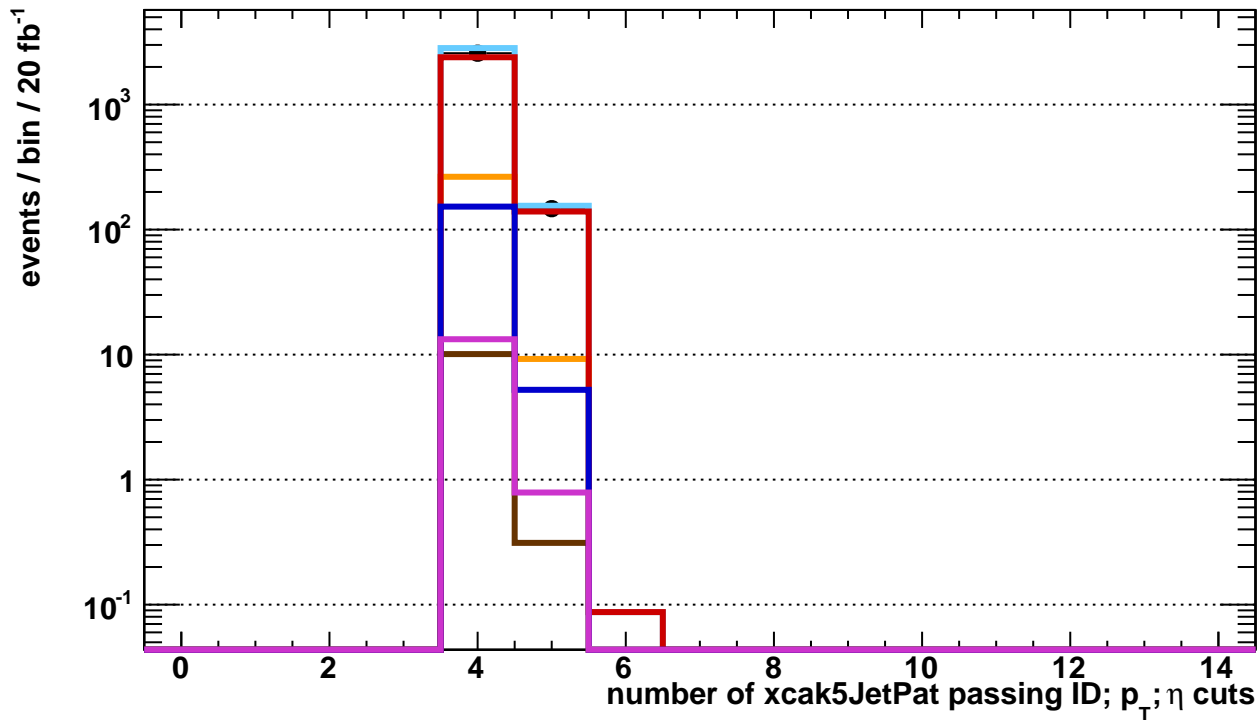


xcak5JetIndicesPat	
Entries	90605
Mean	2.541
RMS	0.6582
Underflow	0
Overflow	0
Integral	9.06e+04

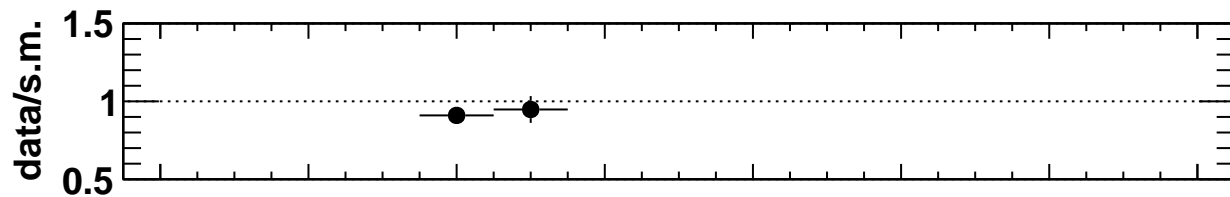
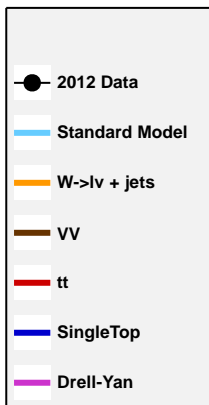


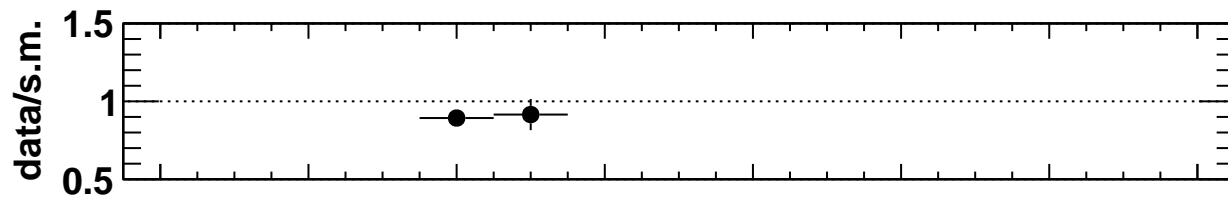
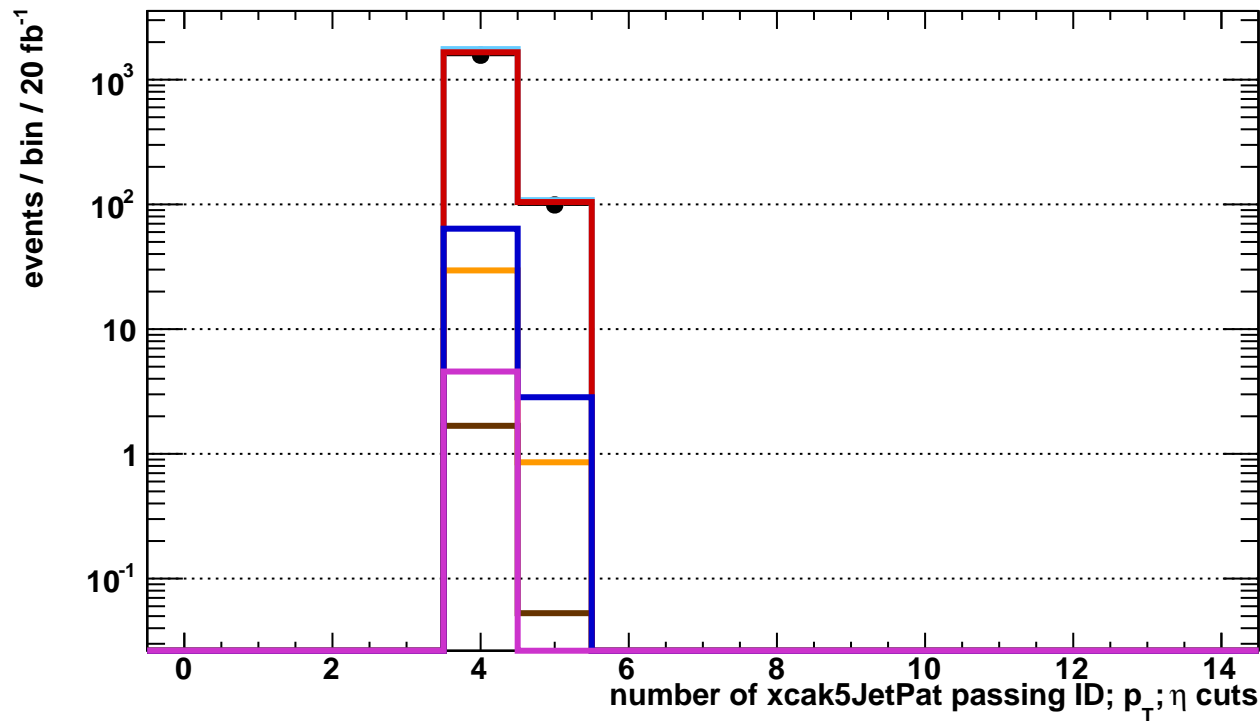
xcak5JetIndicesPat_ge4j_eq0b	
Entries	3027
Mean	4.041
RMS	0.1974
Underflow	0
Overflow	0
Integral	3027



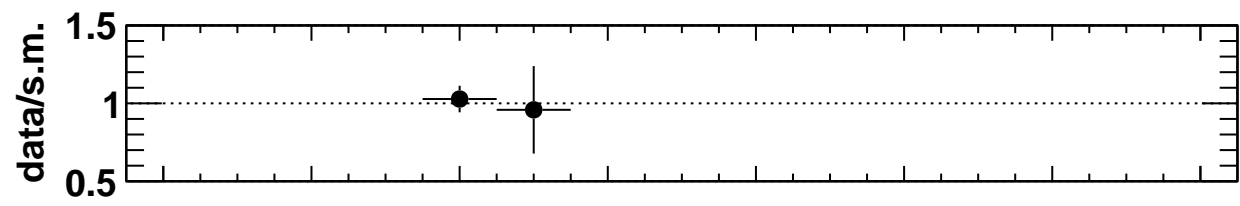
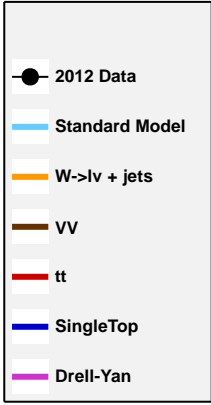
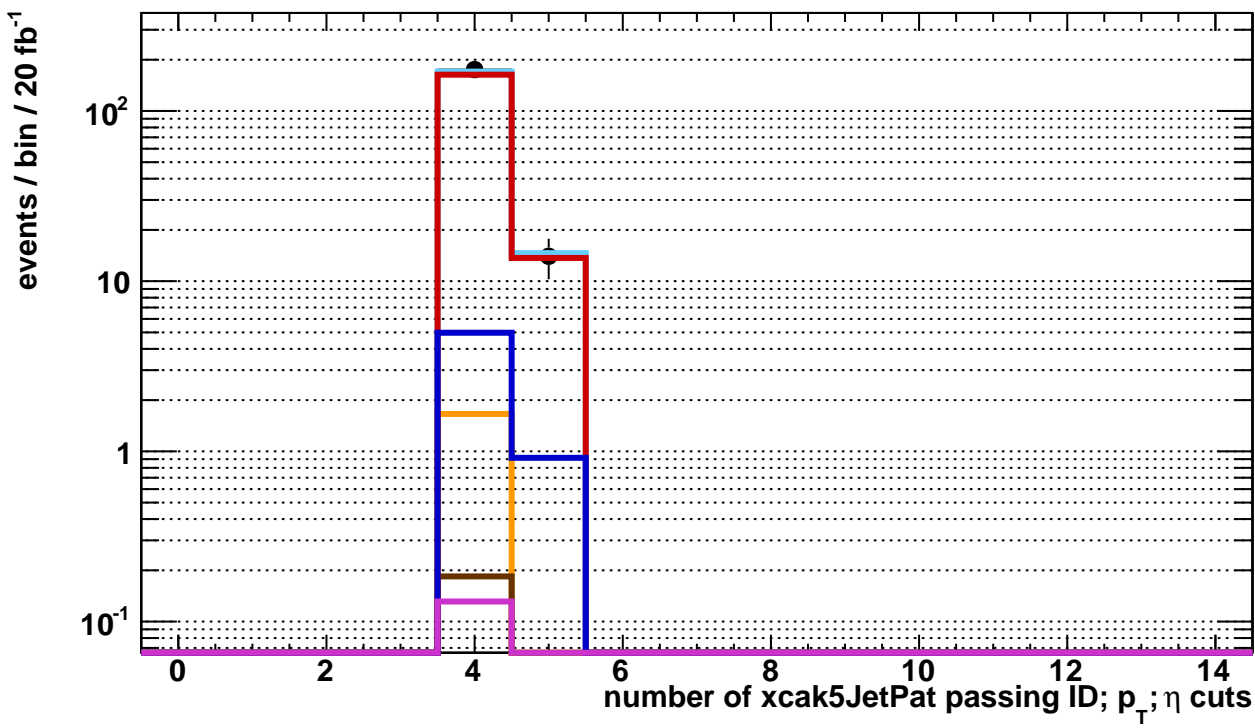


xcak5JetIndicesPat_ge4j_eq1b	
Entries	2723
Mean	4.054
RMS	0.226
Underflow	0
Overflow	0
Integral	2723

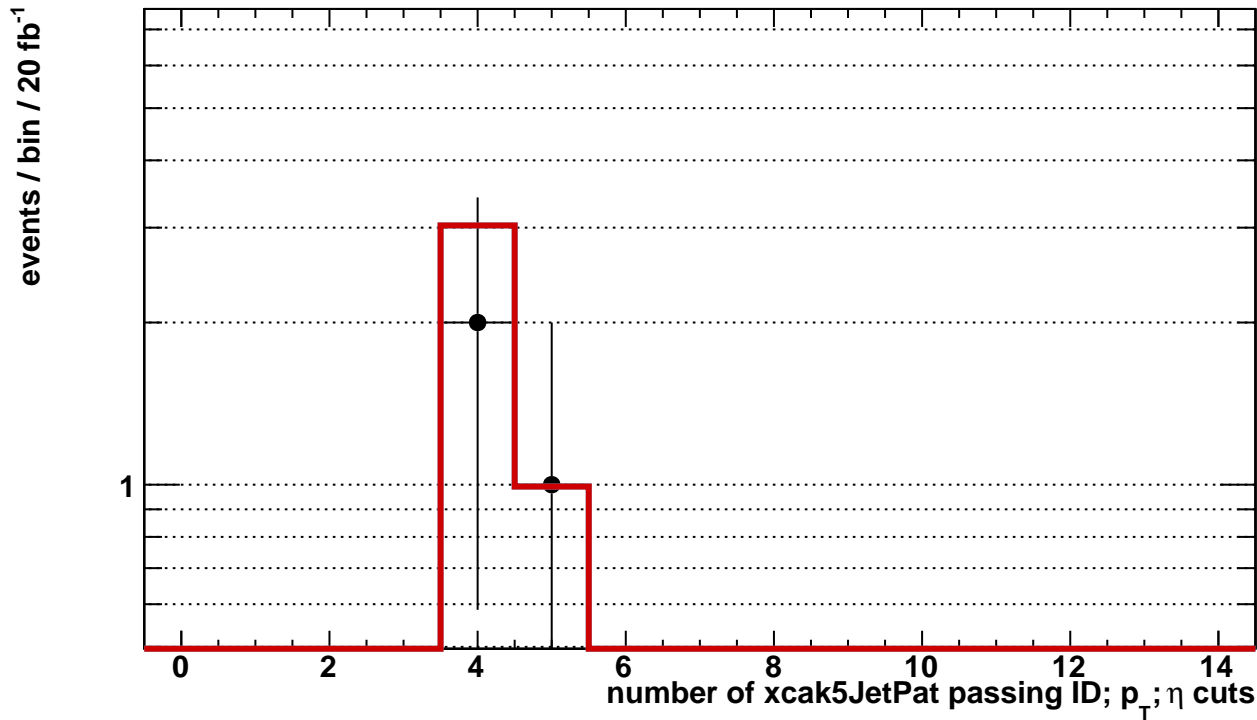




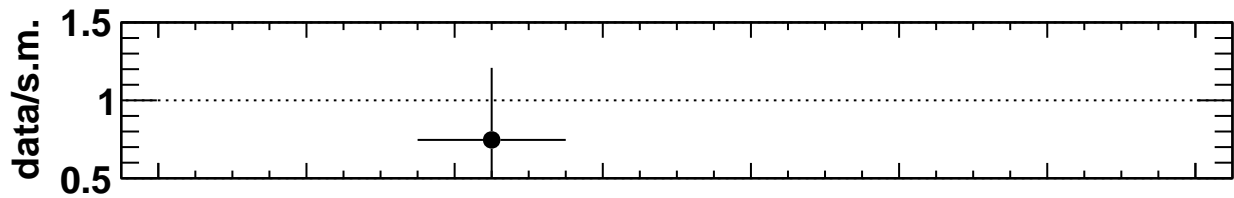
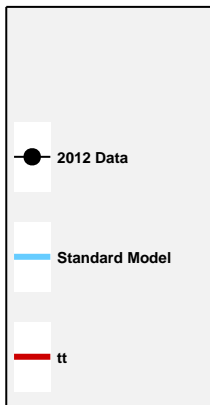
xcak5JetIndicesPat_ge4j_eq3b	
Entries	189
Mean	4.074
RMS	0.2619
Underflow	0
Overflow	0
Integral	189

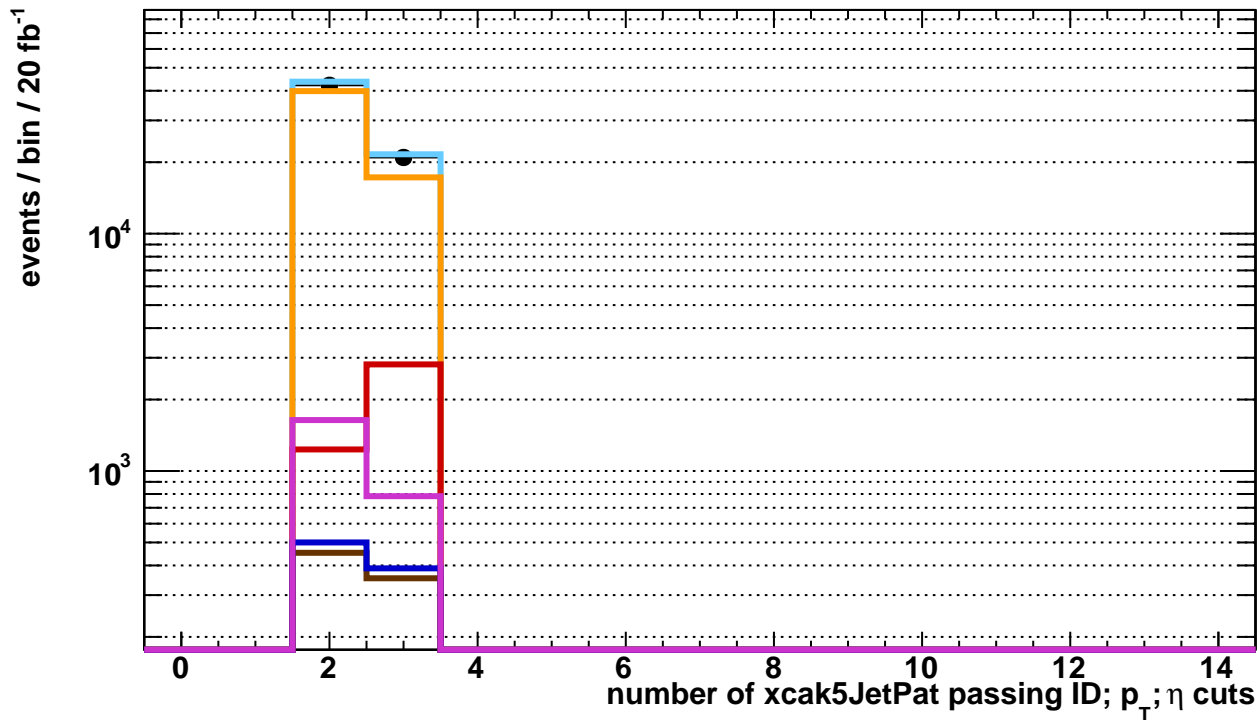




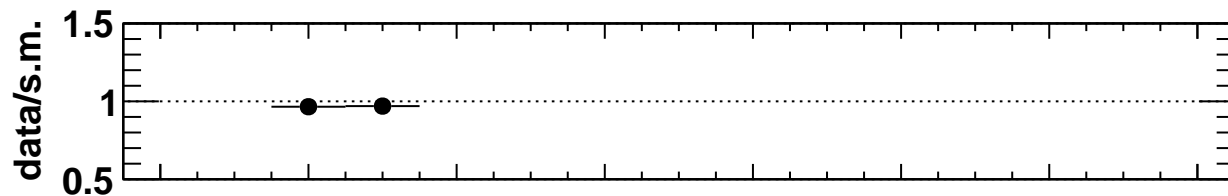


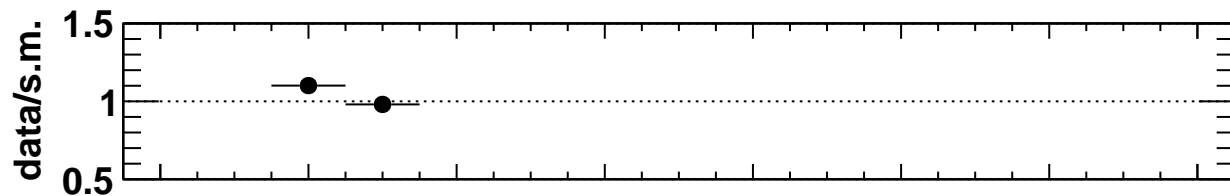
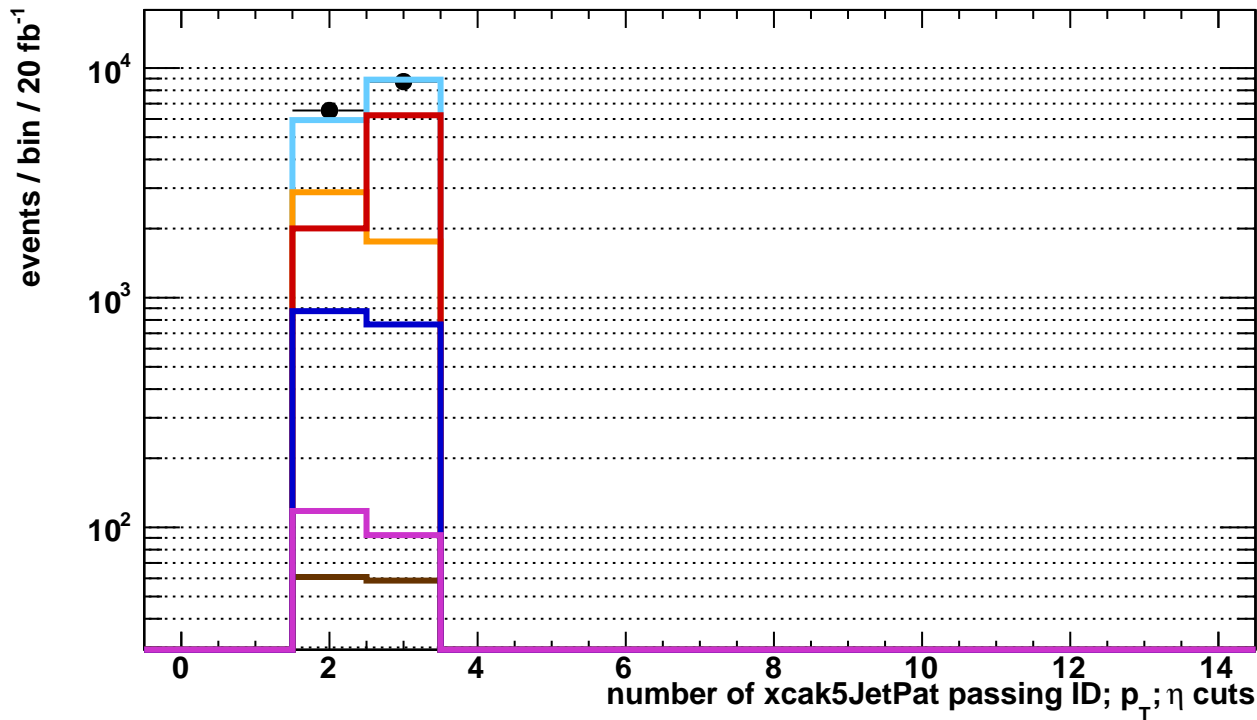
xcak5JetIndicesPat_ge4j_ge4b	
Entries	3
Mean	4.333
RMS	0.4714
Underflow	0
Overflow	0
Integral	3

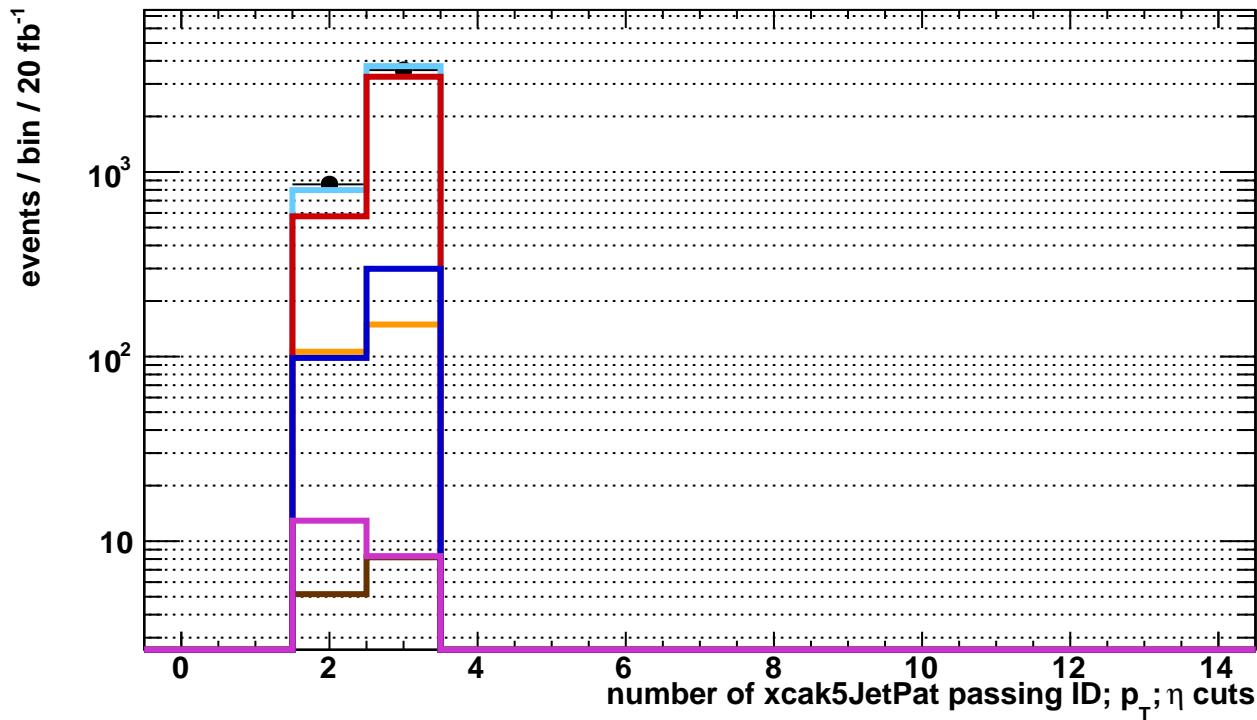




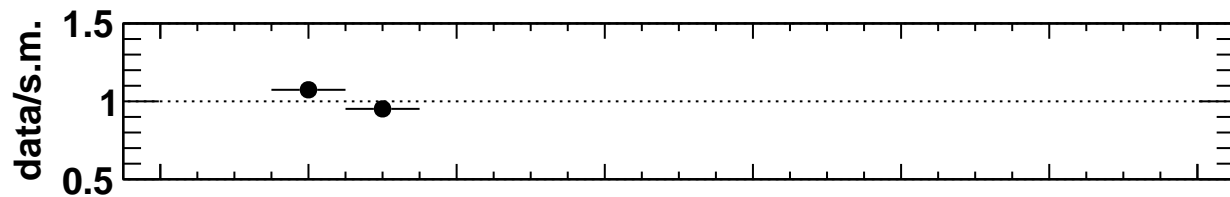
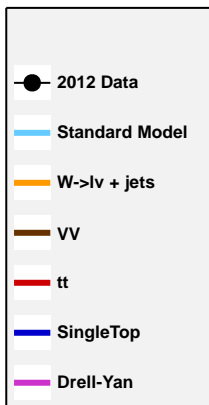
xcak5JetIndicesPat_le3j_eq0b	
Entries	63113
Mean	2.332
RMS	0.4708
Underflow	0
Overflow	0
Integral	6.311e+04

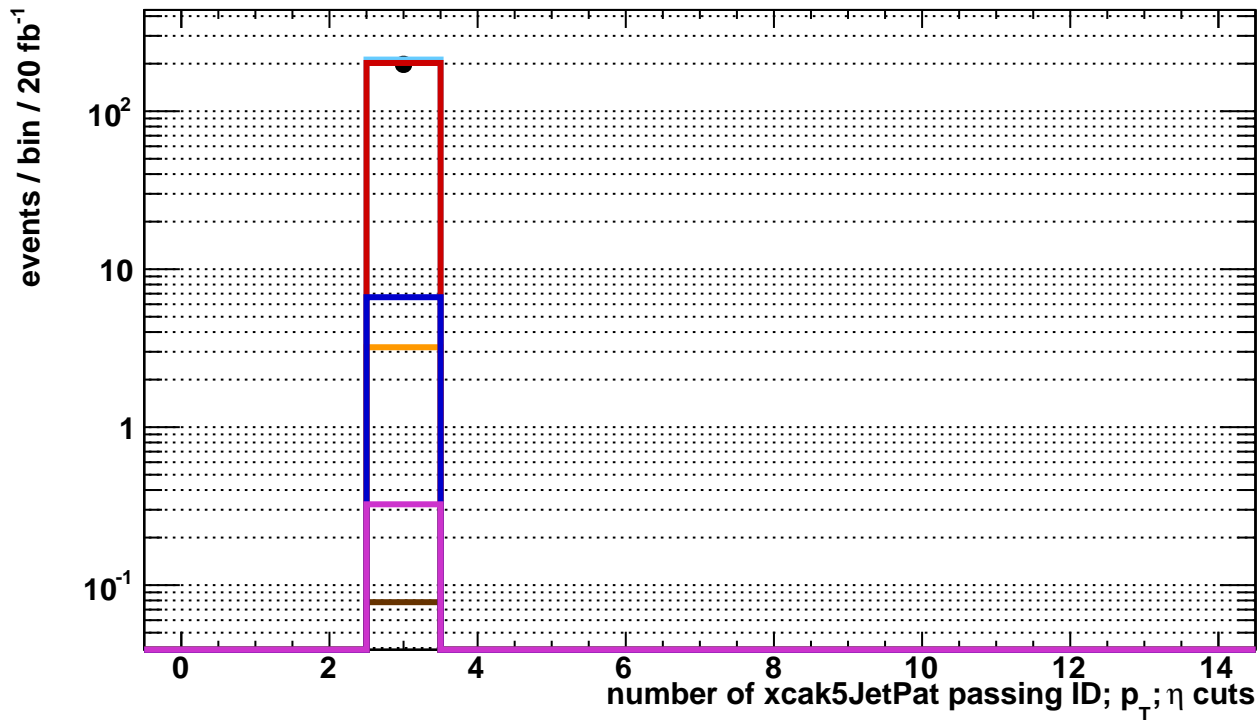




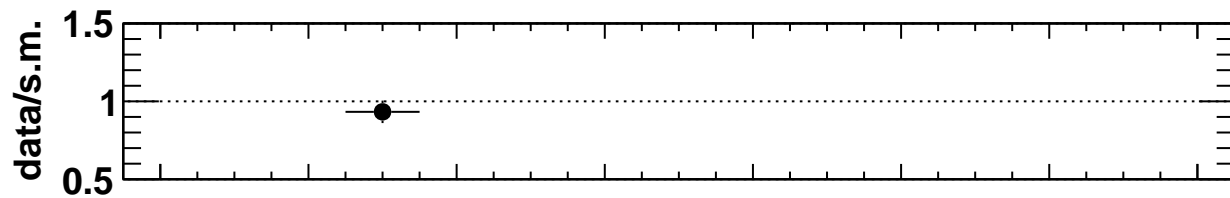


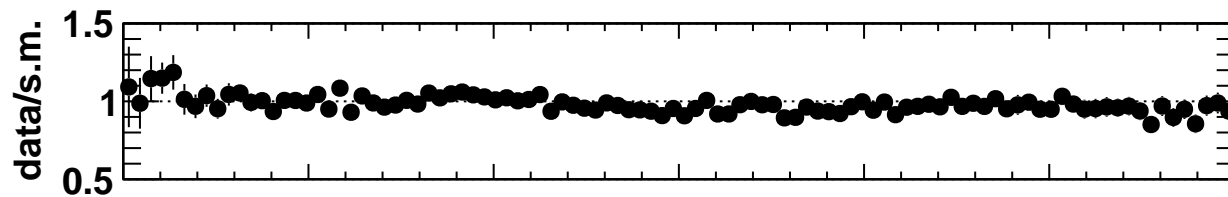
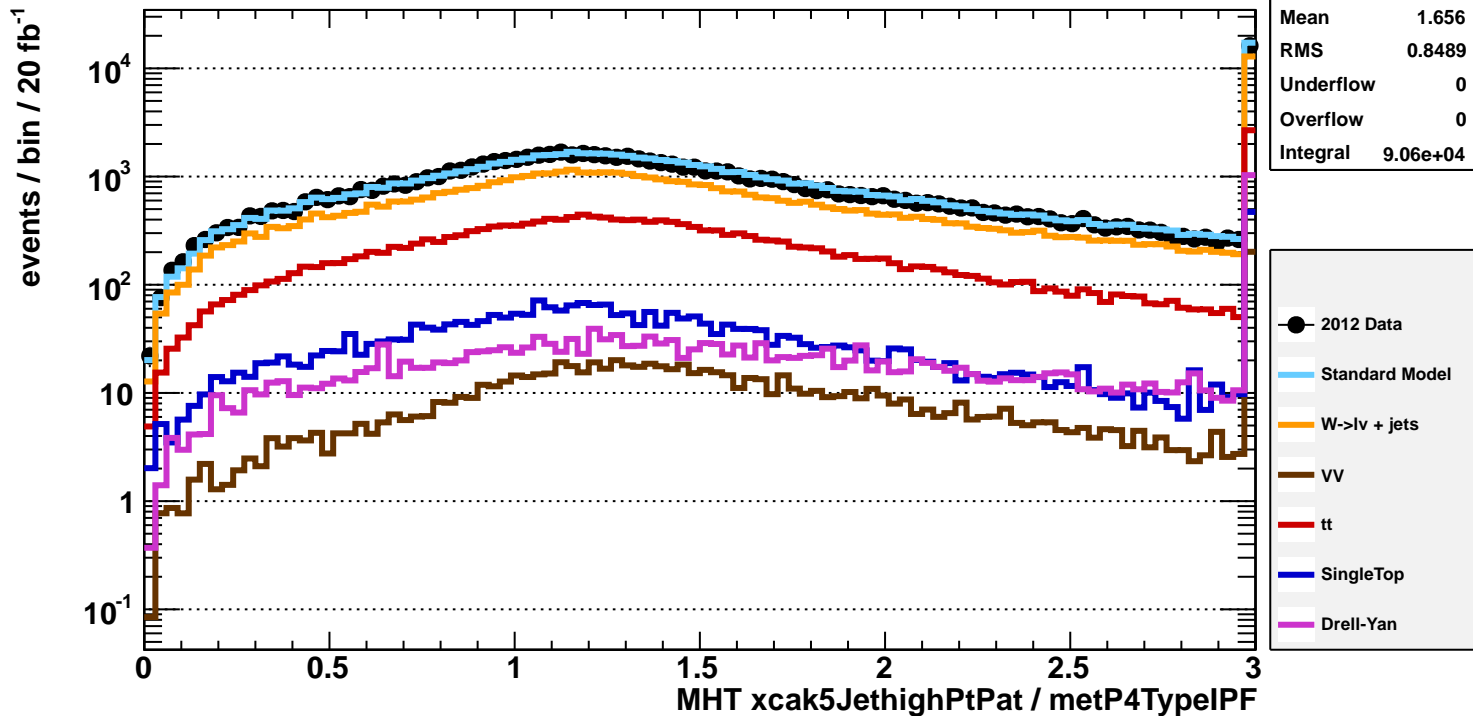
xcak5JetIndicesPat_le3l_eq2b	
Entries	4422
Mean	2.806
RMS	0.3953
Underflow	0
Overflow	0
Integral	4422

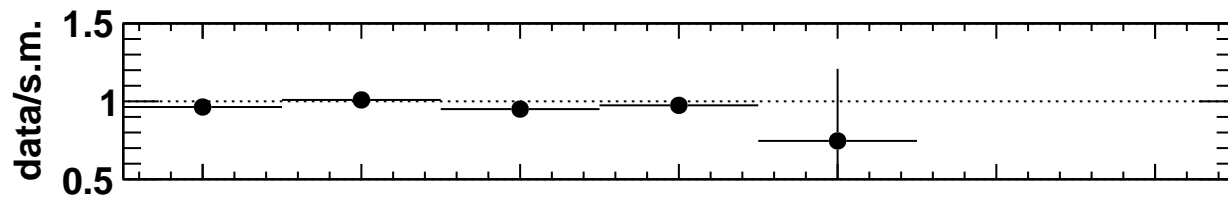
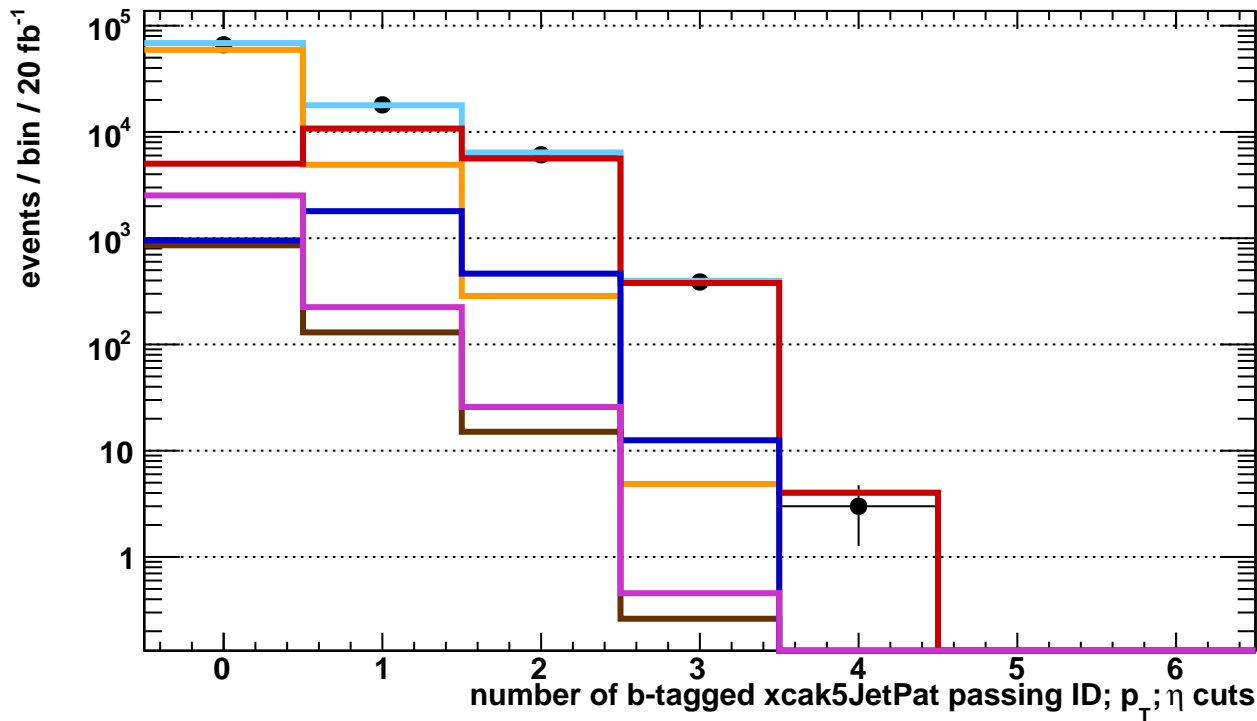


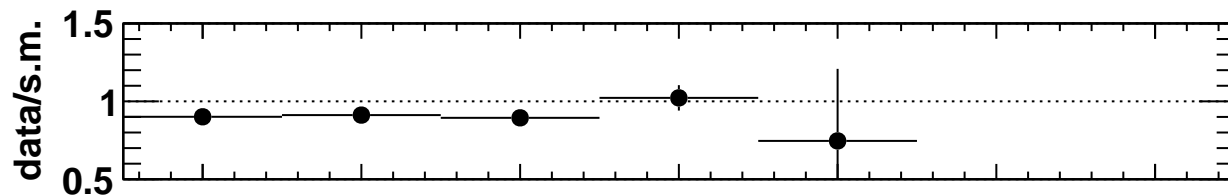
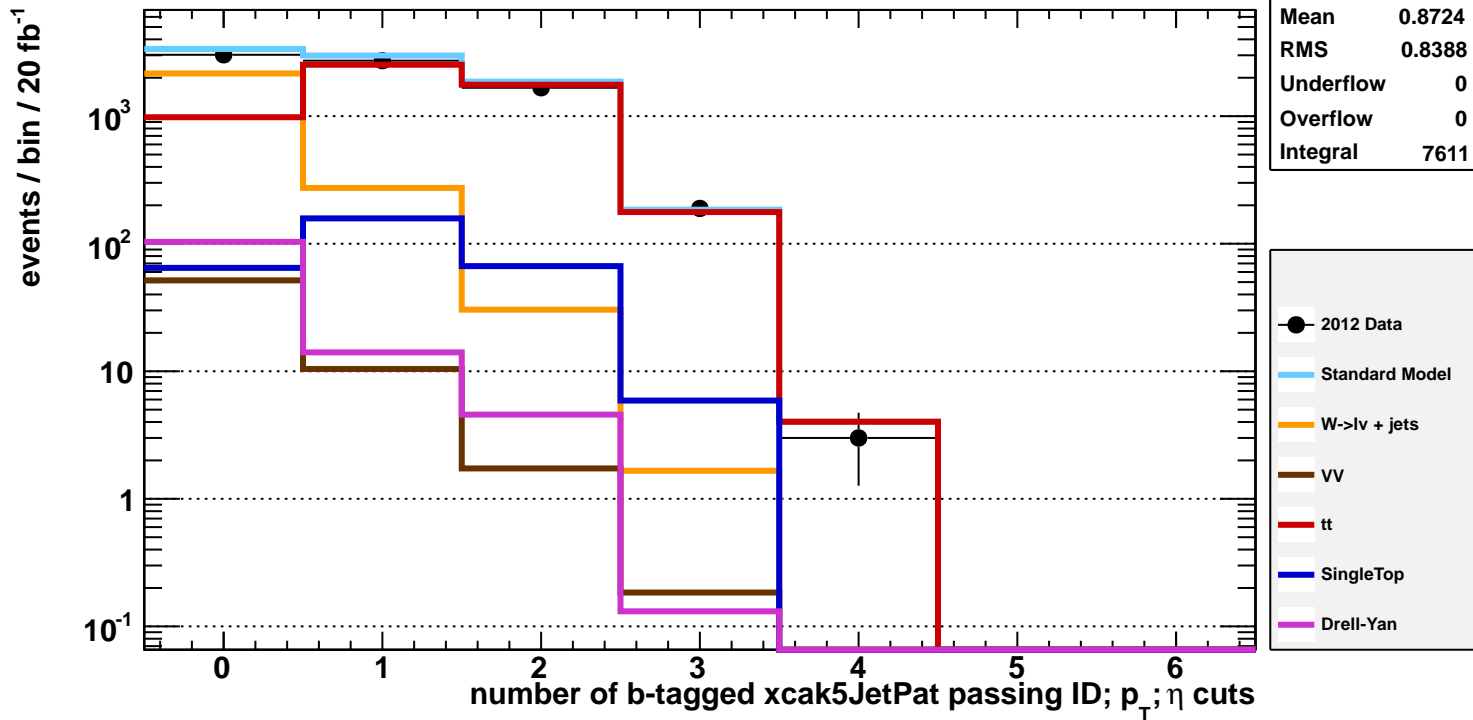


xcak5JetIndicesPat_le3j_eq3b	
Entries	198
Mean	3
RMS	0
Underflow	0
Overflow	0
Integral	198

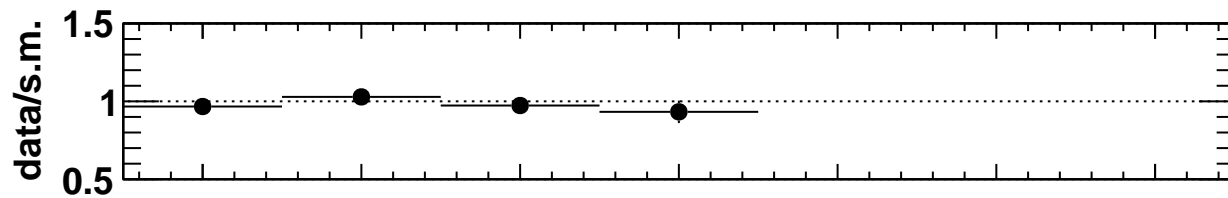
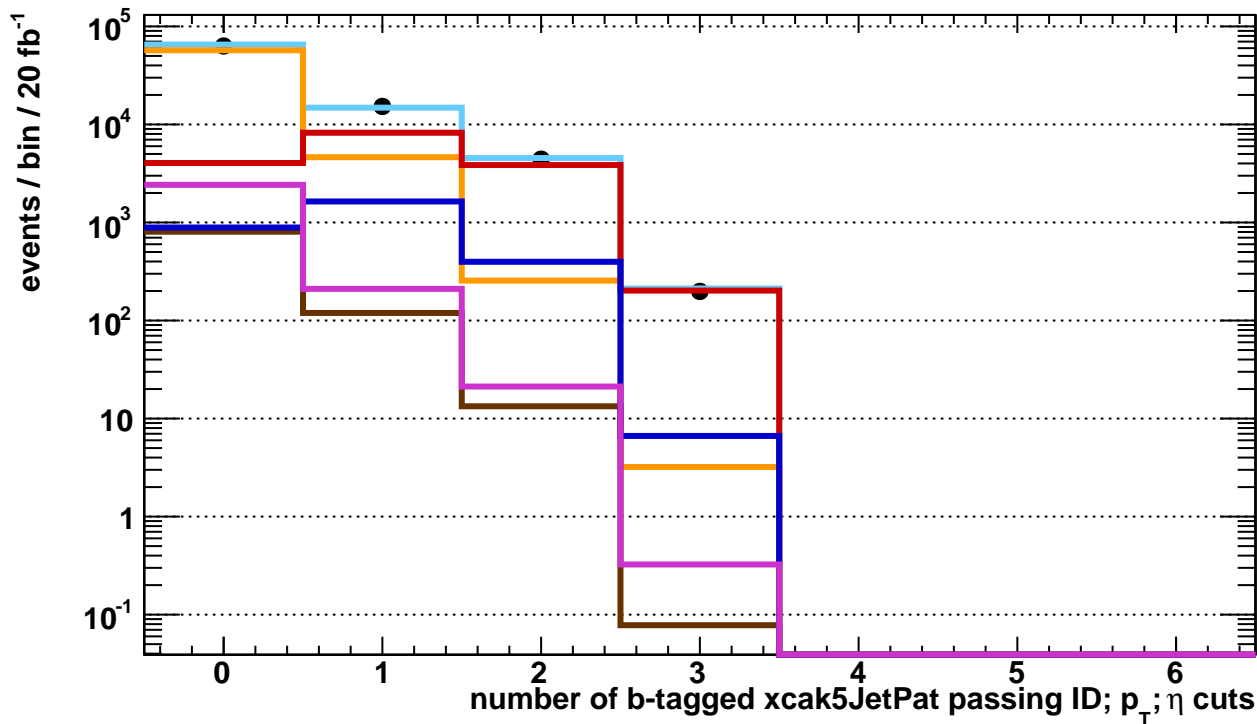


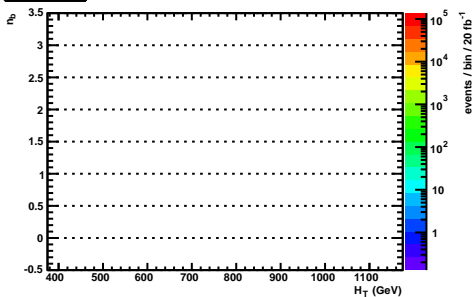
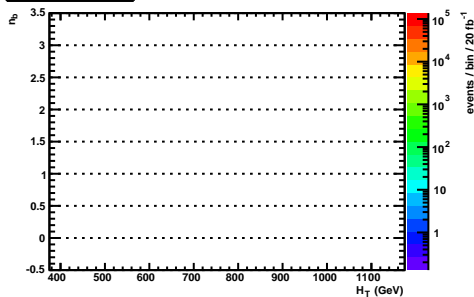
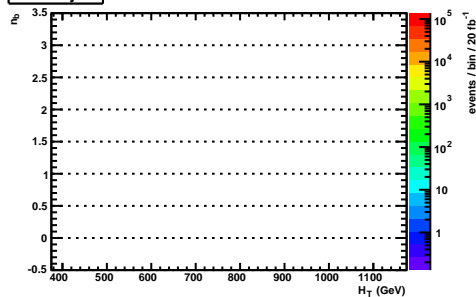
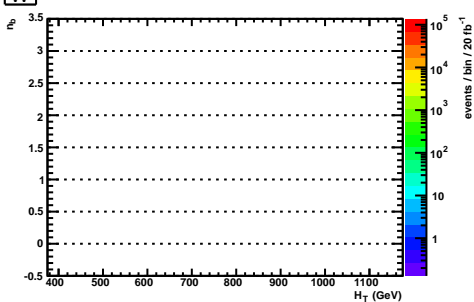
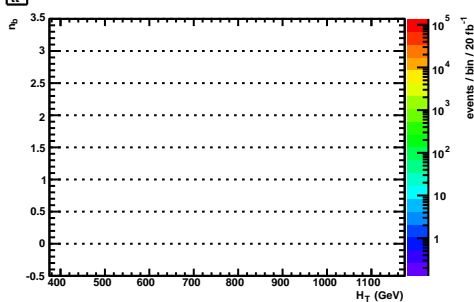
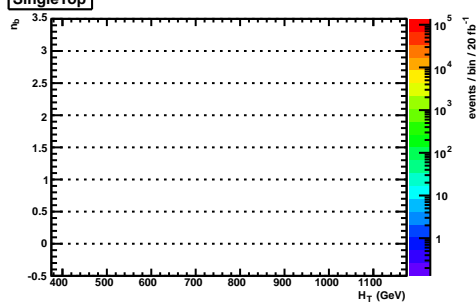
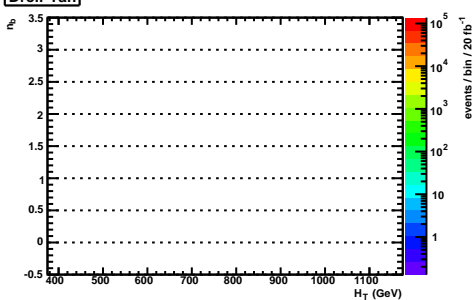


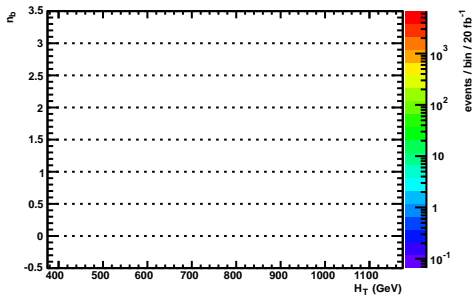
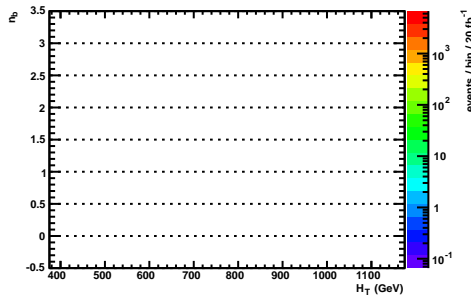
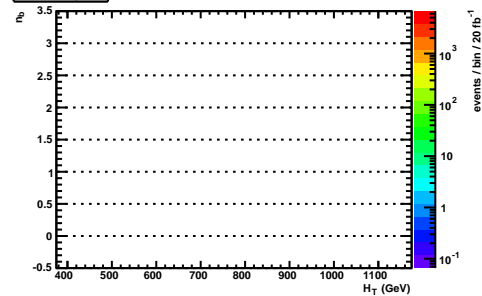
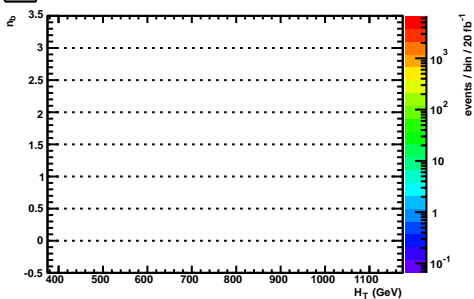
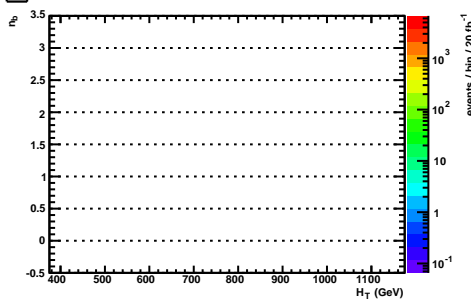
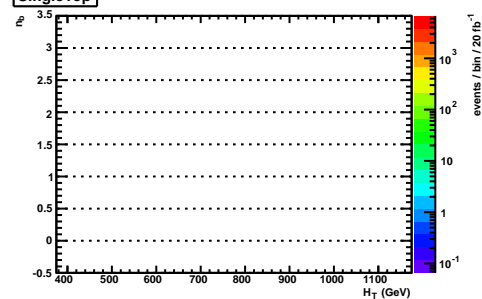
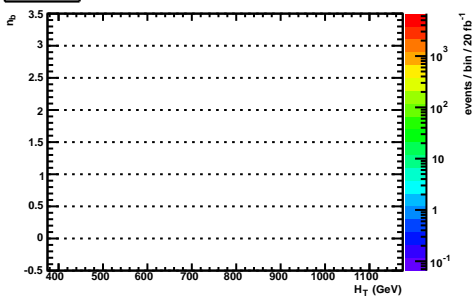


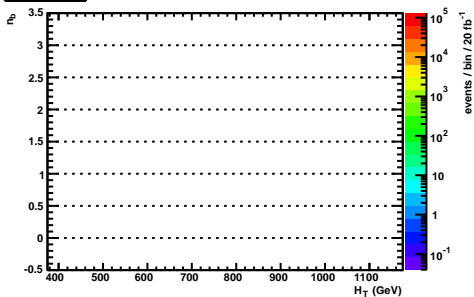
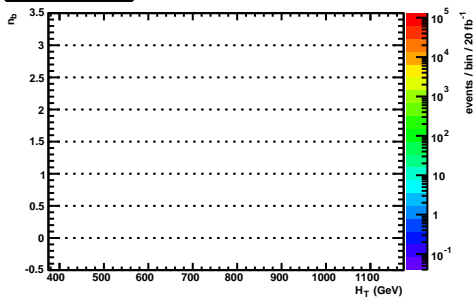
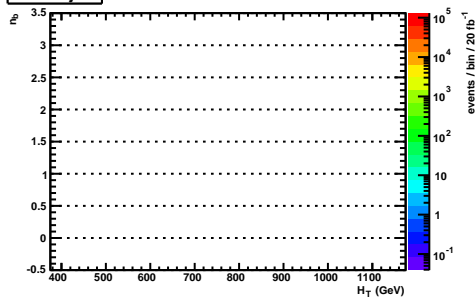
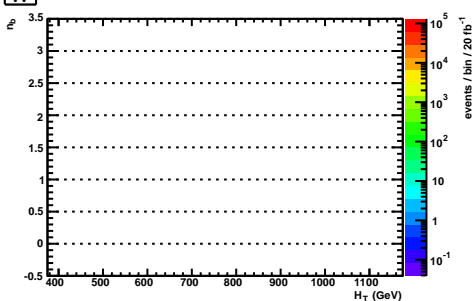
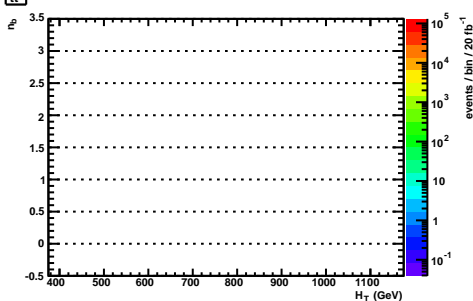
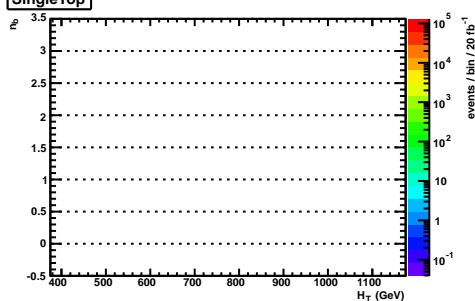
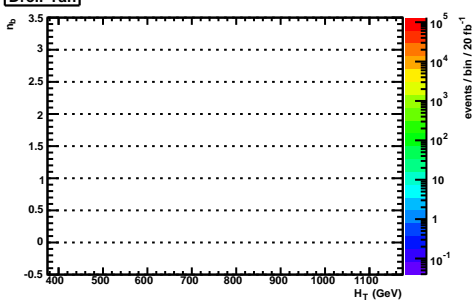


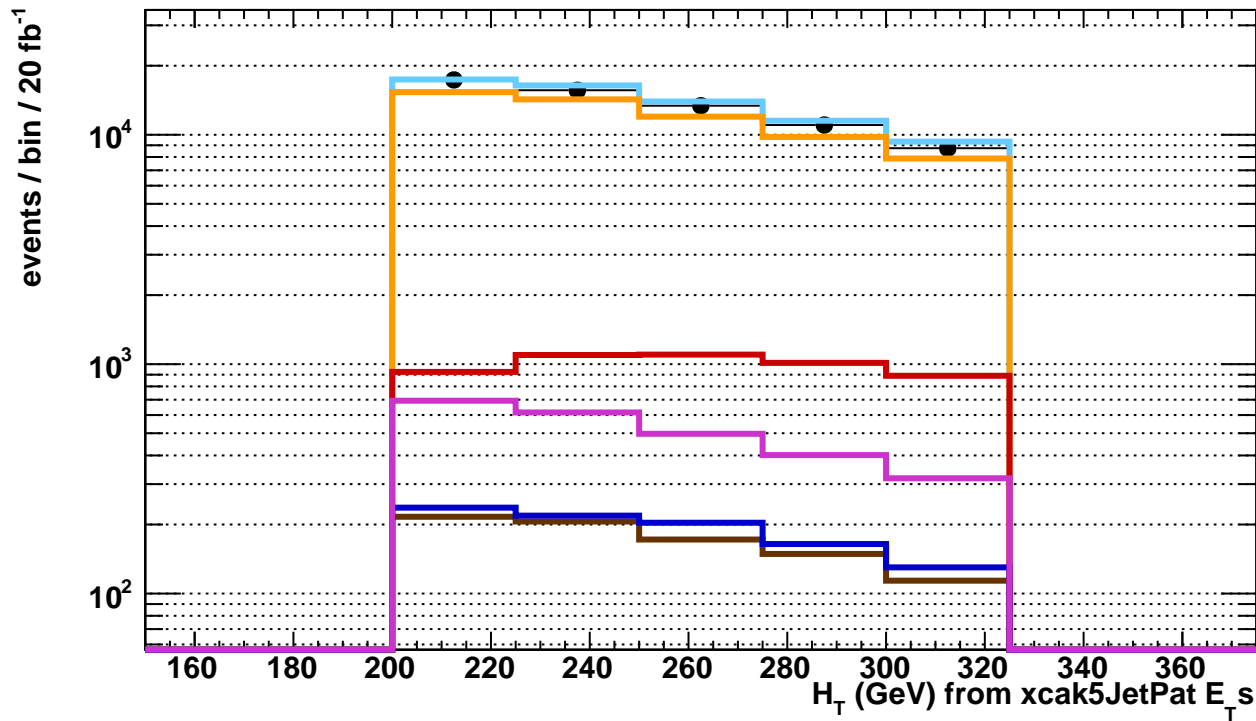




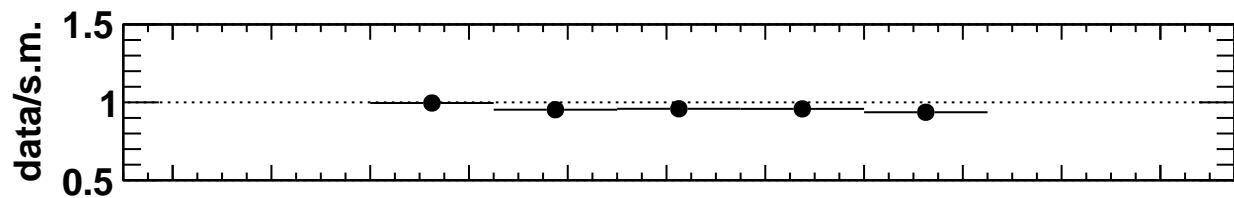
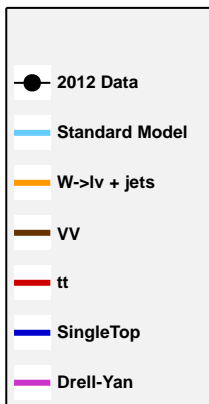
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

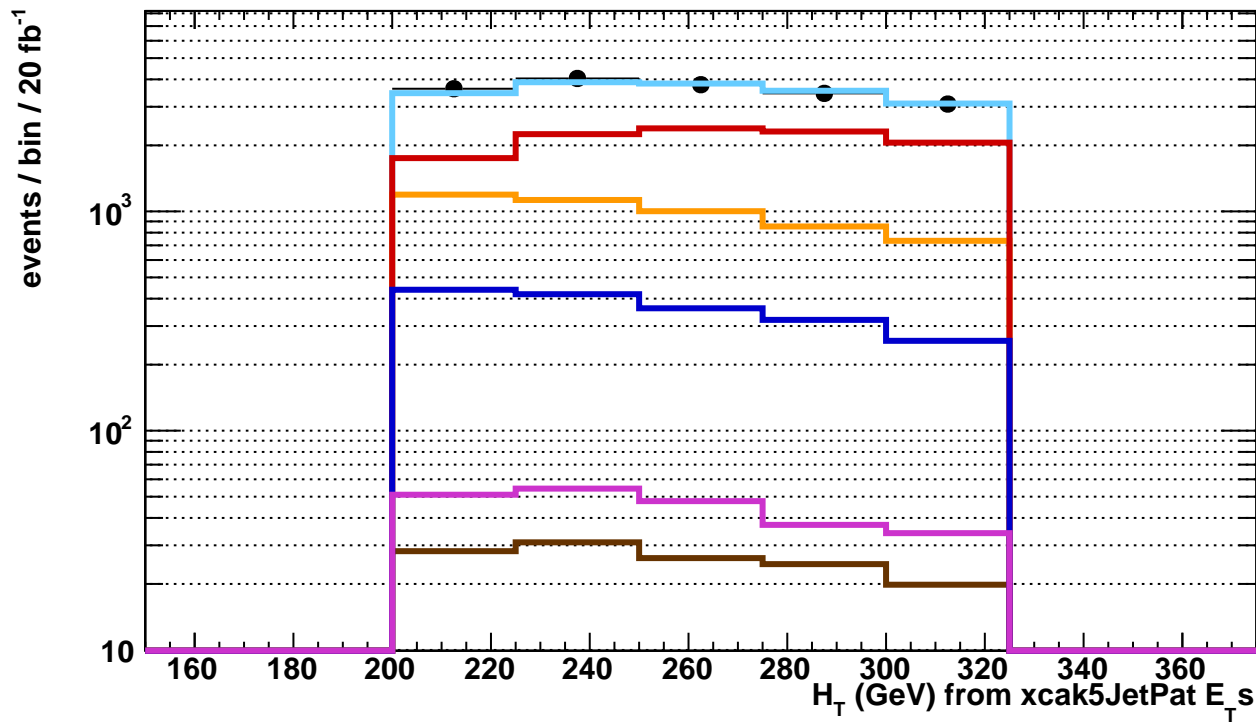
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

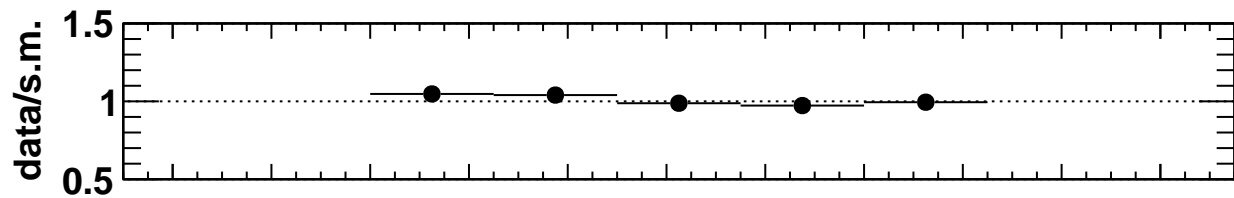
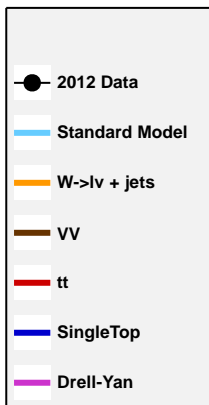


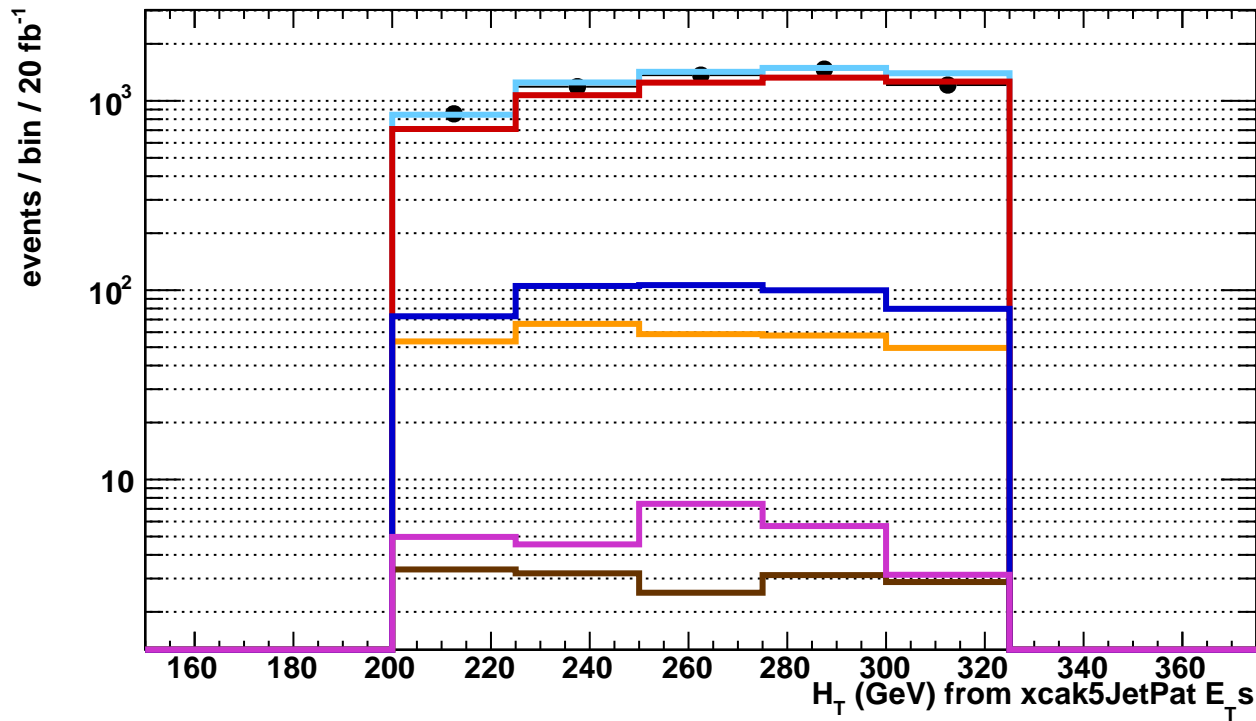
xcak5JetSumEtPat_eq0b	
Entries	66140
Mean	254
RMS	34.79
Underflow	0
Overflow	0
Integral	6.614e+04



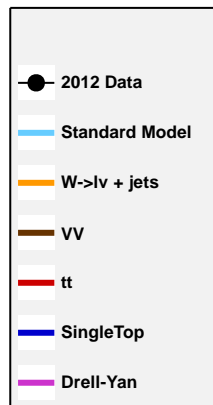


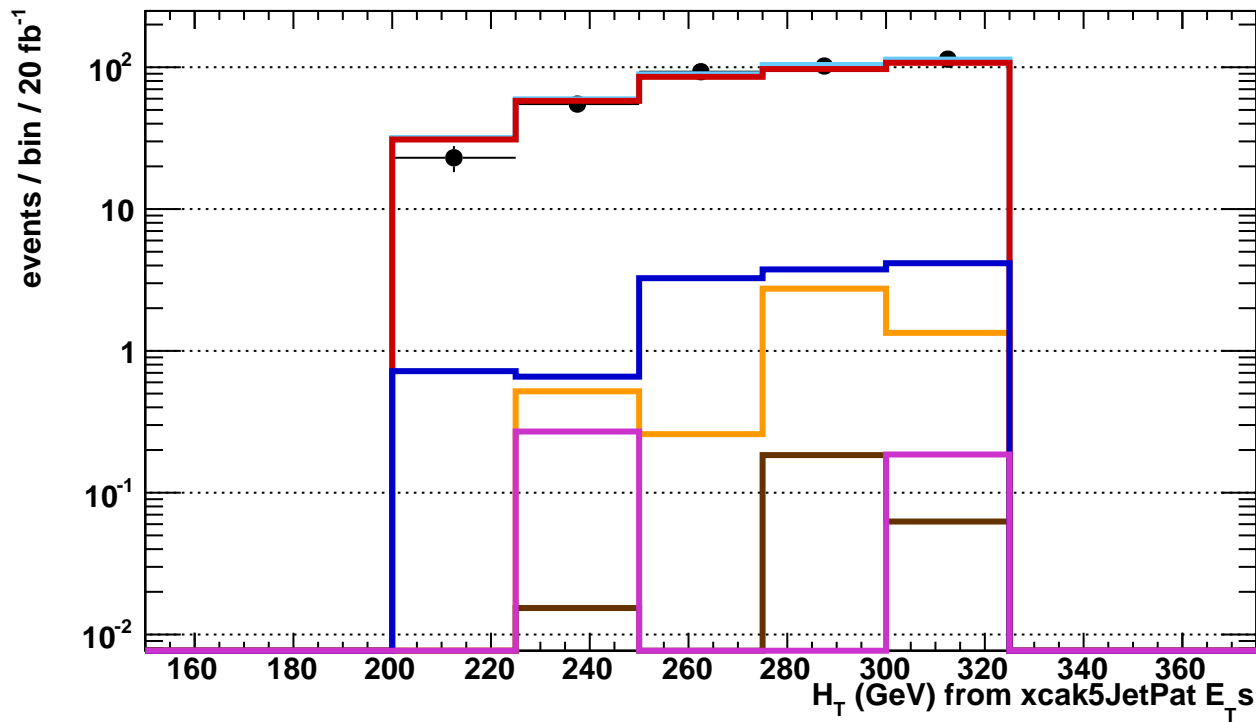
xcak5JetSumEtPat_eq1b	
Entries	17984
Mean	260.2
RMS	34.88
Underflow	0
Overflow	0
Integral	1.798e+04



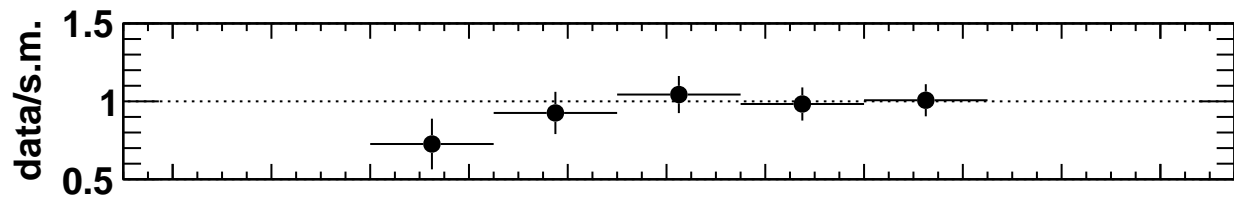
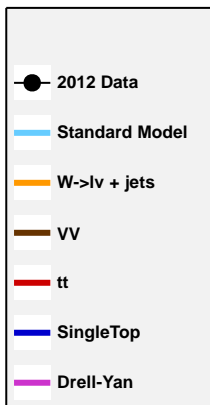


xcak5JetSumEtPat_eq2b	
Entries	6091
Mean	266.8
RMS	33.74
Underflow	0
Overflow	0
Integral	6091

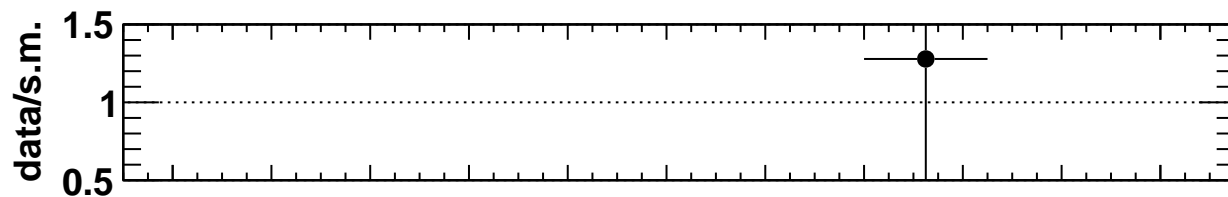
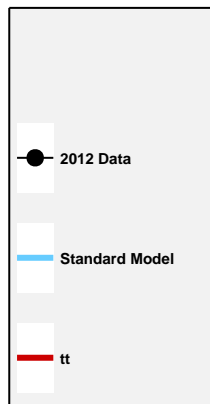
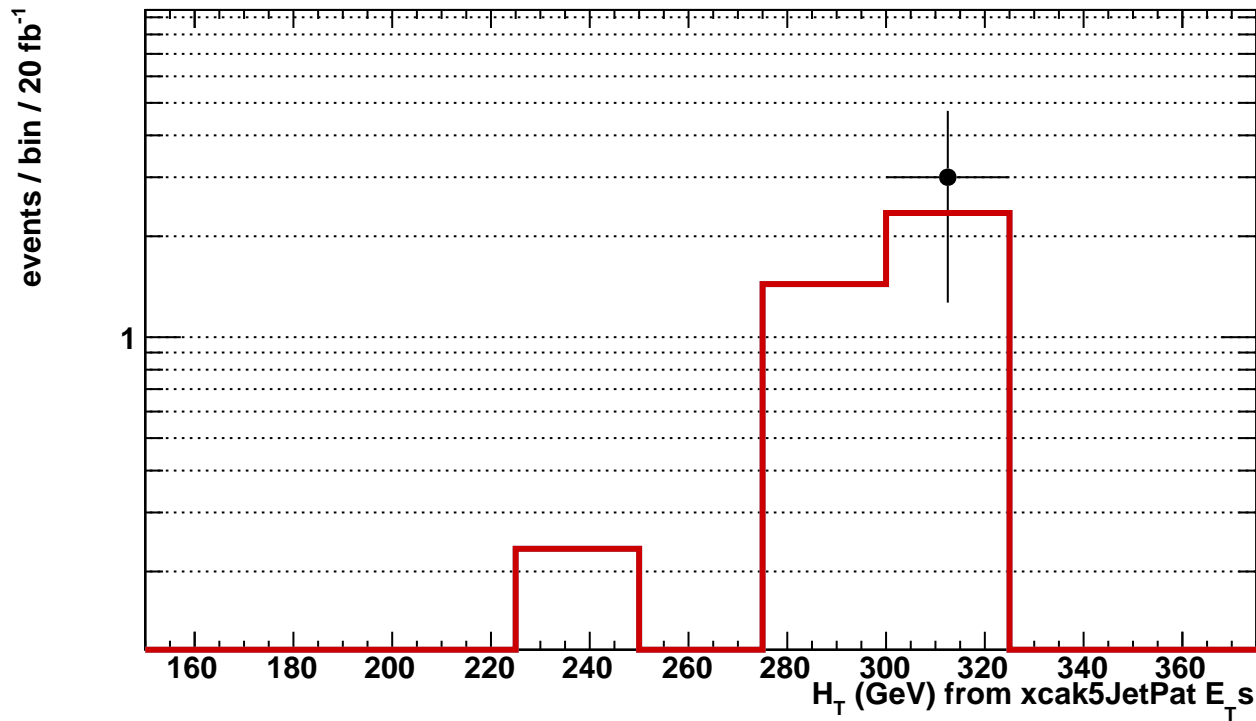


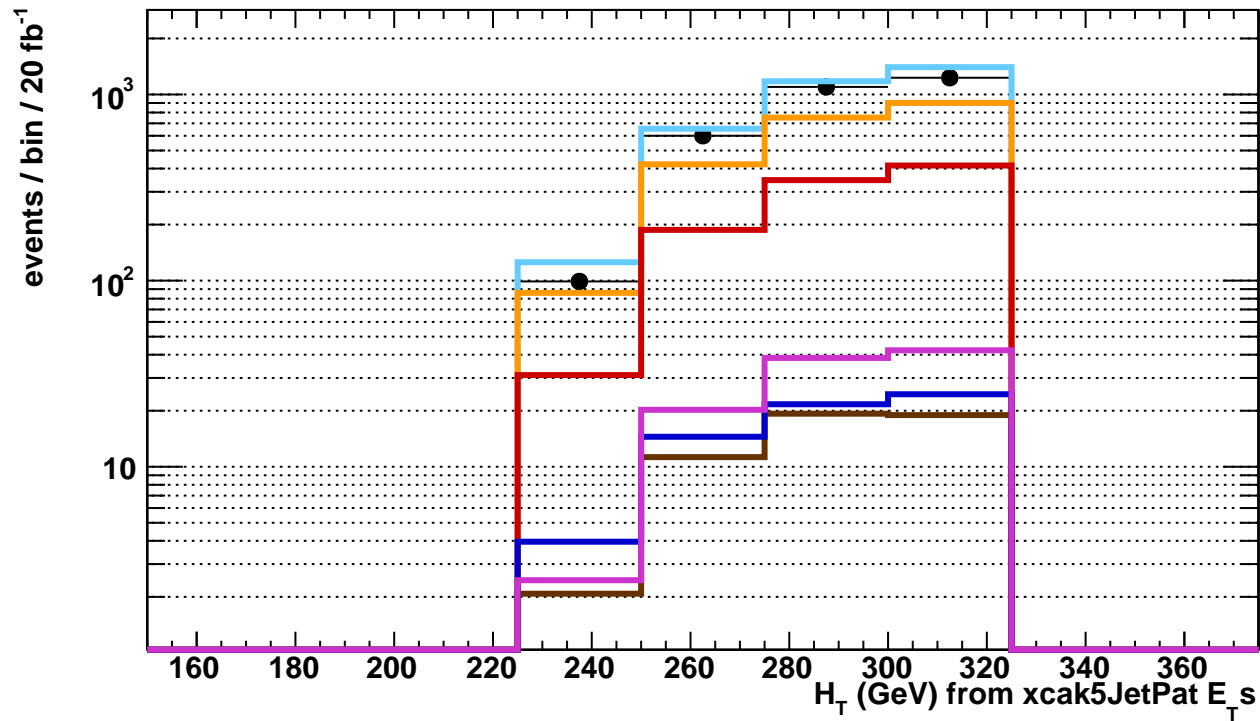


xcak5JetSumEtPat_eq3b	
Entries	387
Mean	278
RMS	31.1
Underflow	0
Overflow	0
Integral	387

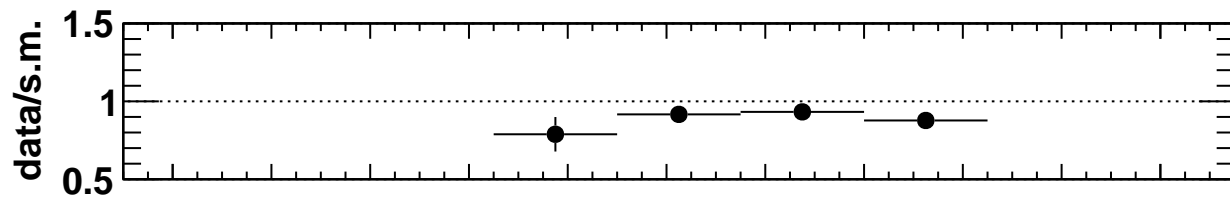
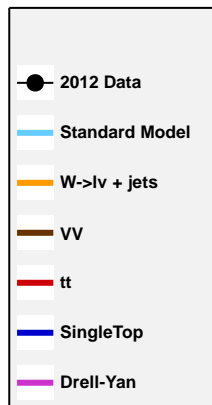


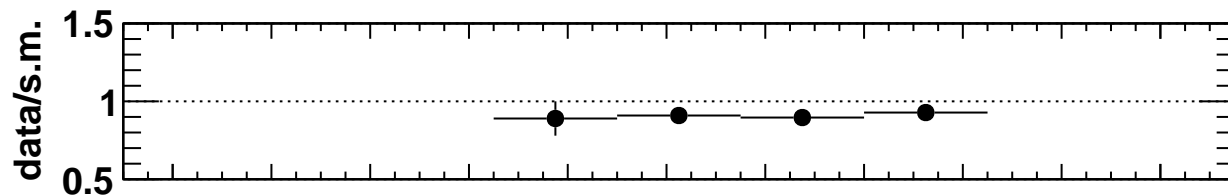
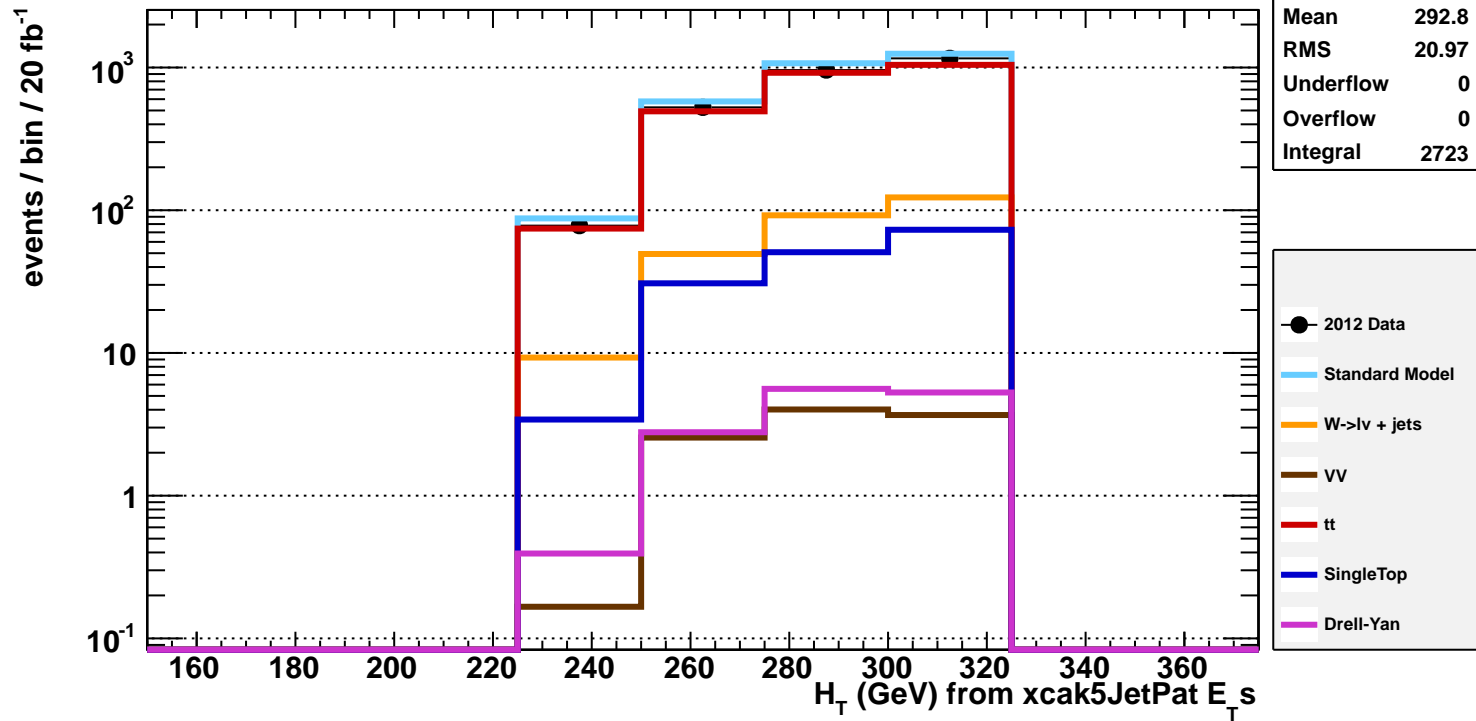


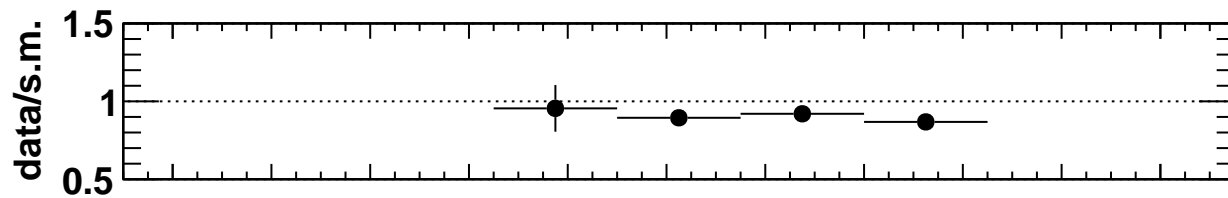
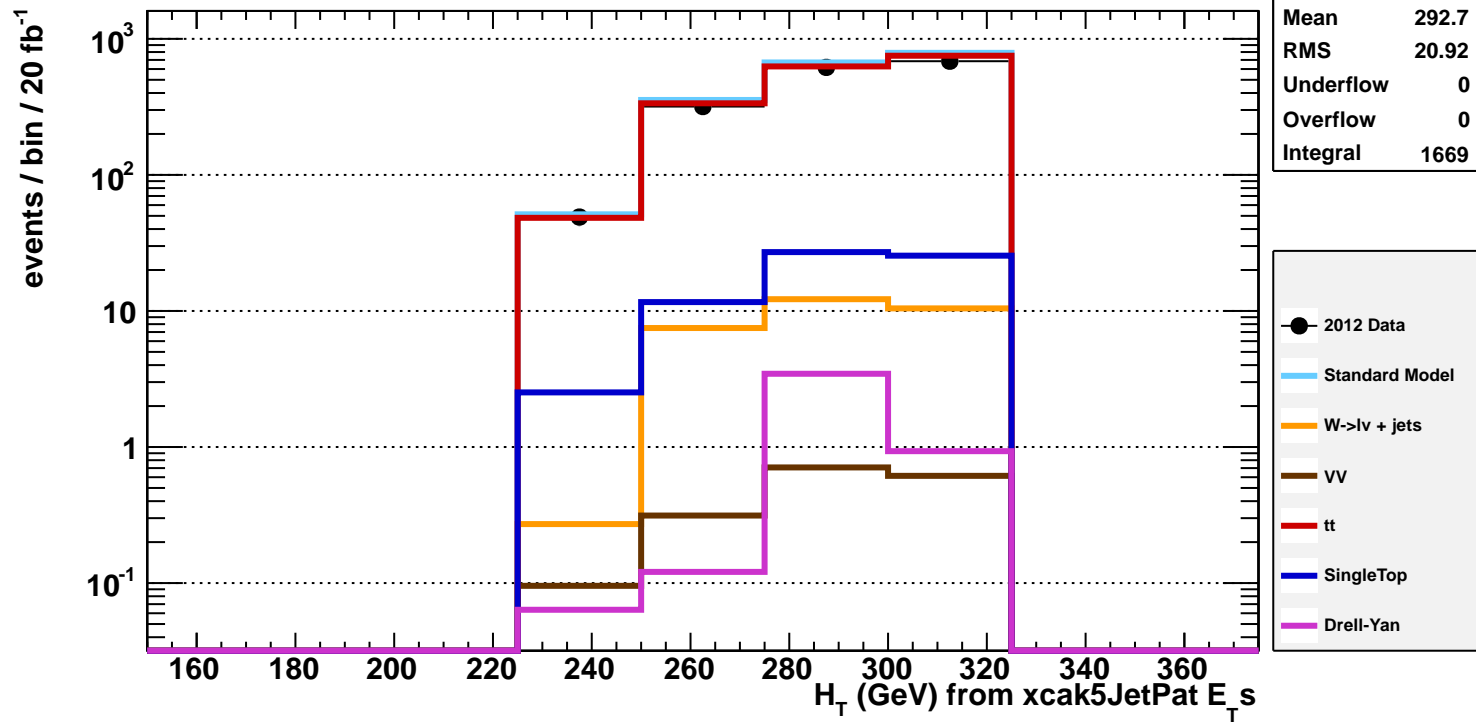


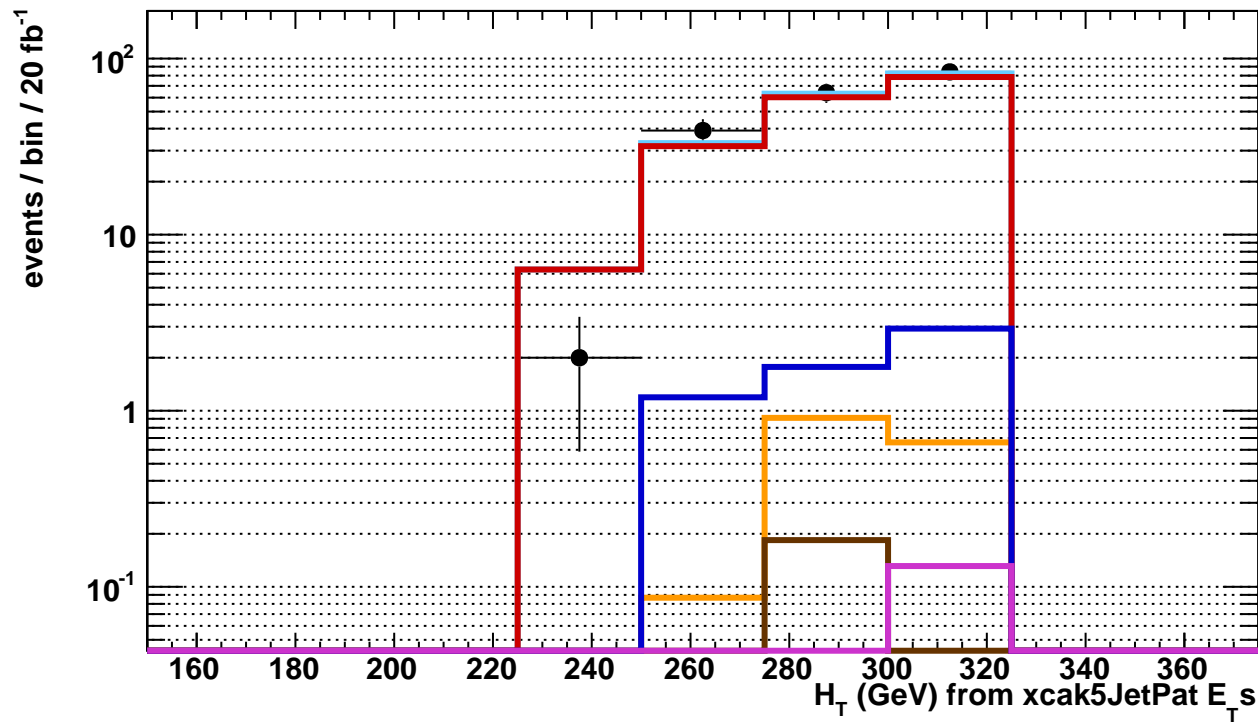


xcak5JetSumEtPat_ge4j_eq0b	
Entries	3027
Mean	291.8
RMS	21.13
Underflow	0
Overflow	0
Integral	3027

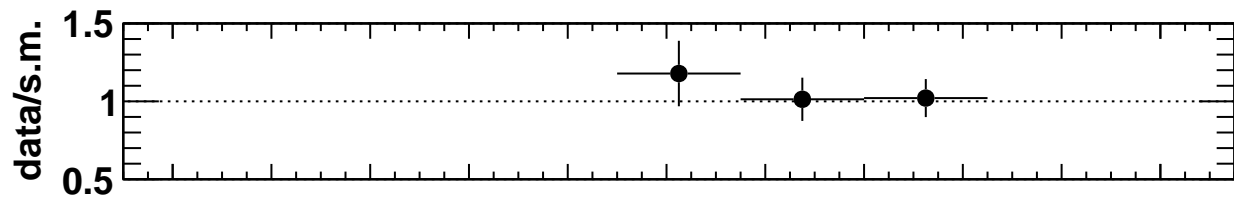
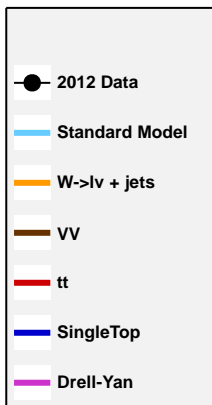




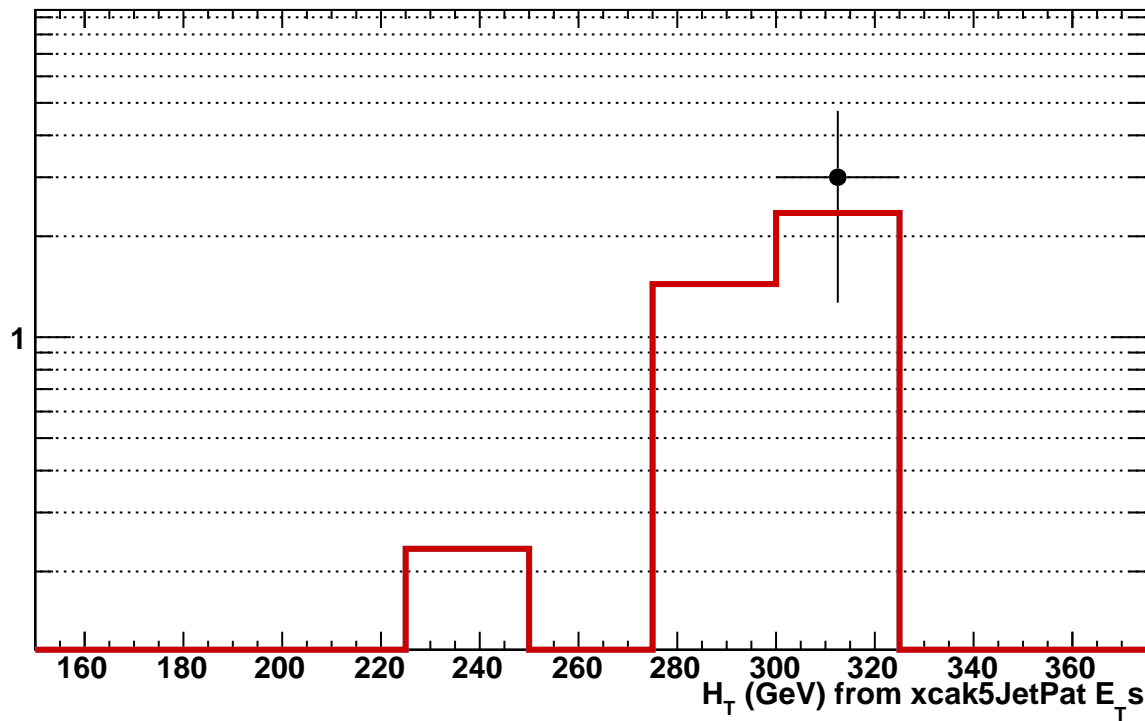




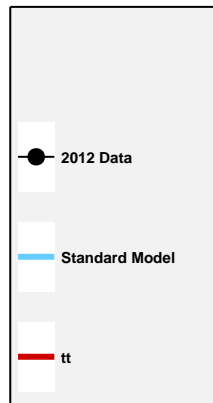
xcak5JetSumEtPat_ge4j_eq3b	
Entries	189
Mean	294
RMS	20.44
Underflow	0
Overflow	0
Integral	189



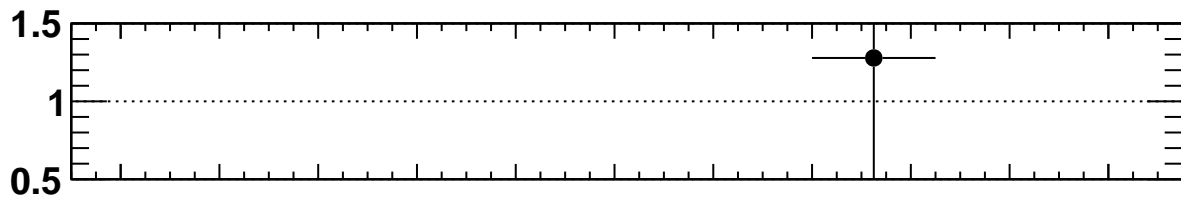
events / bin / 20 fb<sup>-1</sup>

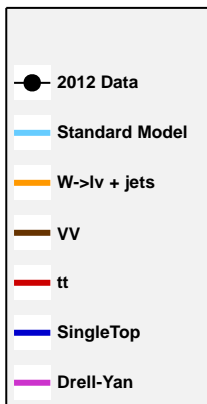
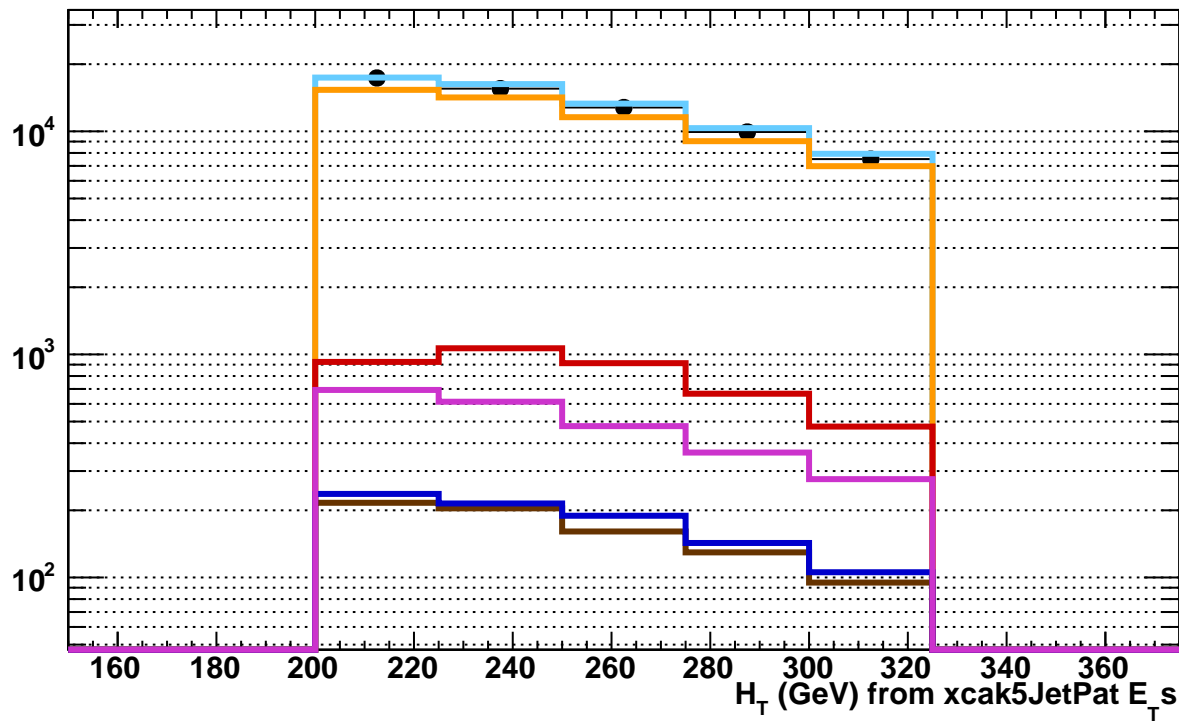


xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	306.9
RMS	3.939
Underflow	0
Overflow	0
Integral	3

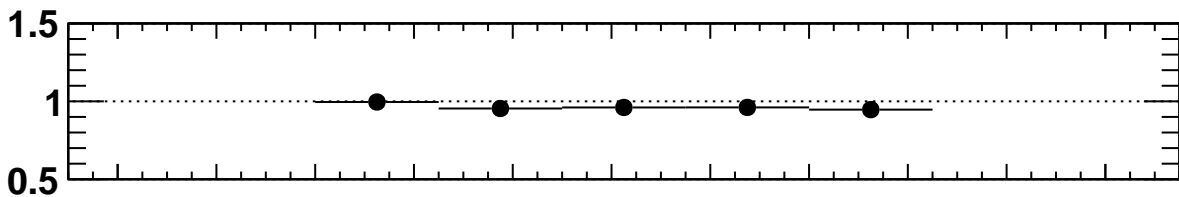


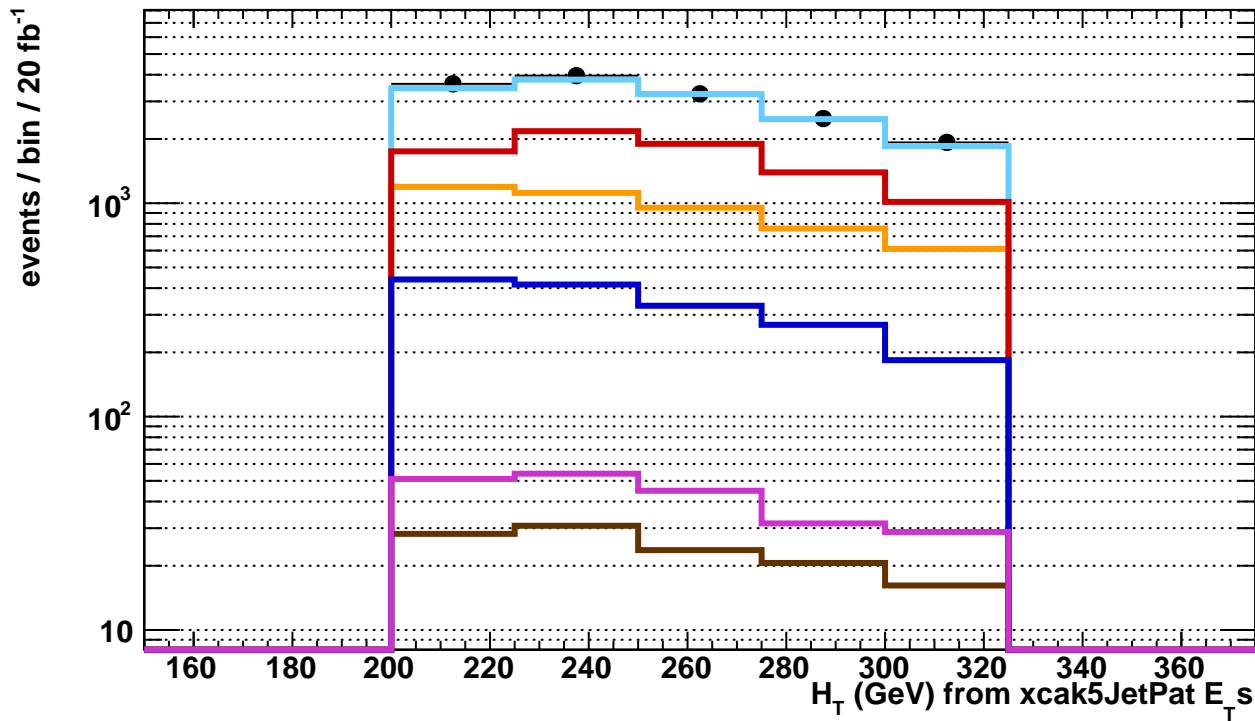
data/s.m.



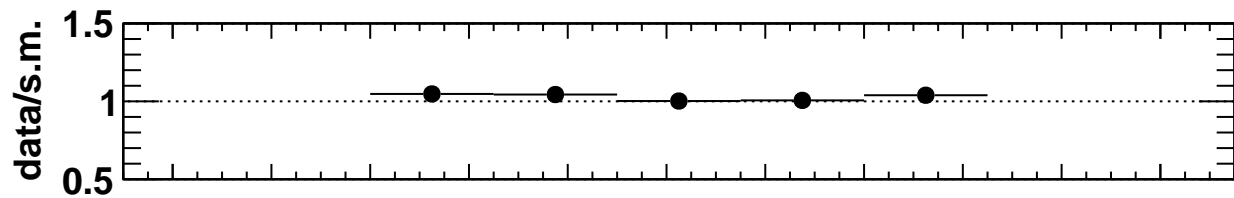
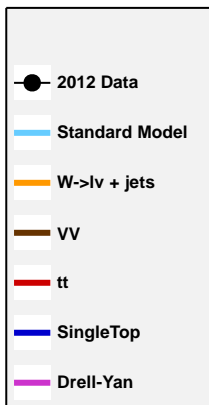
events / bin / 20 fb<sup>-1</sup>

data/s.m.

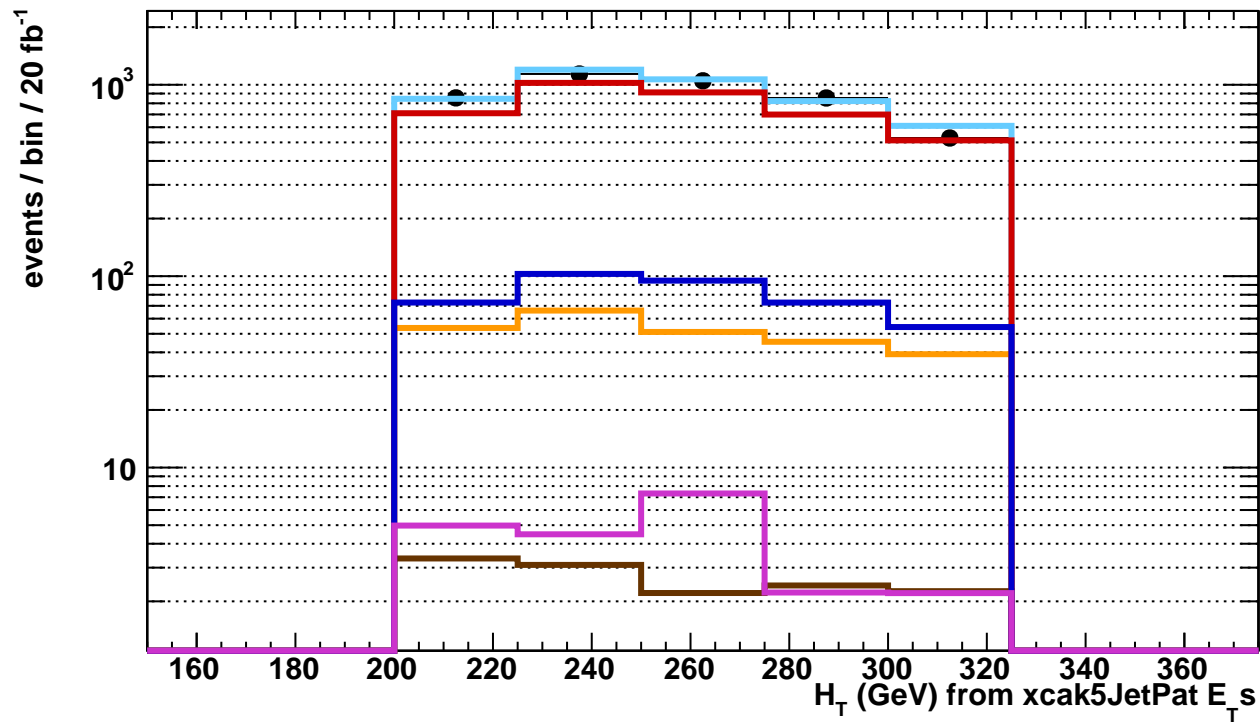




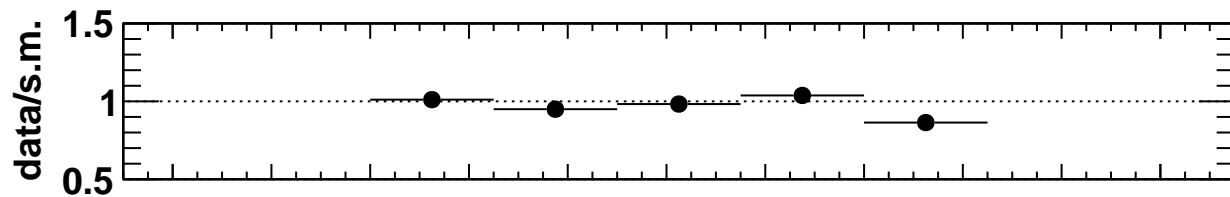
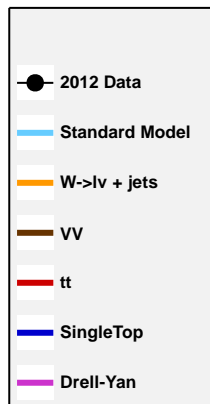
xcak5JetSumEtPat_le3j_eq1b	
Entries	15261
Mean	254.3
RMS	33.63
Underflow	0
Overflow	0
Integral	1.526e+04

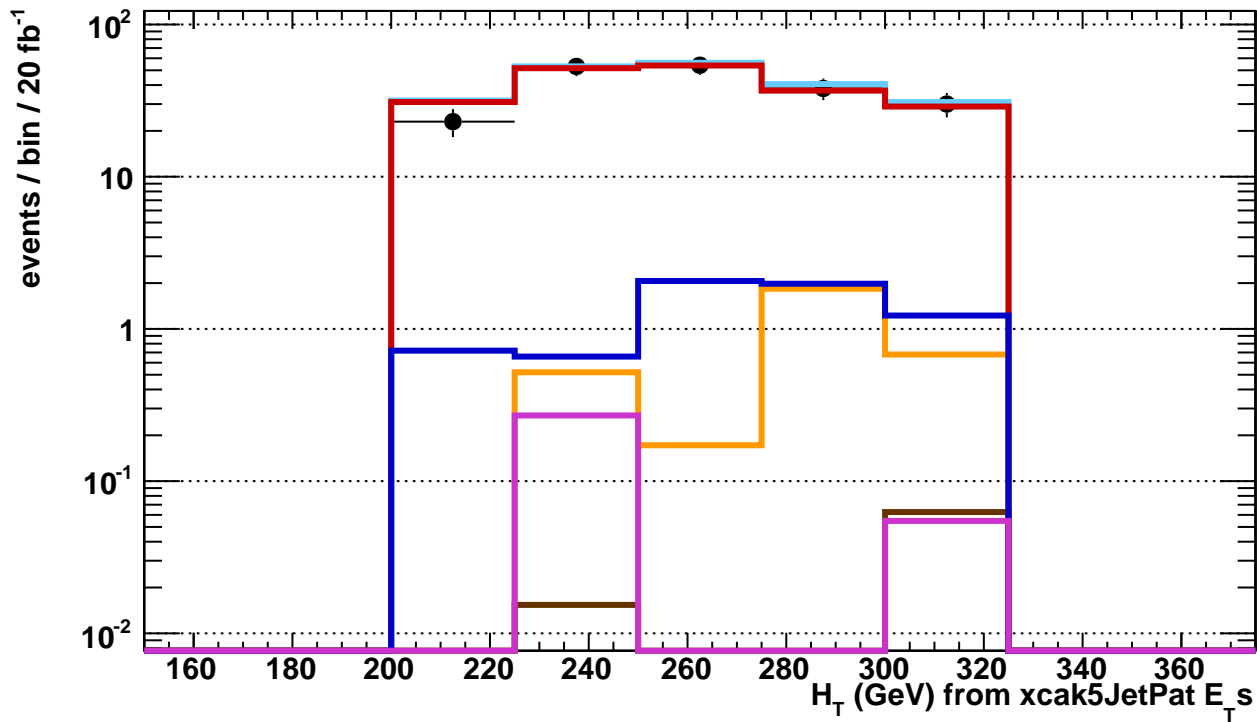




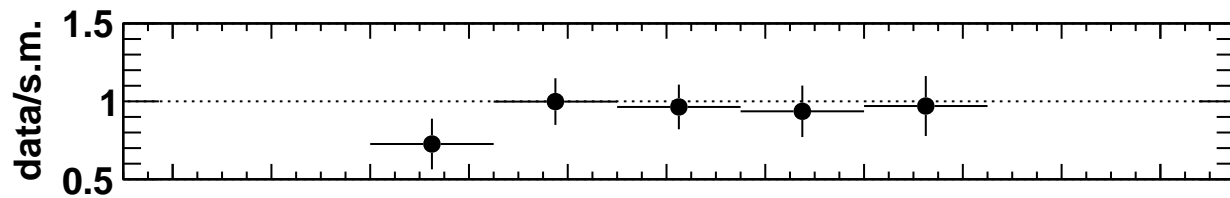
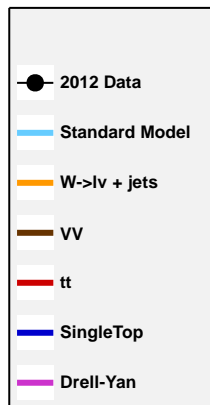


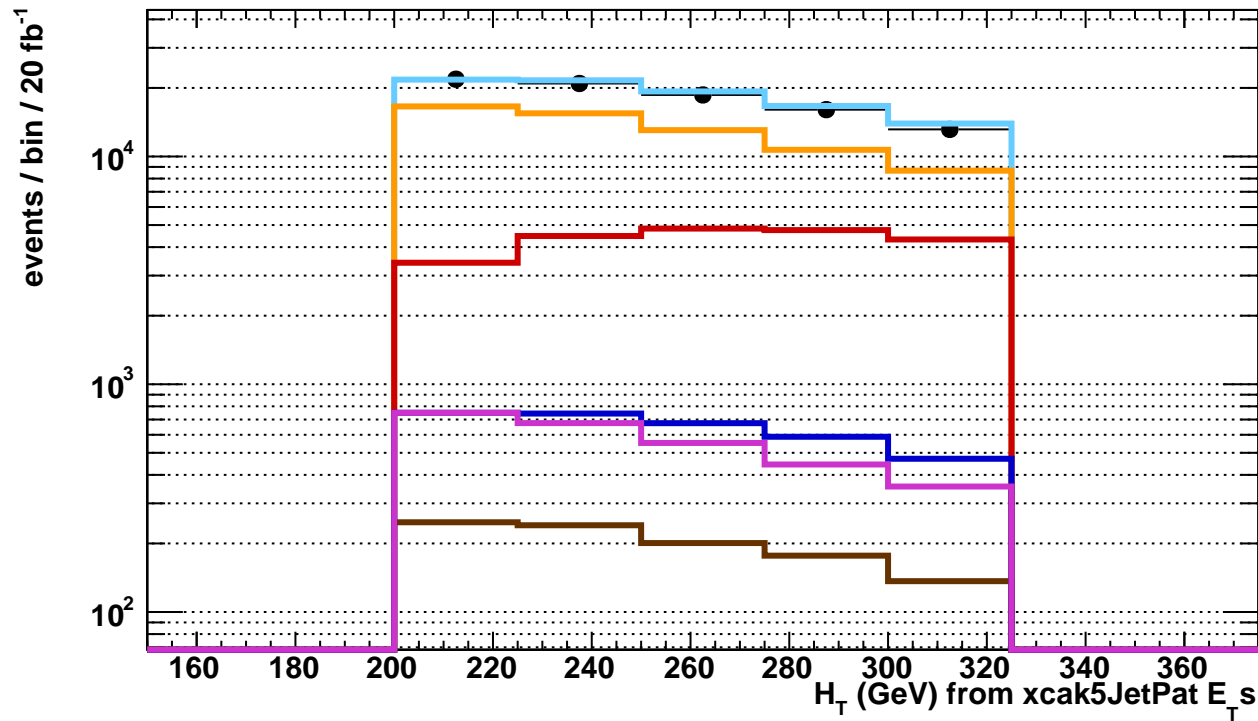
xcak5JetSumEtPat_le3j_eq2b	
Entries	4422
Mean	257.1
RMS	32.48
Underflow	0
Overflow	0
Integral	4422



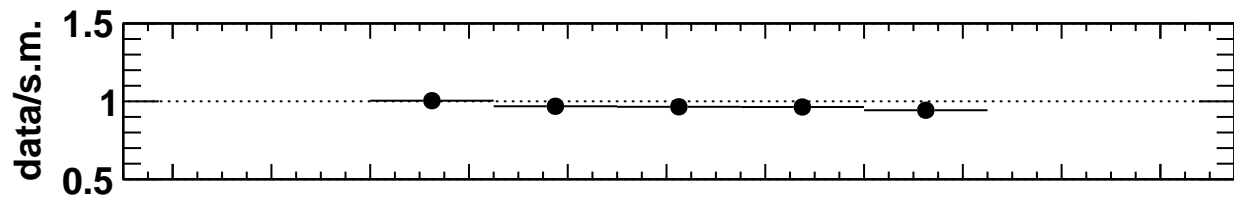
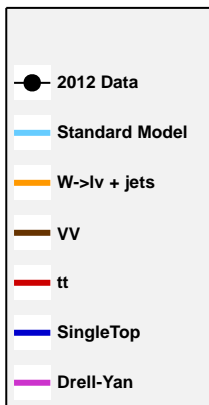


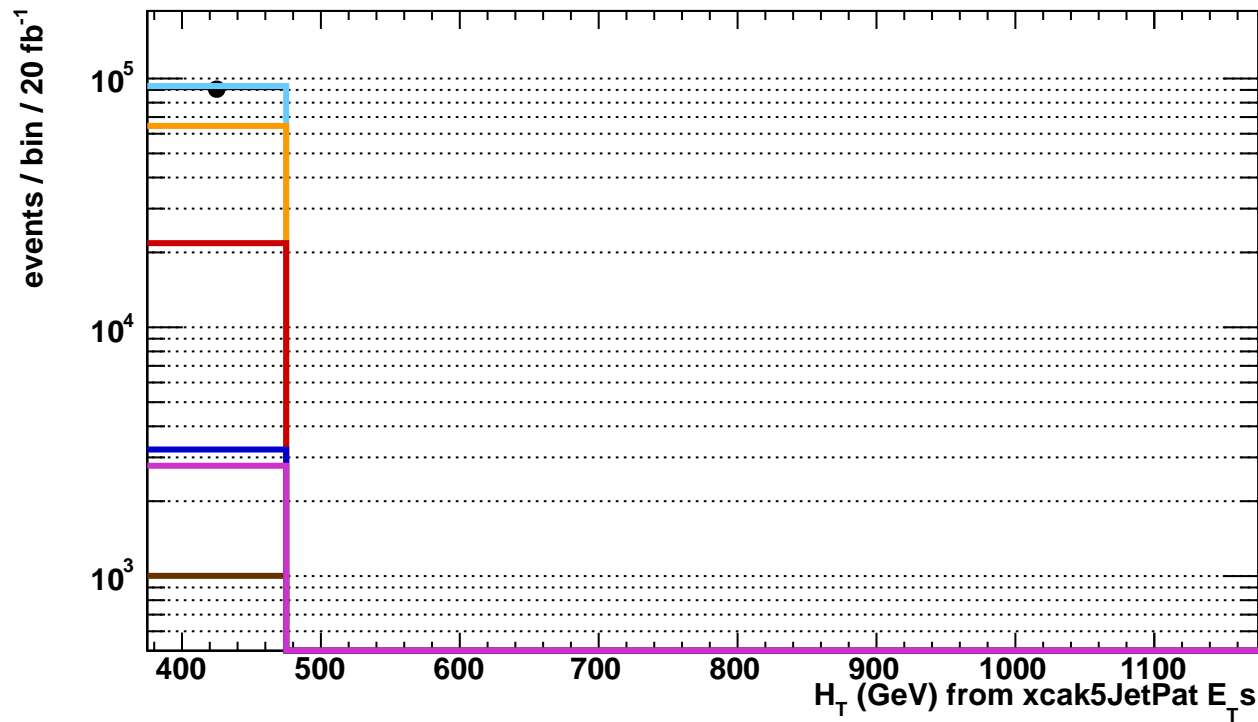
xcak5JetSumEtPat_le3j_eq3b	
Entries	198
Mean	262.6
RMS	31.8
Underflow	0
Overflow	0
Integral	198



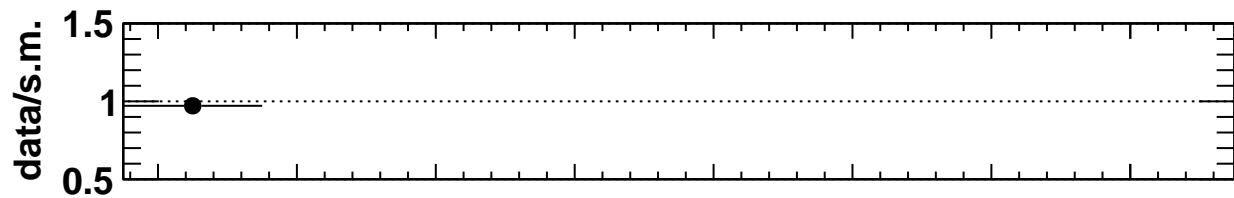
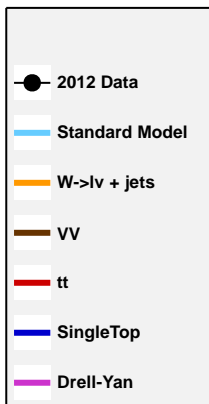


xcak5JetSumEtPat	
Entries	90605
Mean	256.2
RMS	34.96
Underflow	0
Overflow	0
Integral	9.06e+04

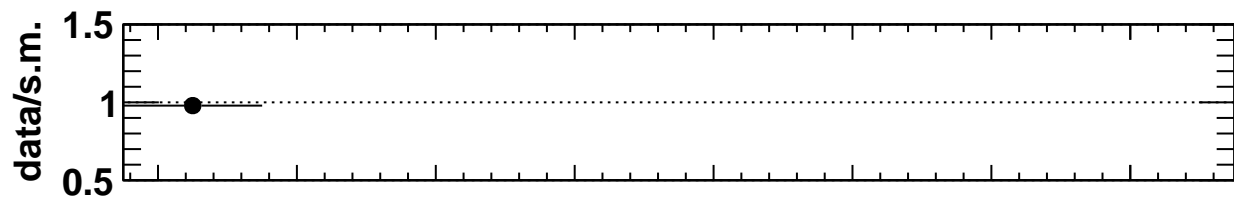
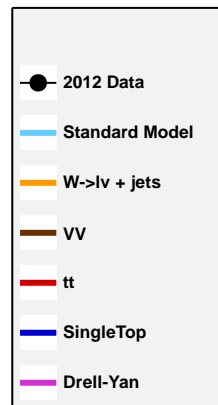
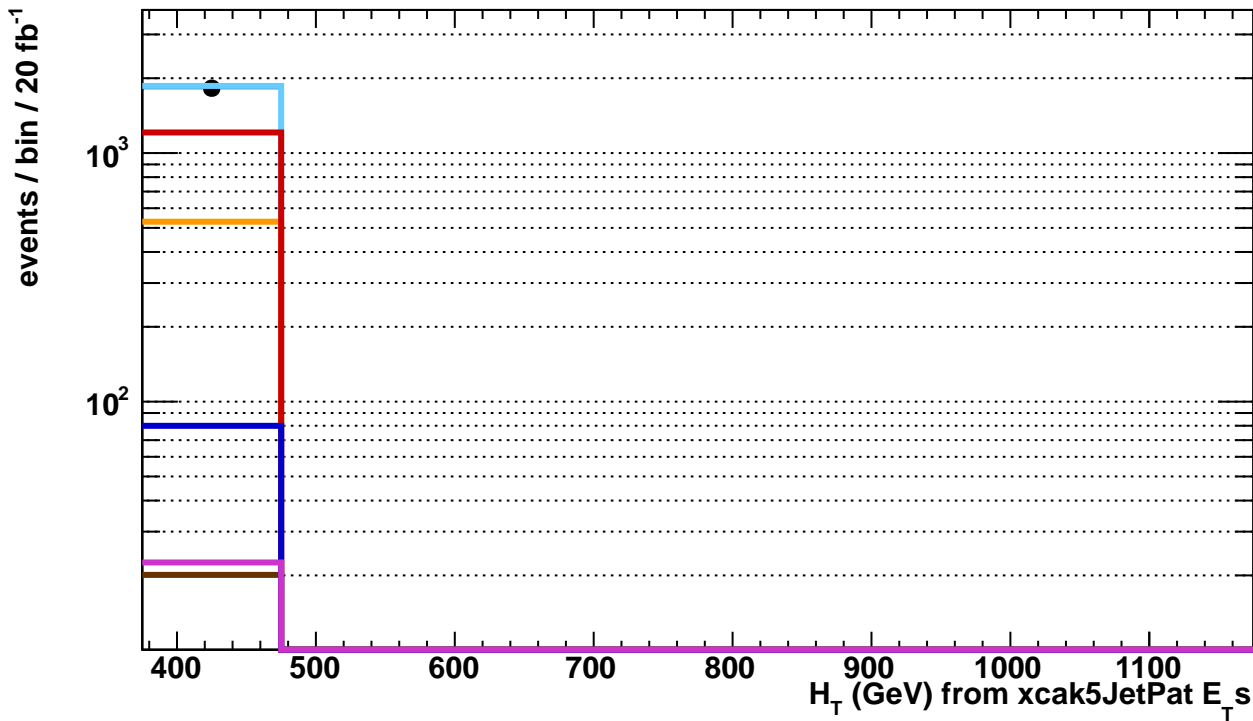


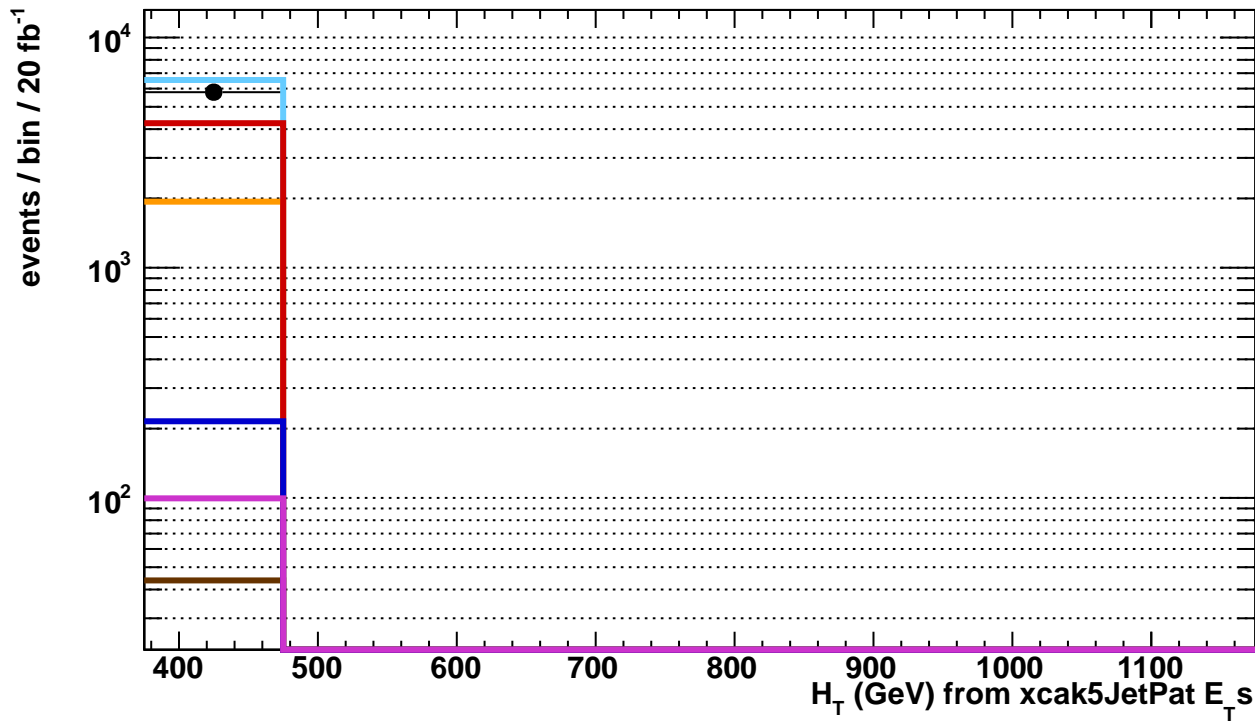


xcak5JetSumEtPat	
Entries	90605
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	9.06e+04

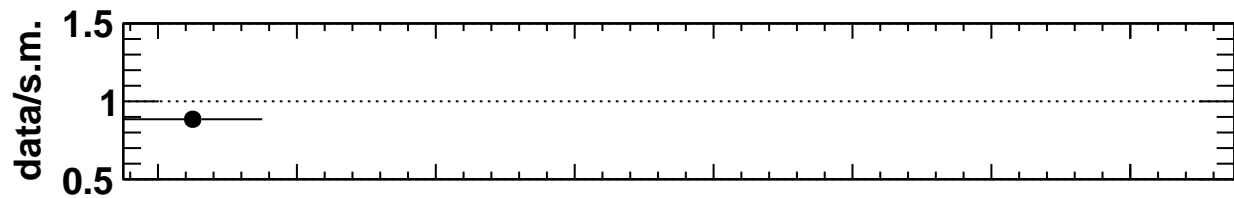
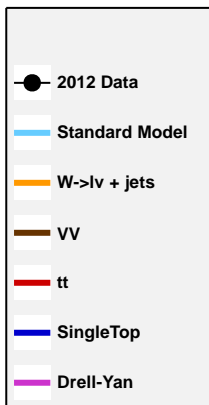


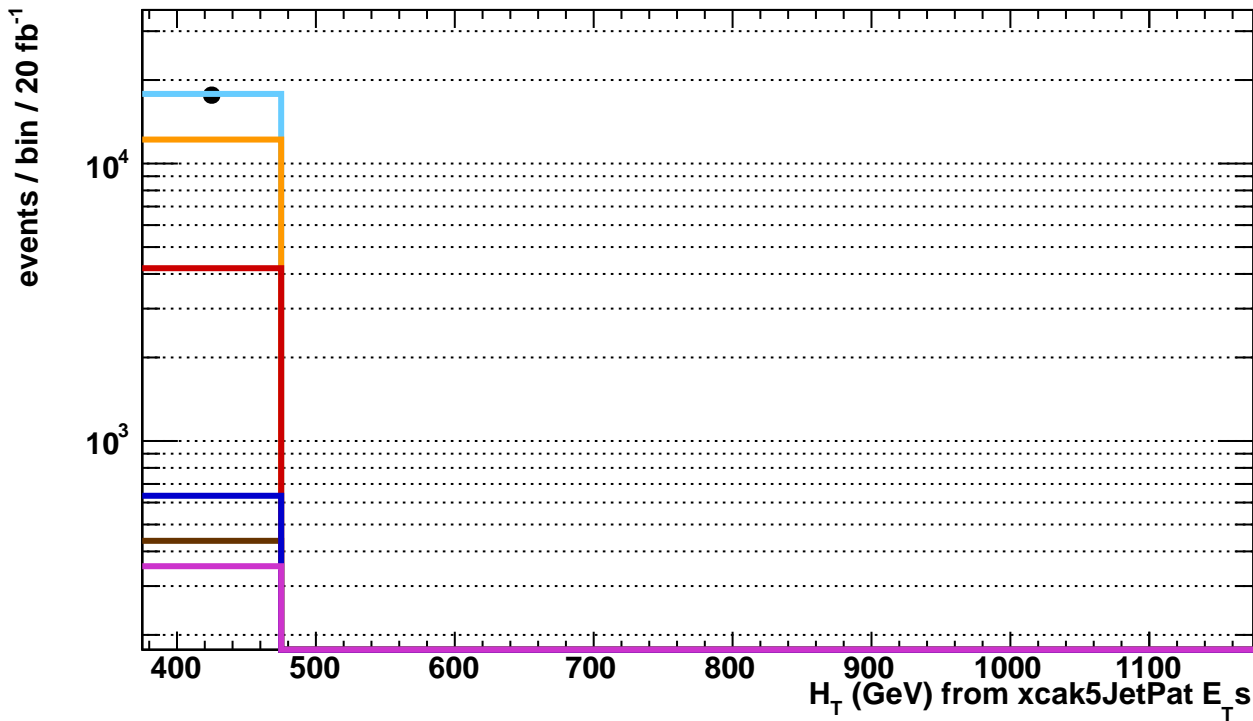
xcak5JetSumEtPat_ge4j_aTge55	
Entries	1823
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1823



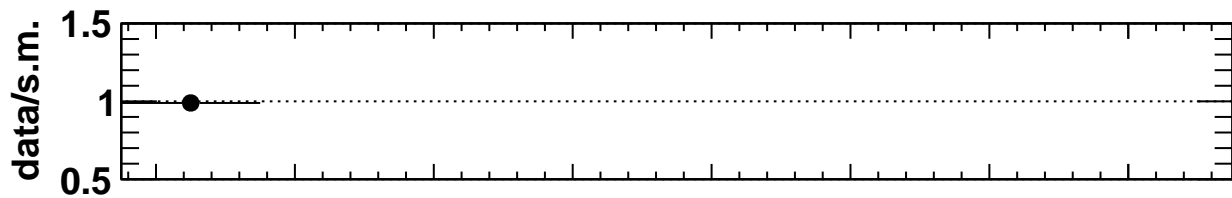
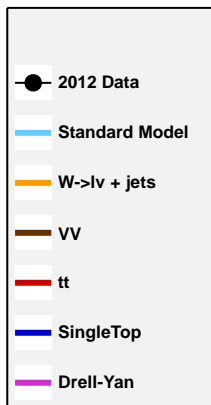


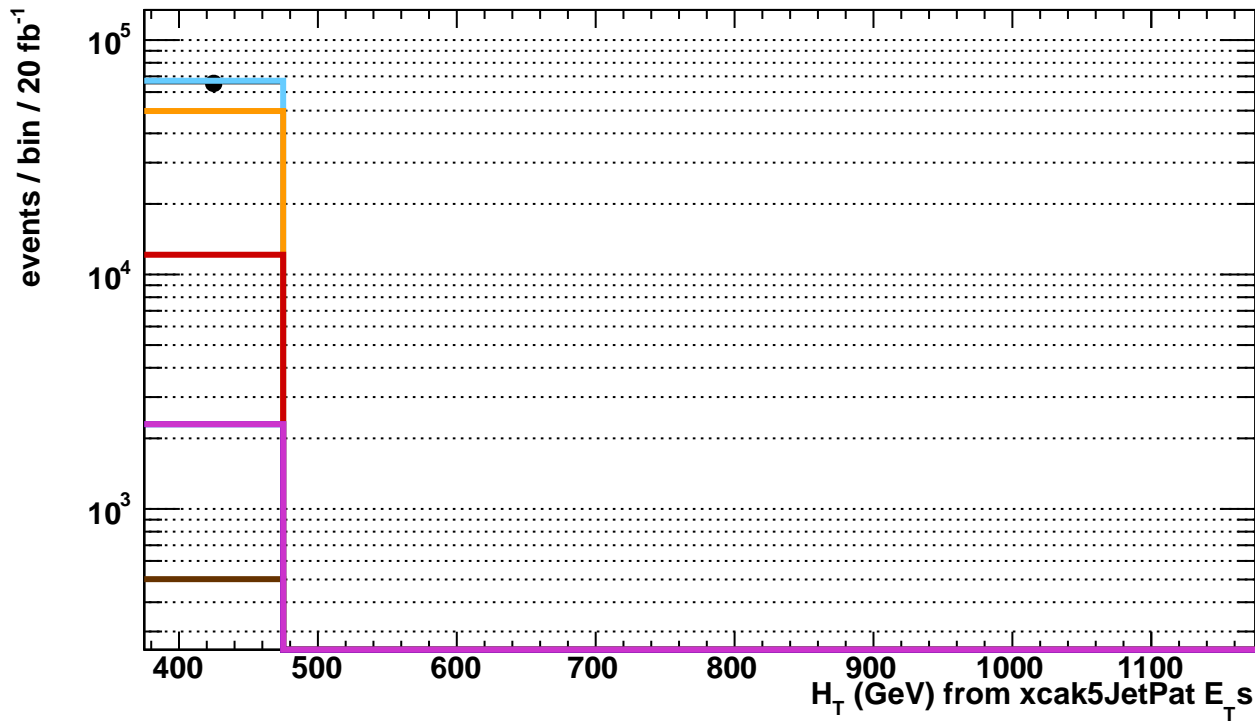
xcak5JetSumEtPat_ge4j_aTl55	
Entries	5788
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	5788



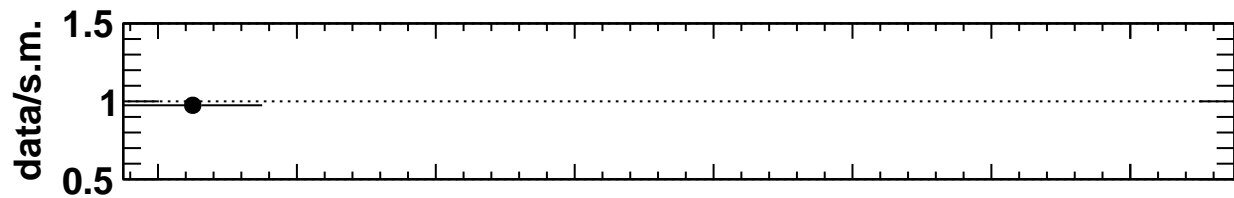
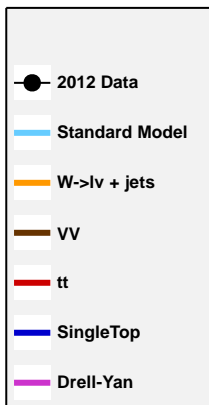


xcak5JetSumEtPat_le3j_aTge55	
Entries	17639
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.764e+04

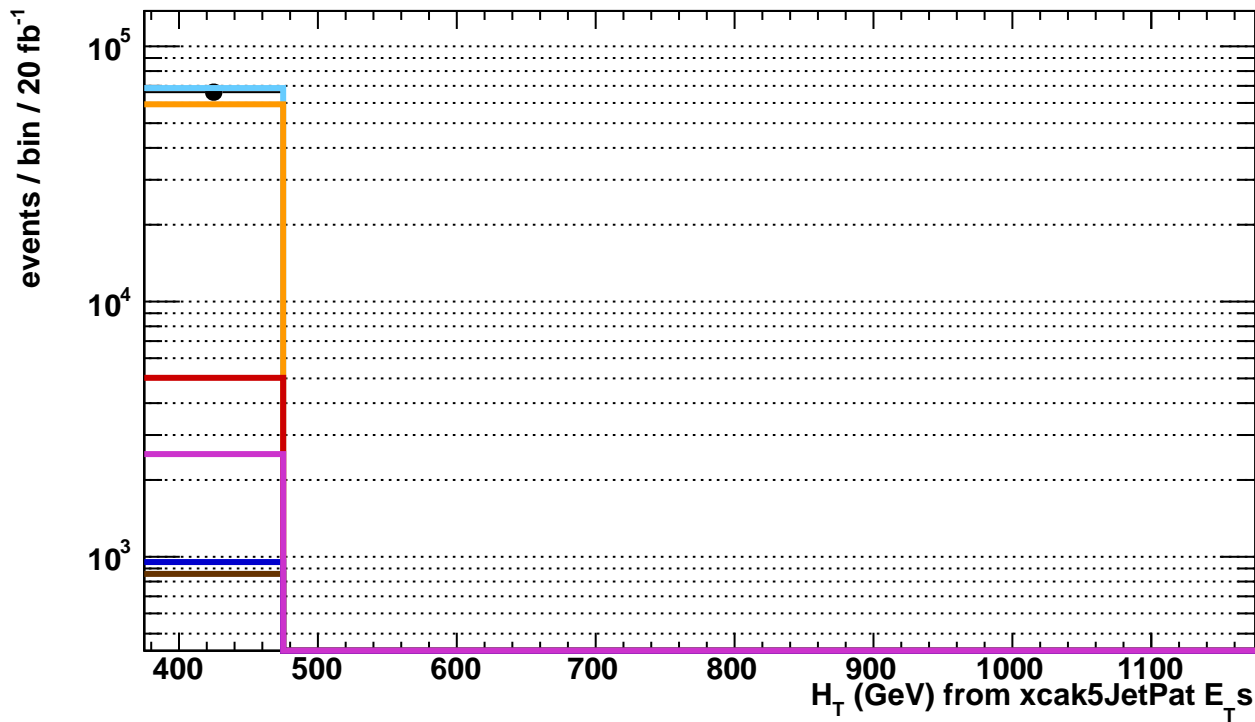




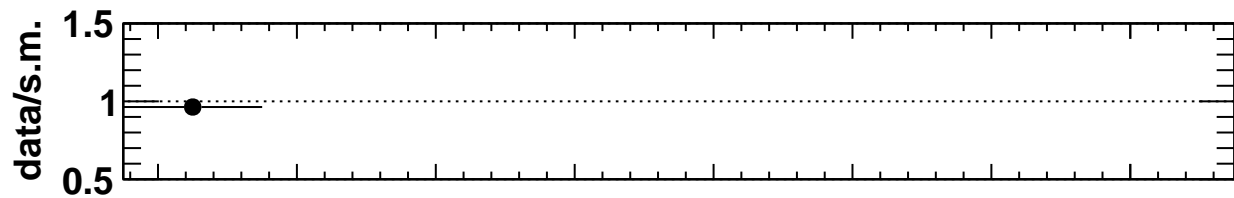
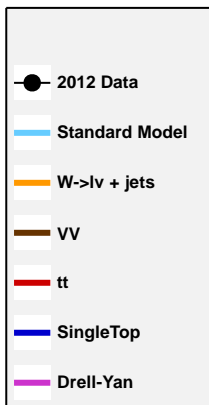
xcak5JetSumEtPat_le3j_aTl55	
Entries	65355
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.536e+04

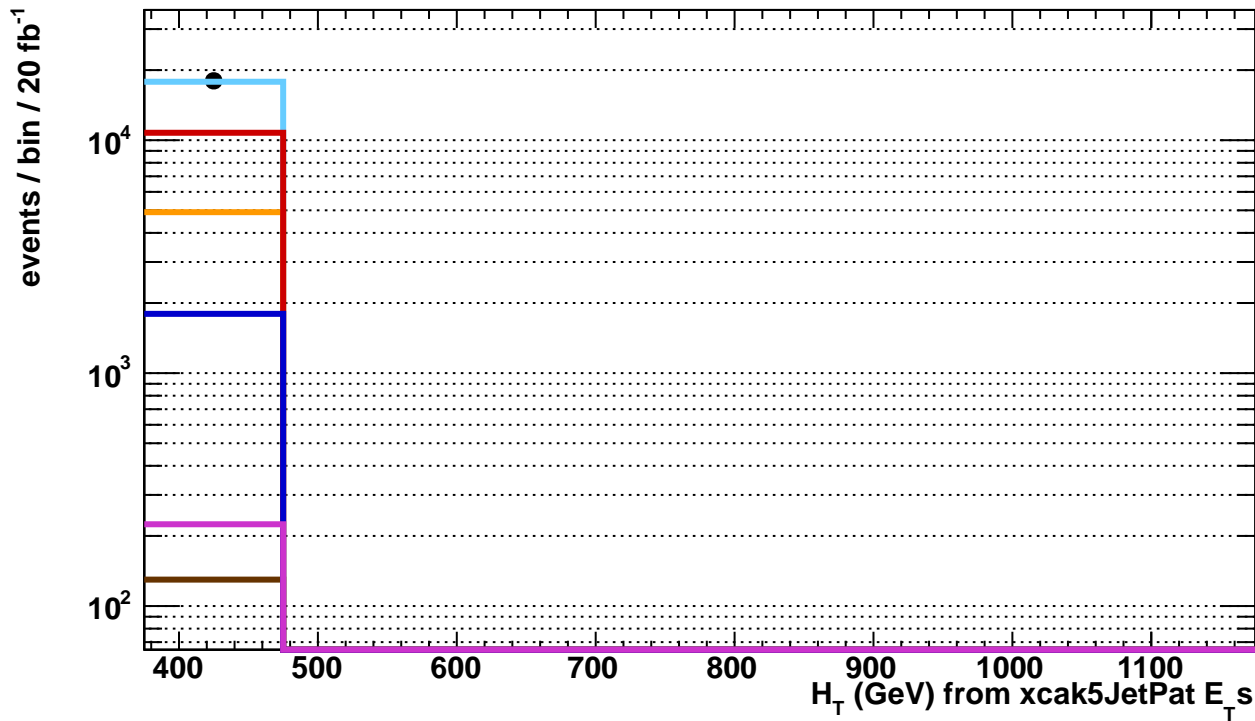




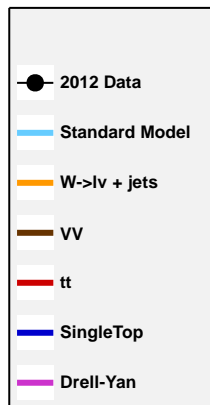


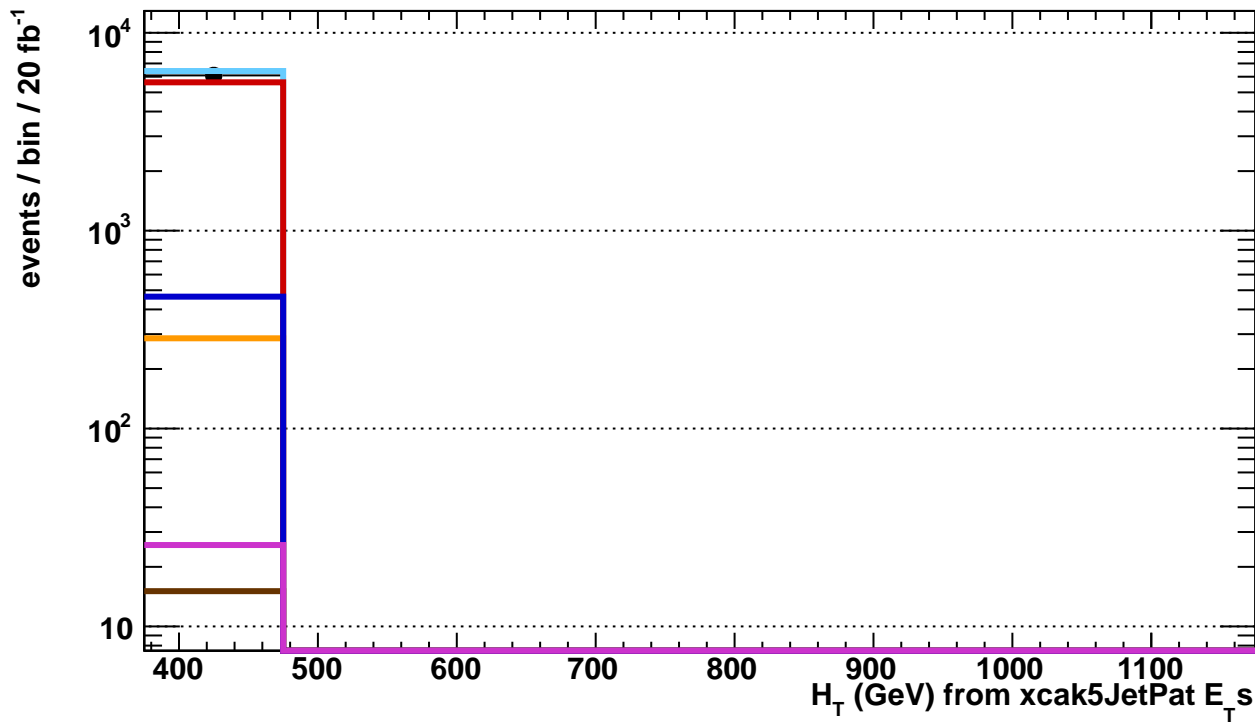
xcak5JetSumEtPat_eq0b	
Entries	66140
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.614e+04



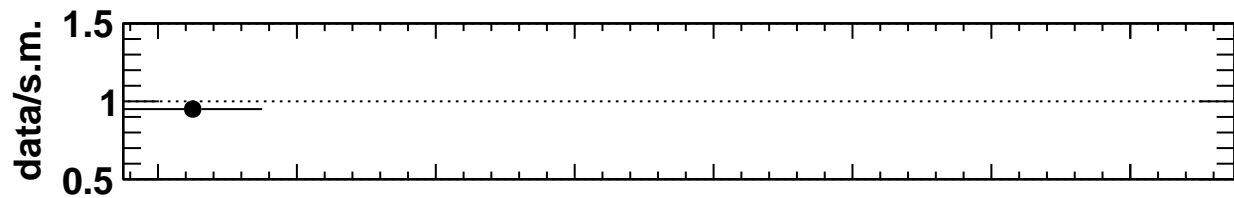
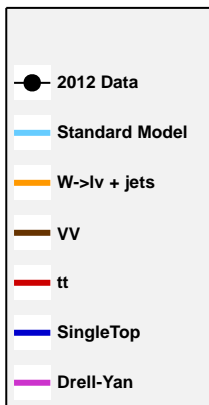


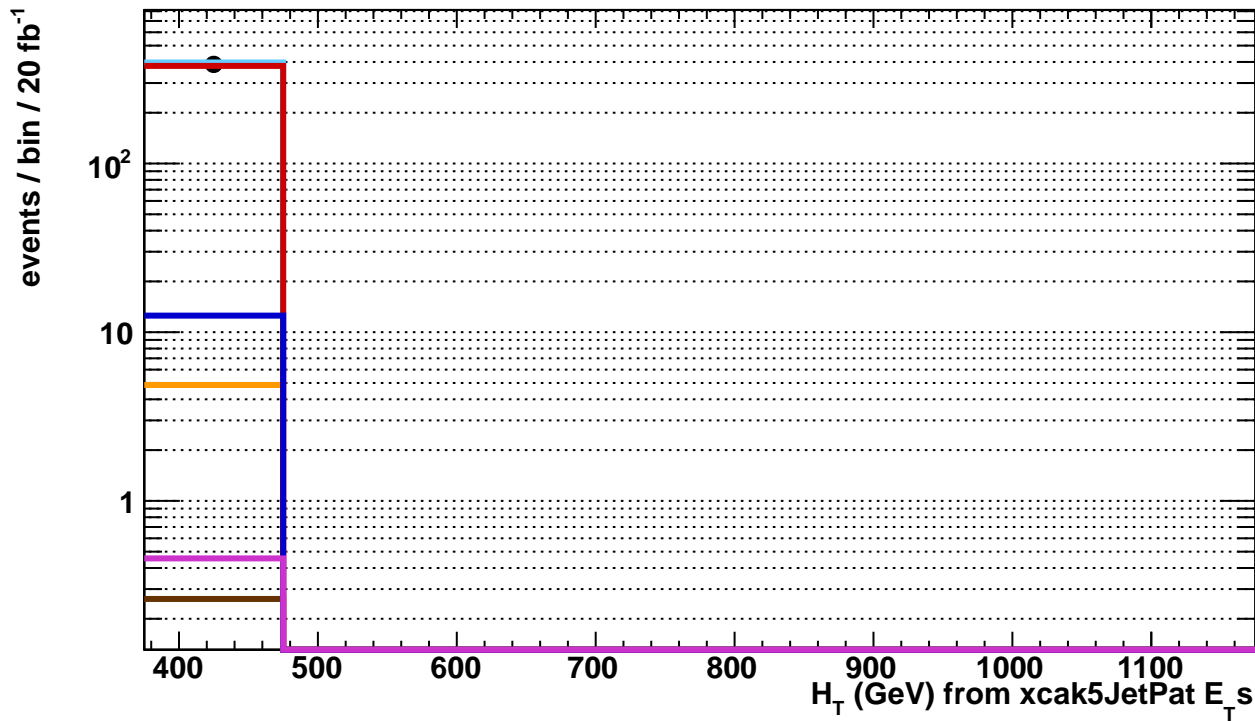
xcak5JetSumEtPat_eq1b	
Entries	17984
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.798e+04



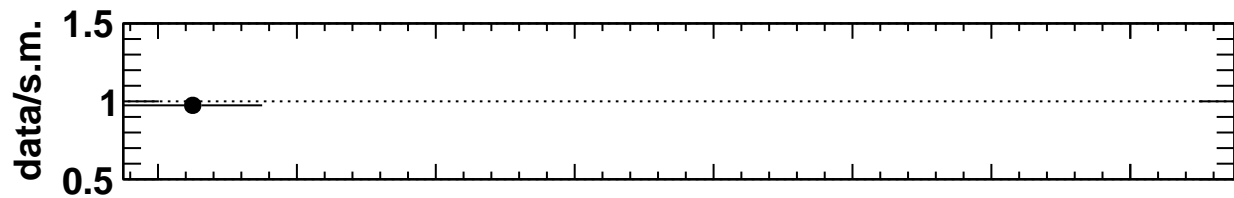
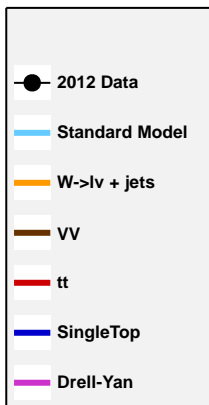


xcak5JetSumEtPat_eq2b	
Entries	6091
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6091

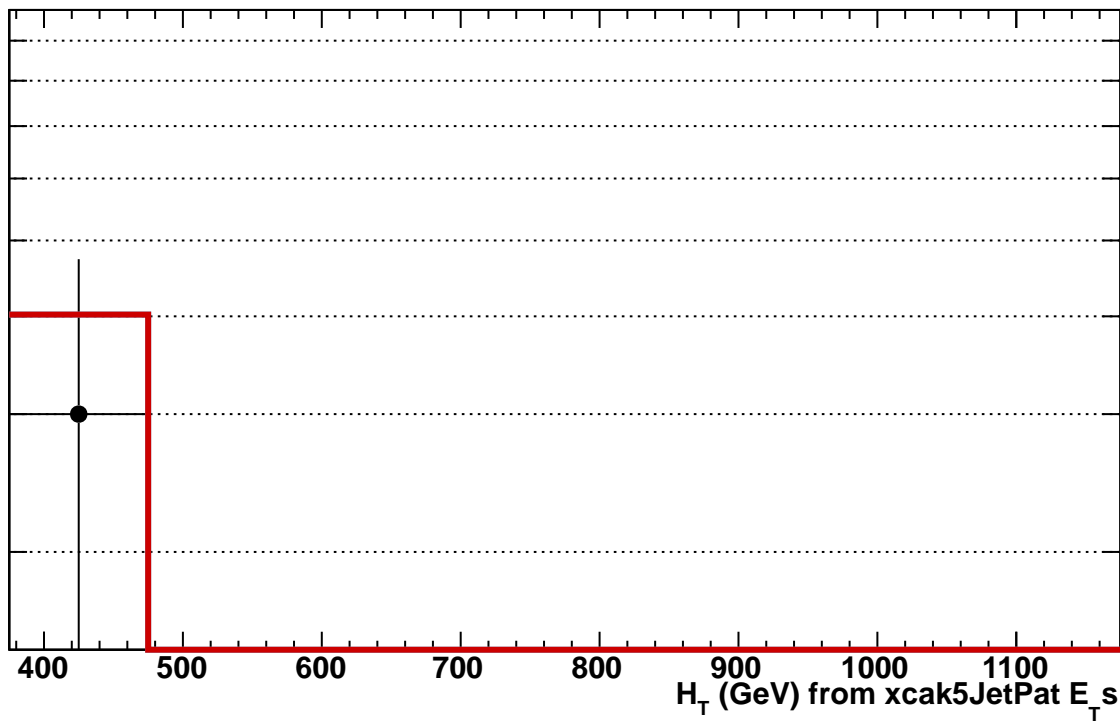




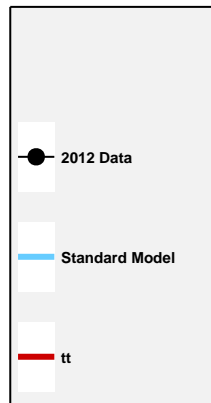
xcak5JetSumEtPat_eq3b	
Entries	387
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	387



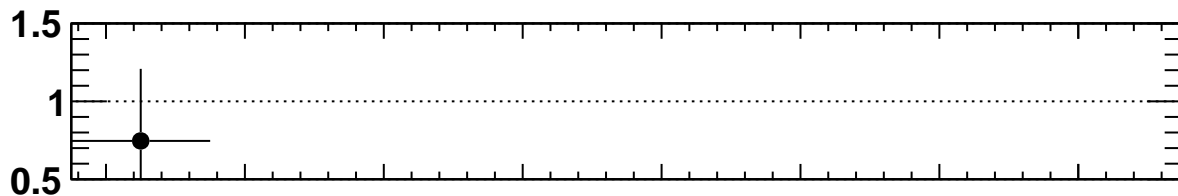
events / bin / 20 fb<sup>-1</sup>



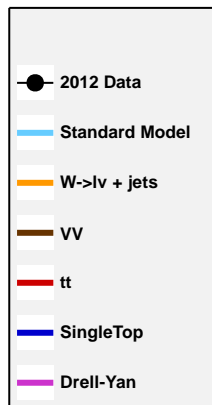
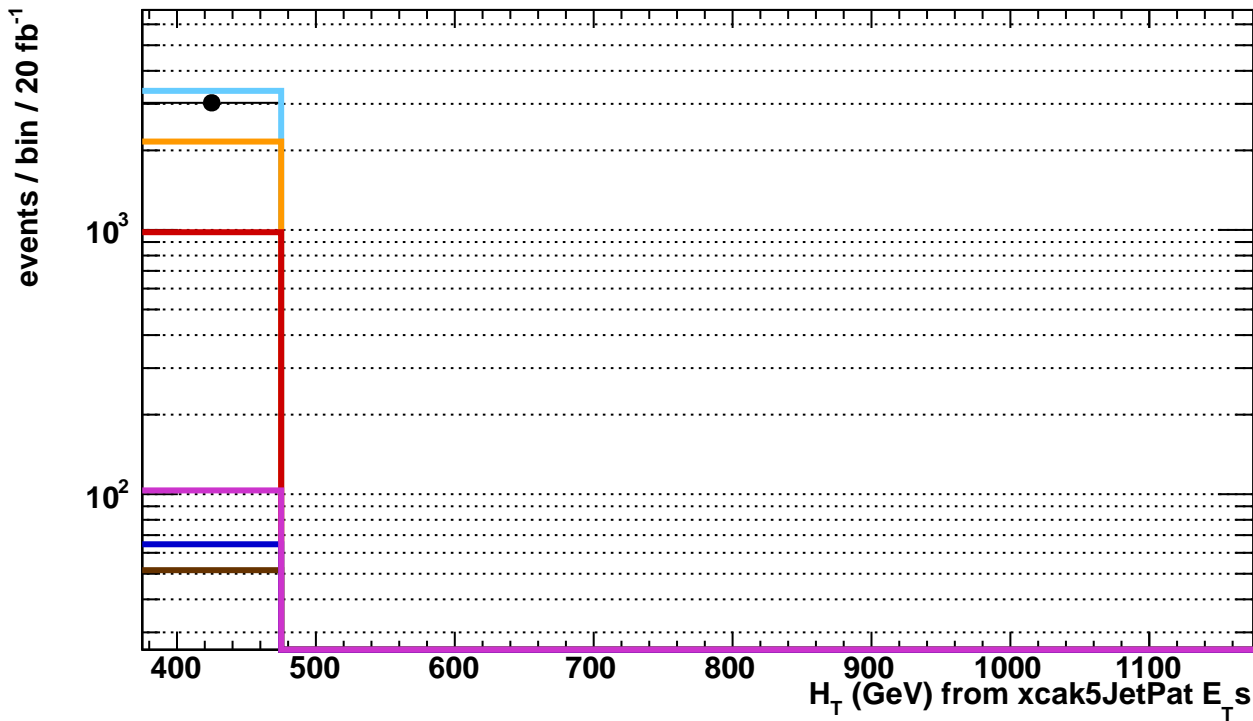
xcak5JetSumEtPat_ge4b	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3

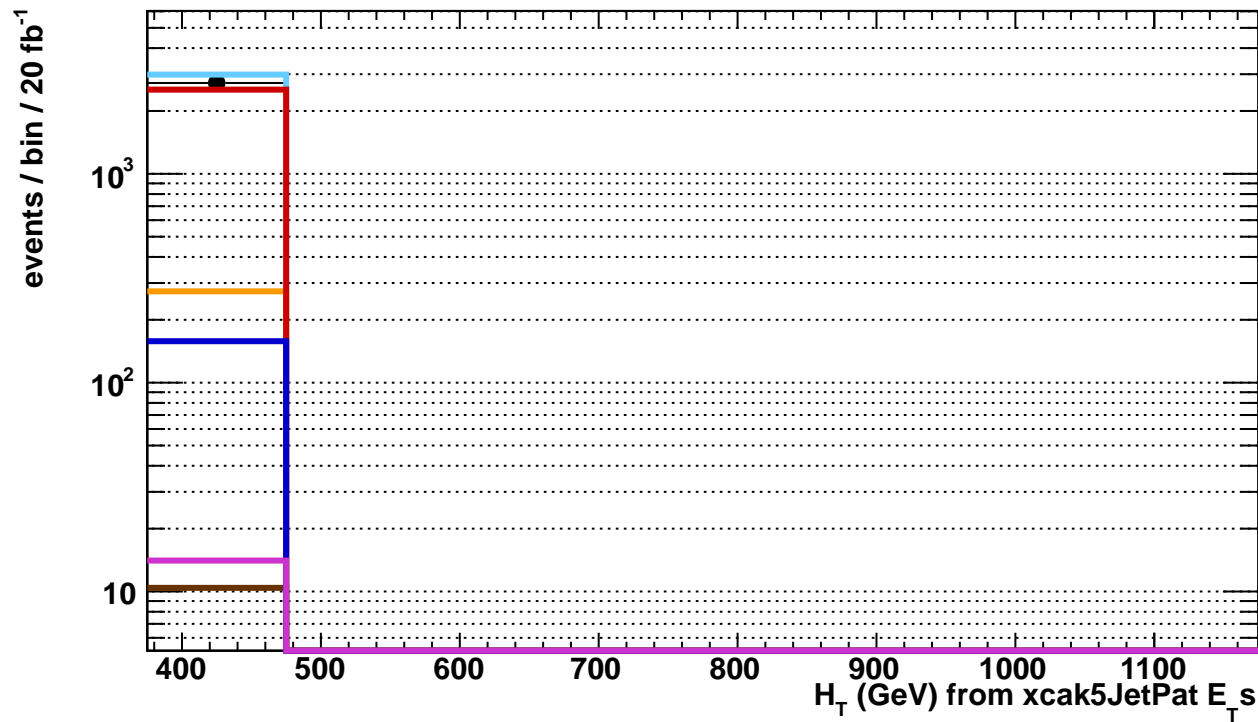


data/s.m.

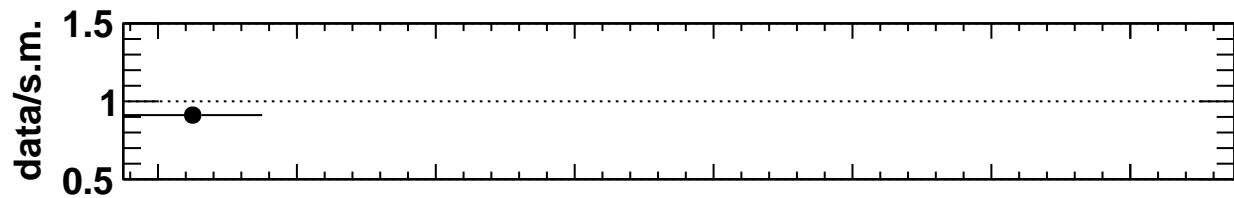


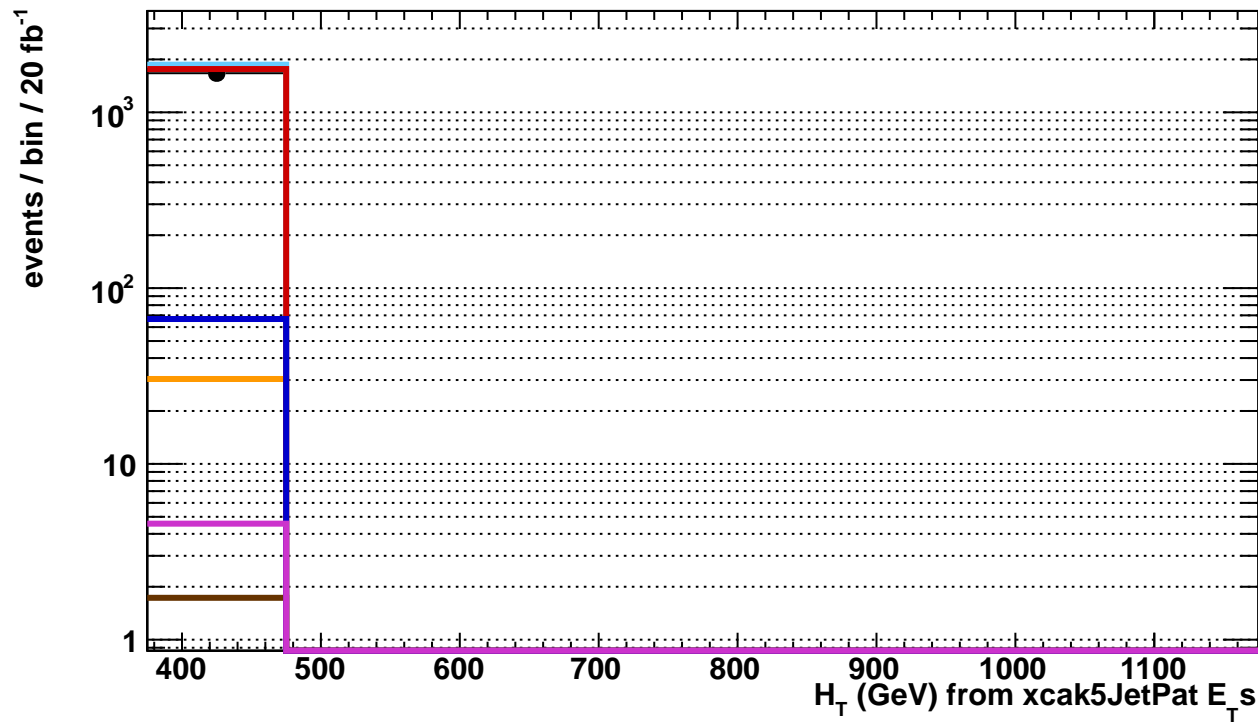
xcak5JetSumEtPat_ge4j_eq0b	
Entries	3027
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3027



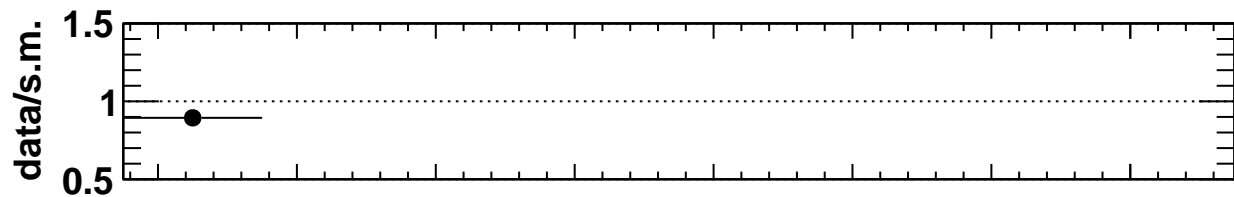
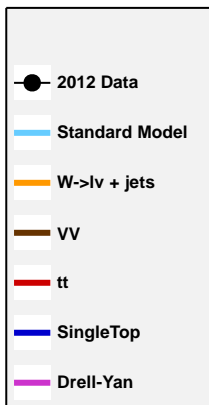


xcak5JetSumEtPat_ge4j_eq1b	
Entries	2723
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2723

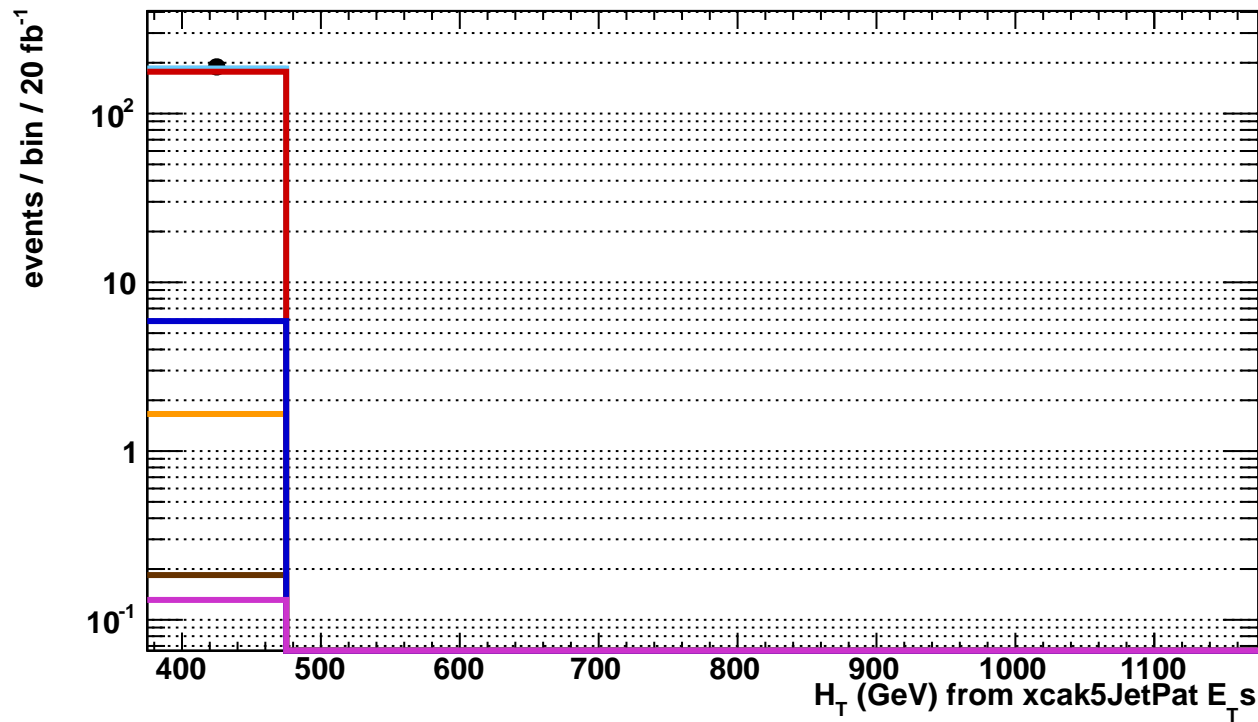




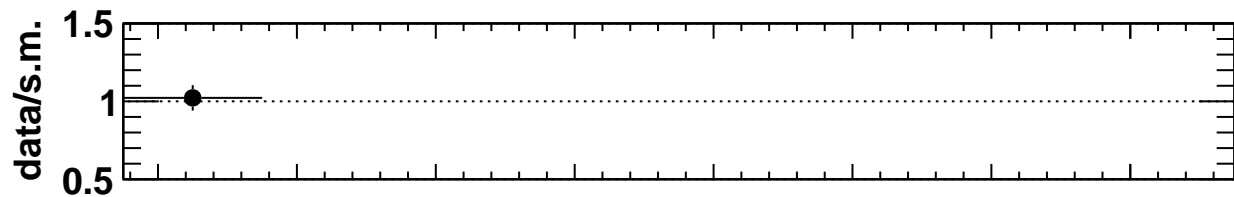
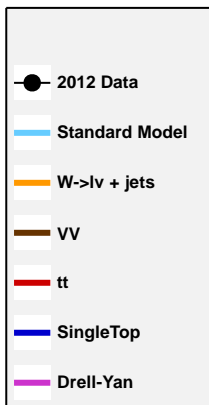
xcak5JetSumEtPat_ge4j_eq2b	
Entries	1669
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1669



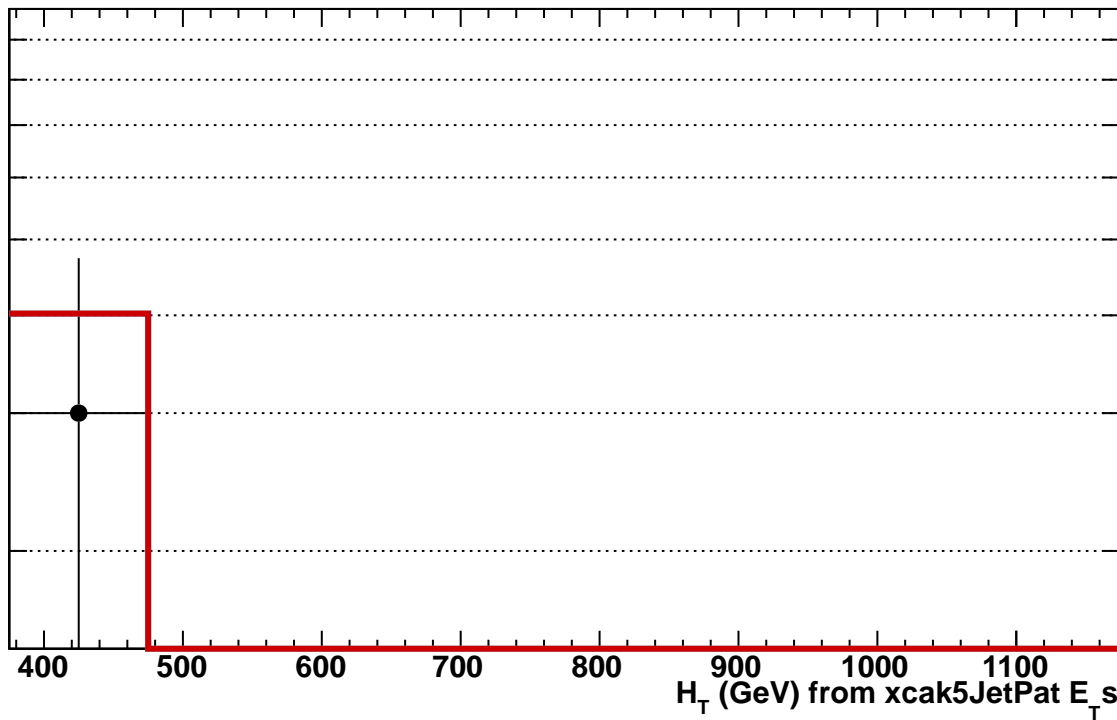




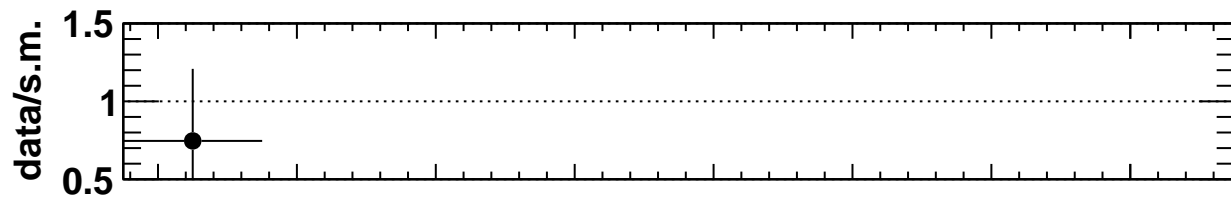
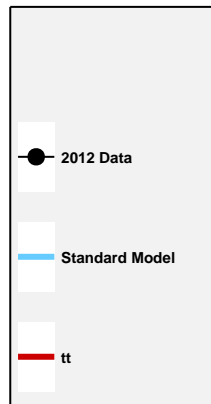
xcak5JetSumEtPat_ge4j_eq3b	
Entries	189
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	189

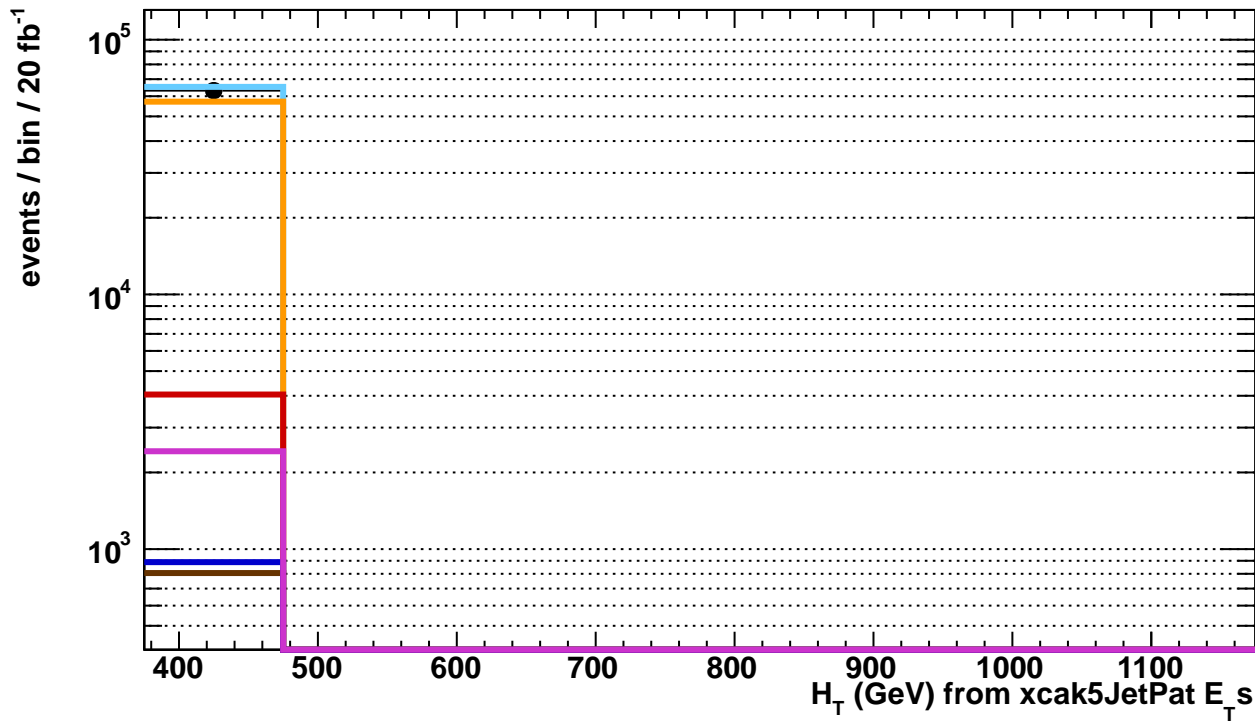


events / bin / 20 fb<sup>-1</sup>

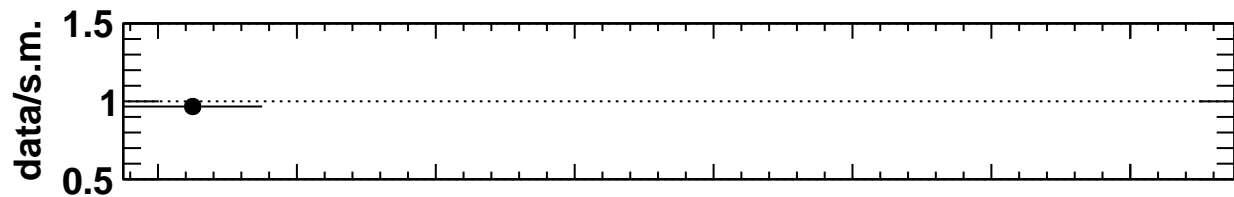
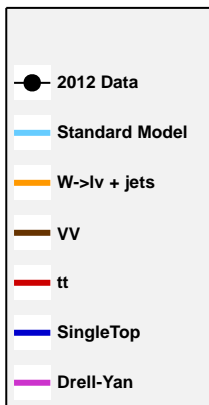


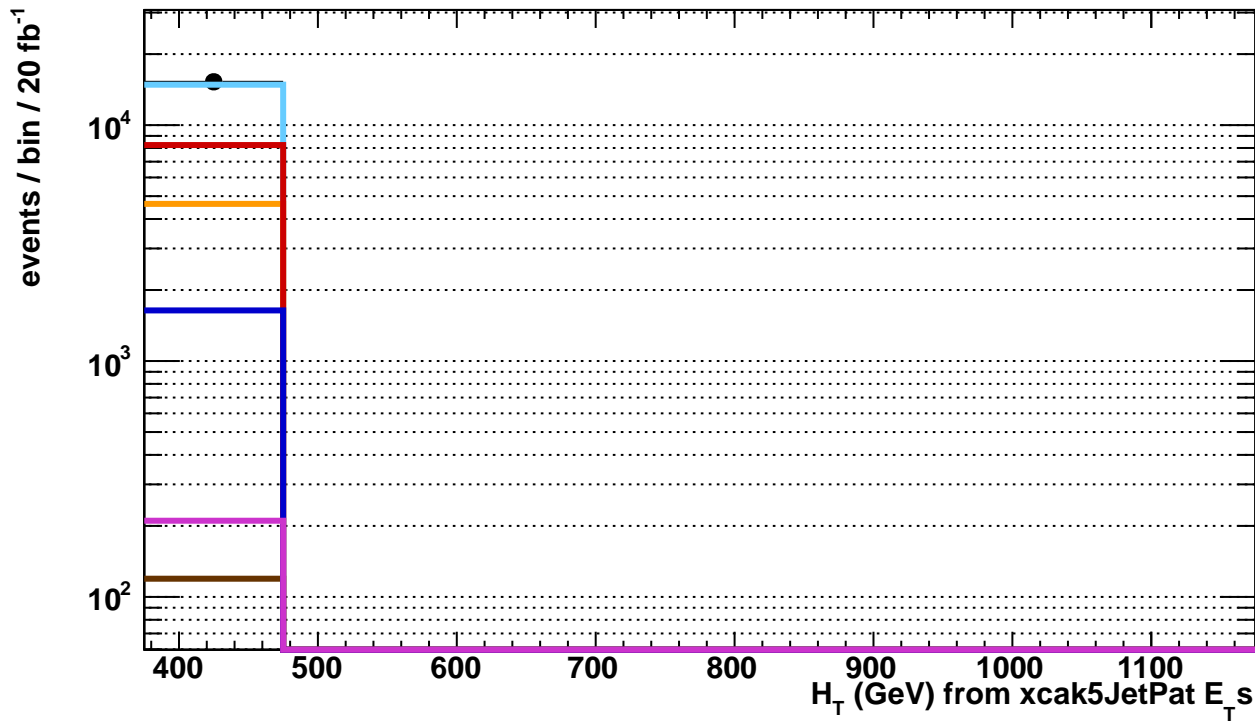
xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3



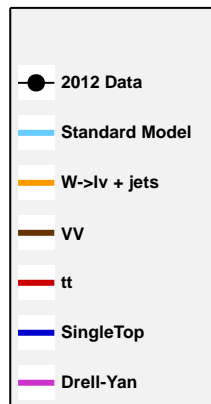


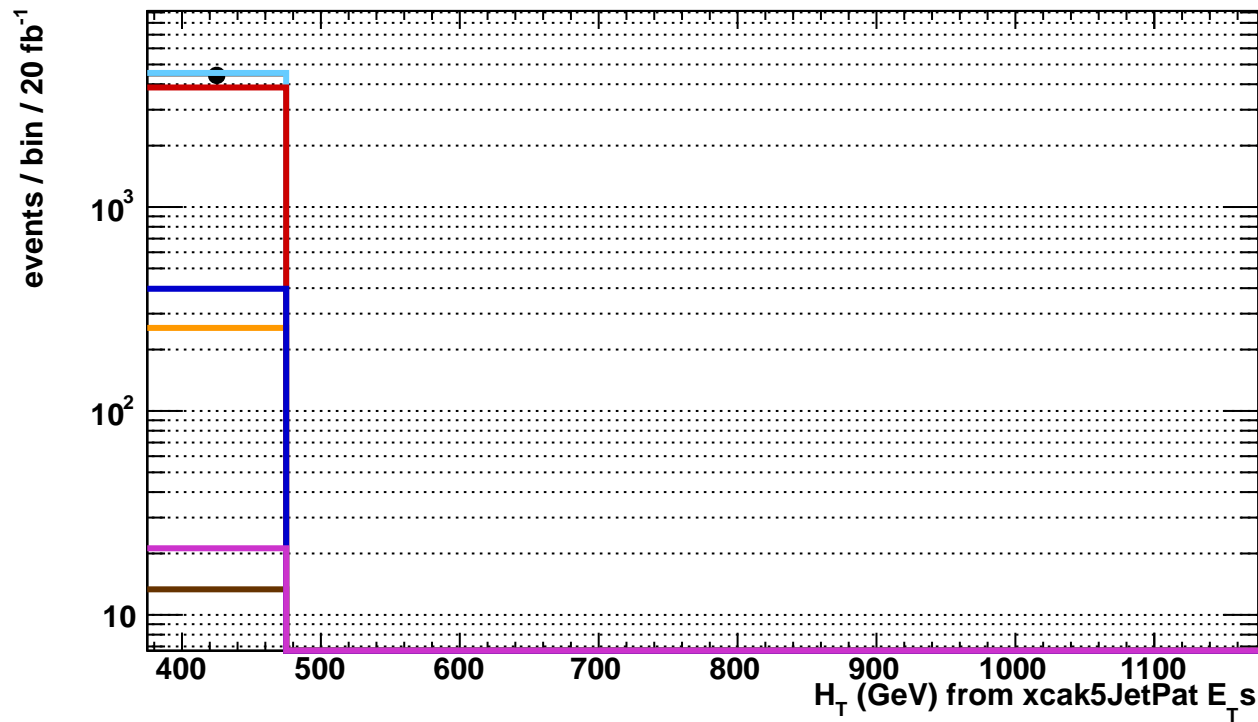
xcak5JetSumEtPat_le3j_eq0b	
Entries	63113
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.311e+04



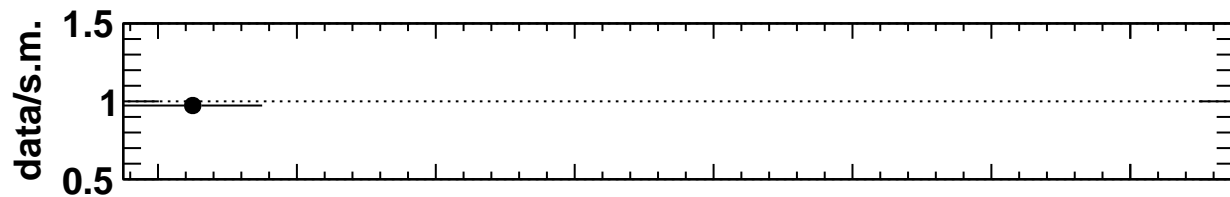
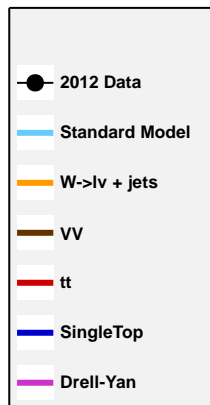


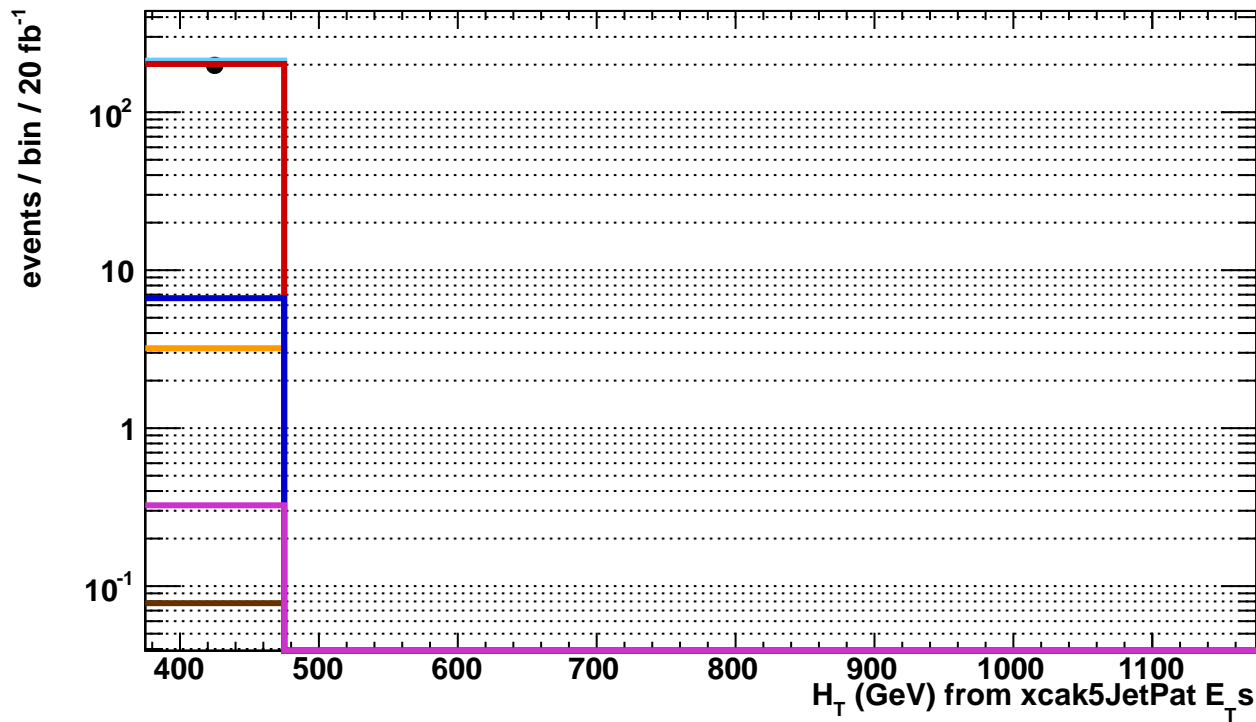
xcak5JetSumEtPat_le3j_eq1b	
Entries	15261
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.526e+04



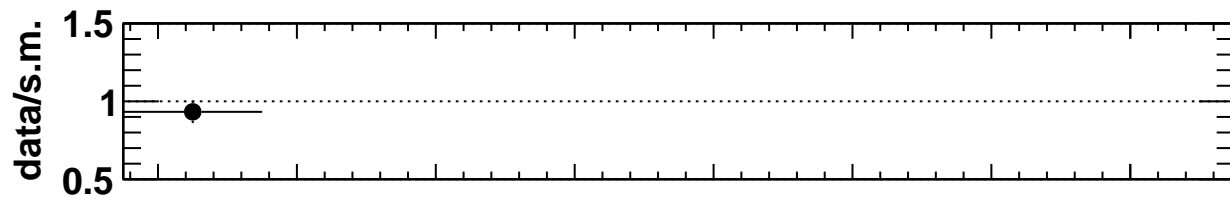
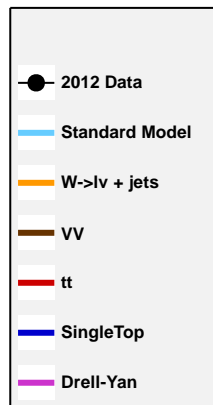


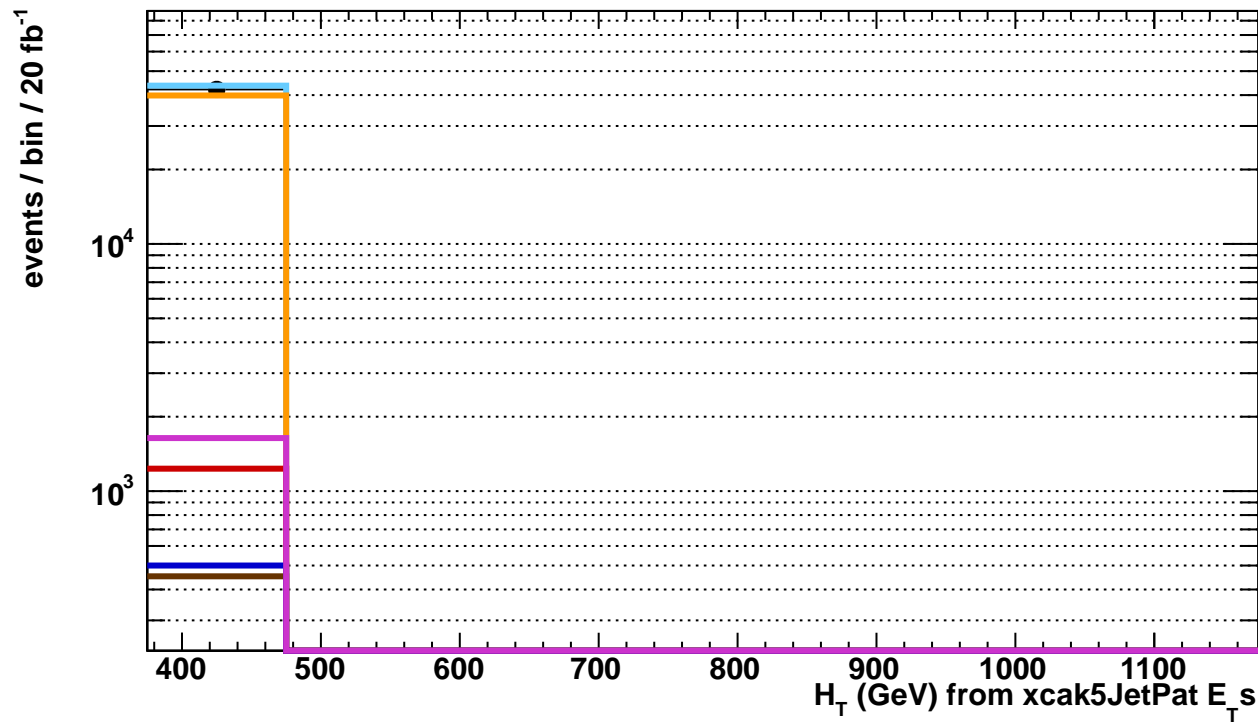
xcak5JetSumEtPat_le3j_eq2b	
Entries	4422
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4422



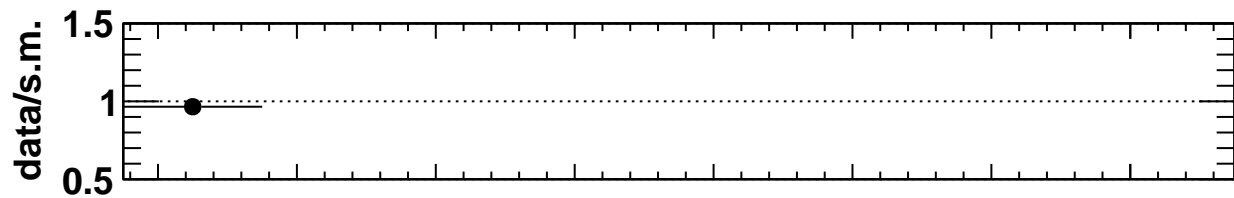


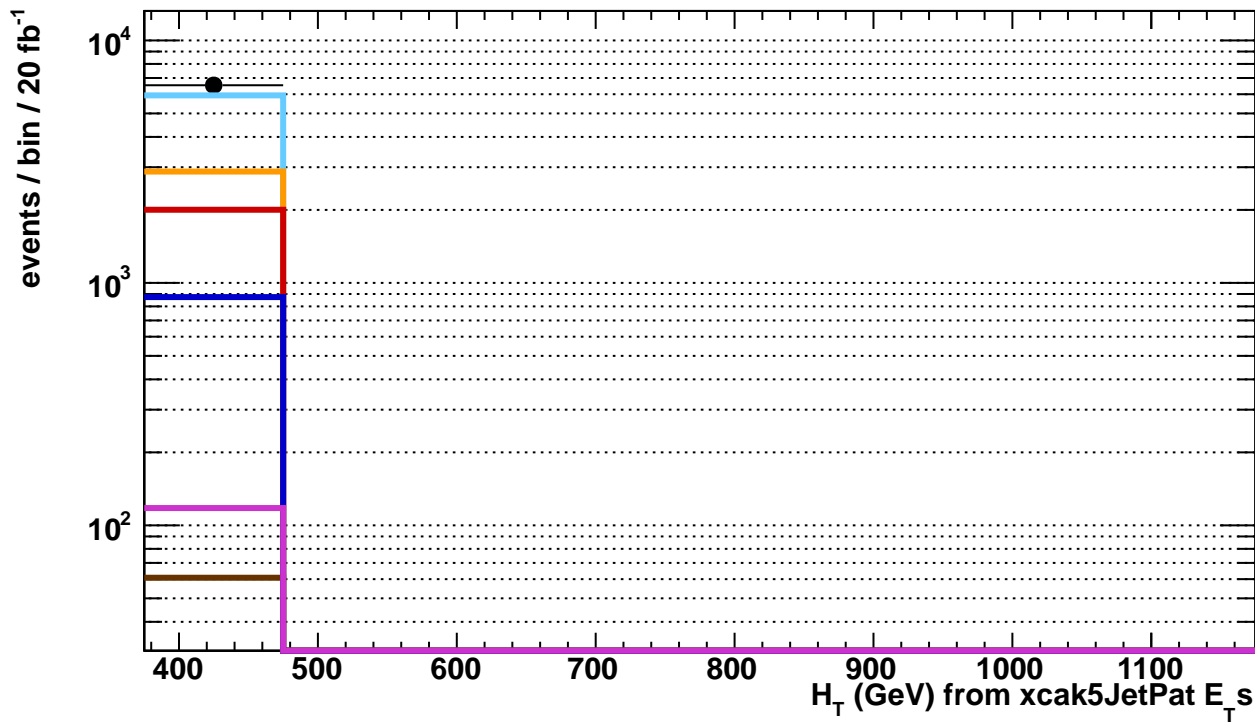
xcak5JetSumEtPat_le3j_eq3b	
Entries	198
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	198





xcak5JetSumEtPat_eq2j_eq0b	
Entries	42174
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4.217e+04

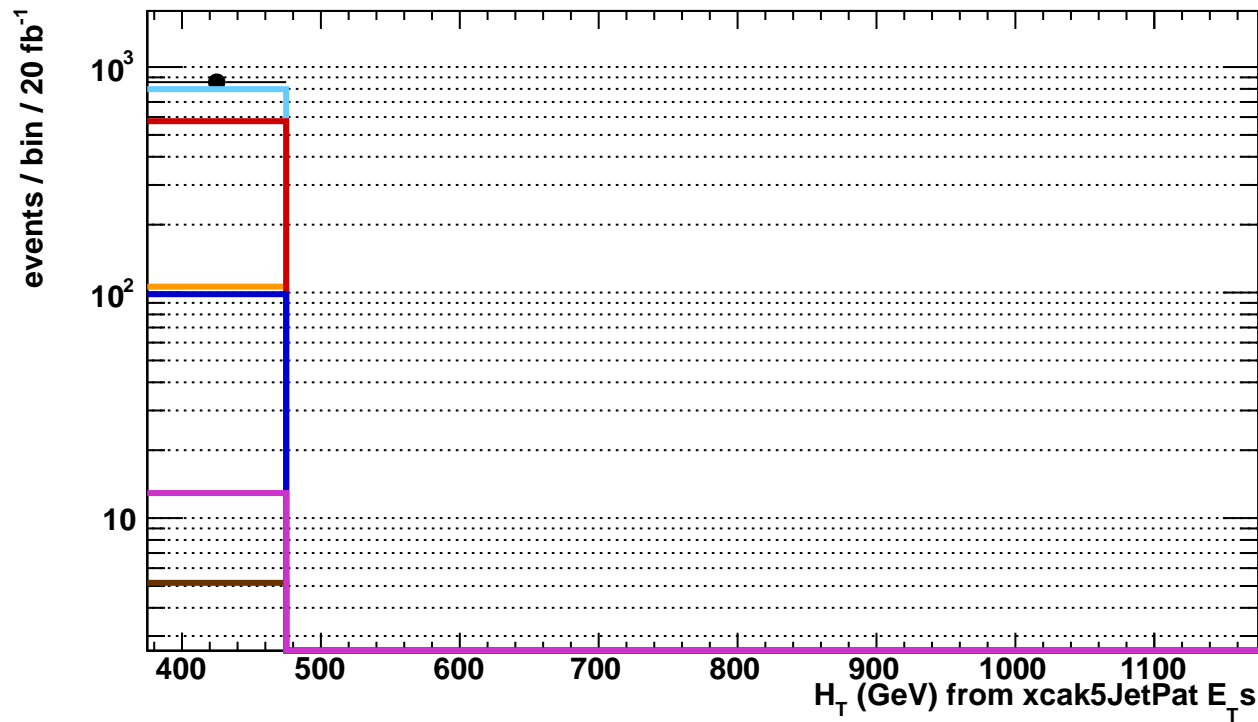




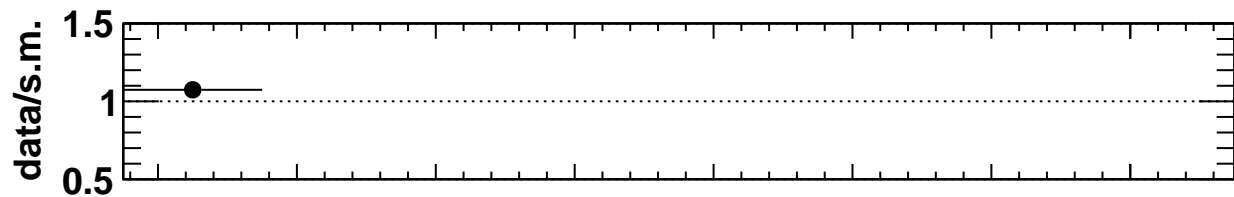
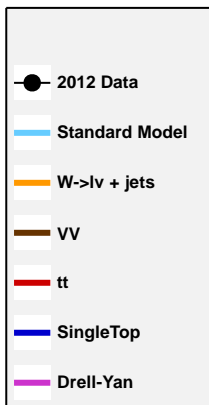
xcak5JetSumEtPat_eq2j_eq1b	
Entries	6534
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6534

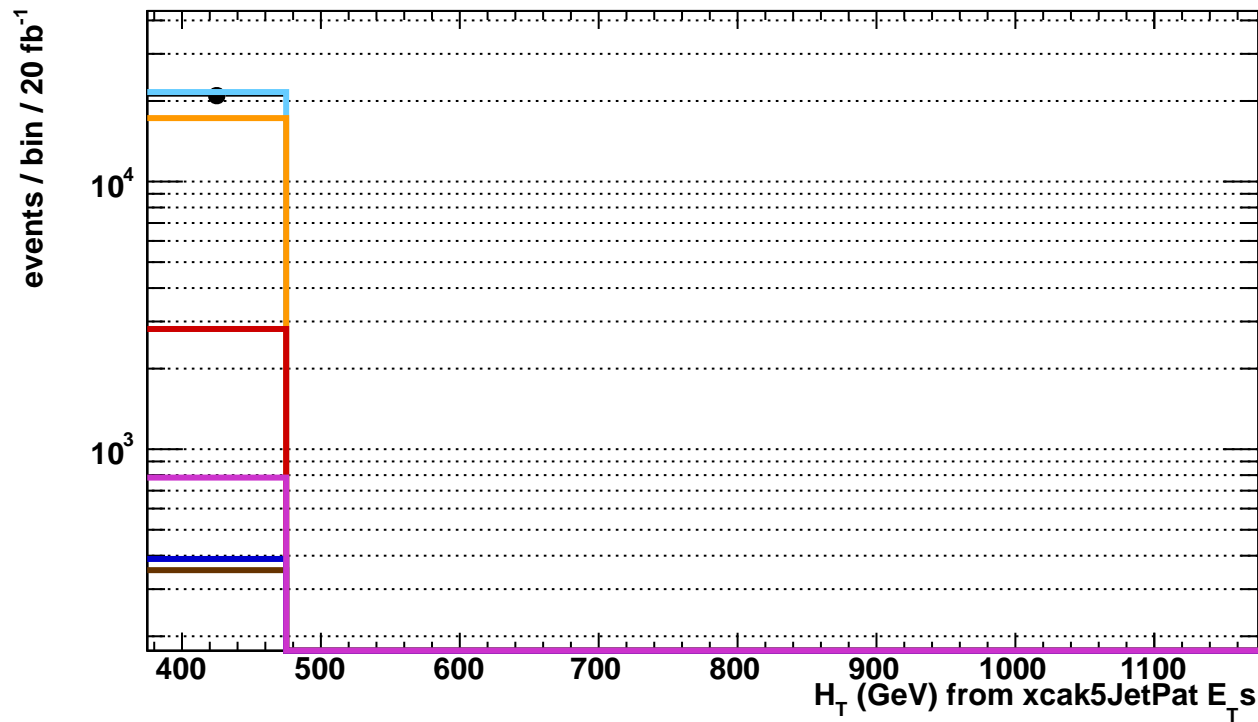
2012 Data	
Standard Model	
W->lv + jets	
VV	
tt	
SingleTop	
Drell-Yan	



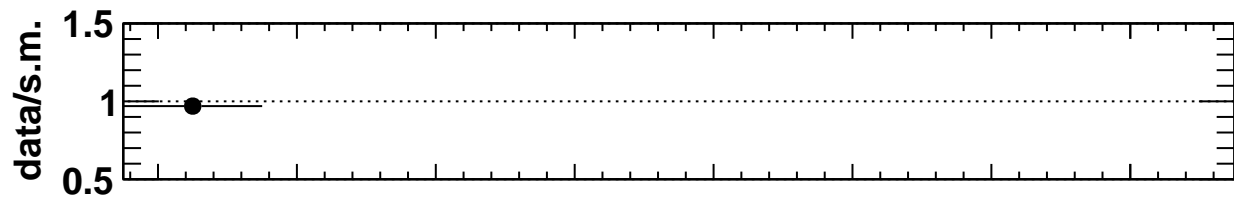
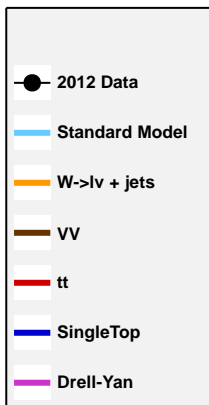


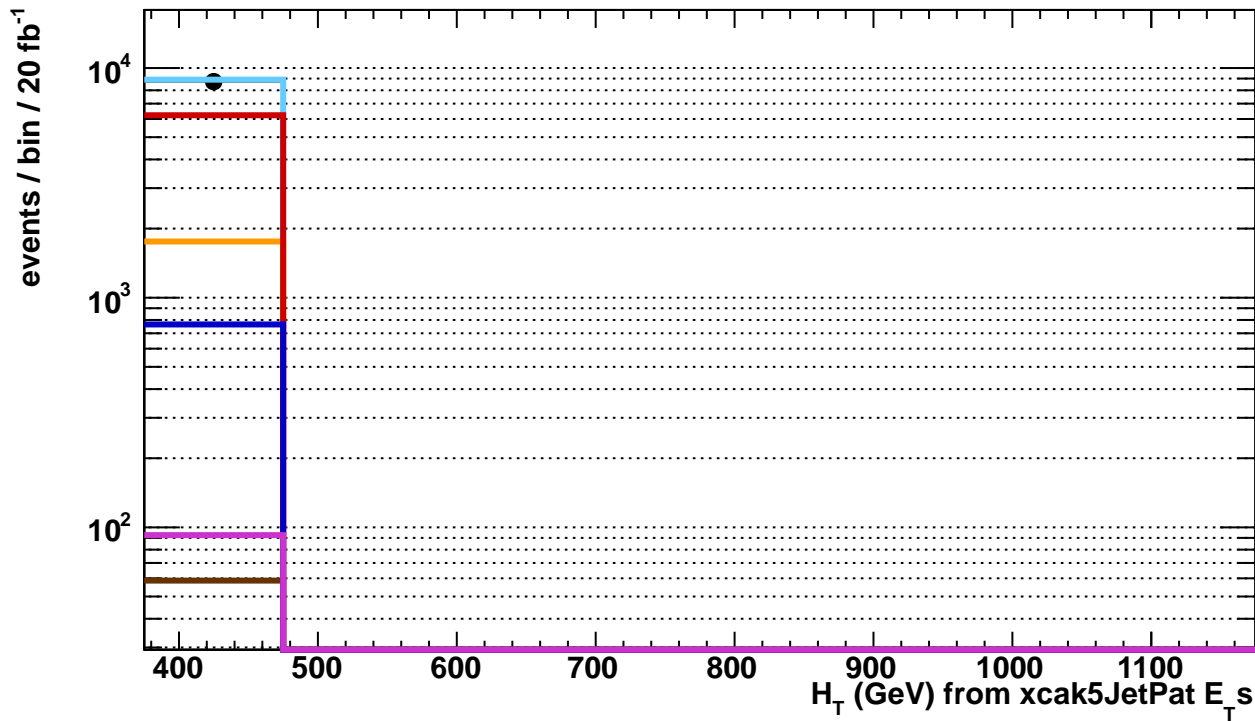
xcak5JetSumEtPat_eq2j_eq2b	
Entries	857
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	857



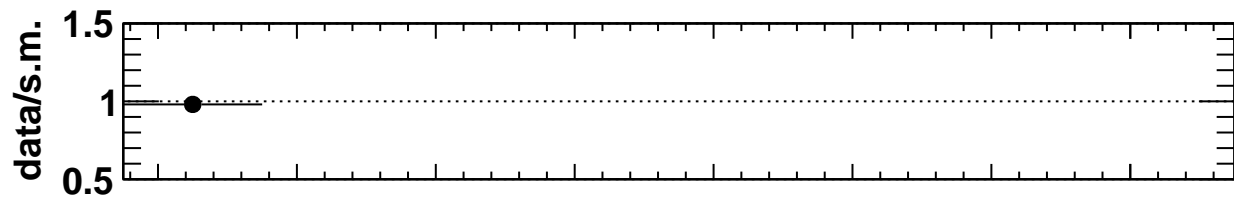
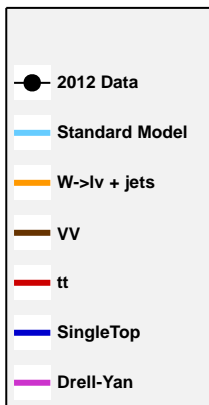


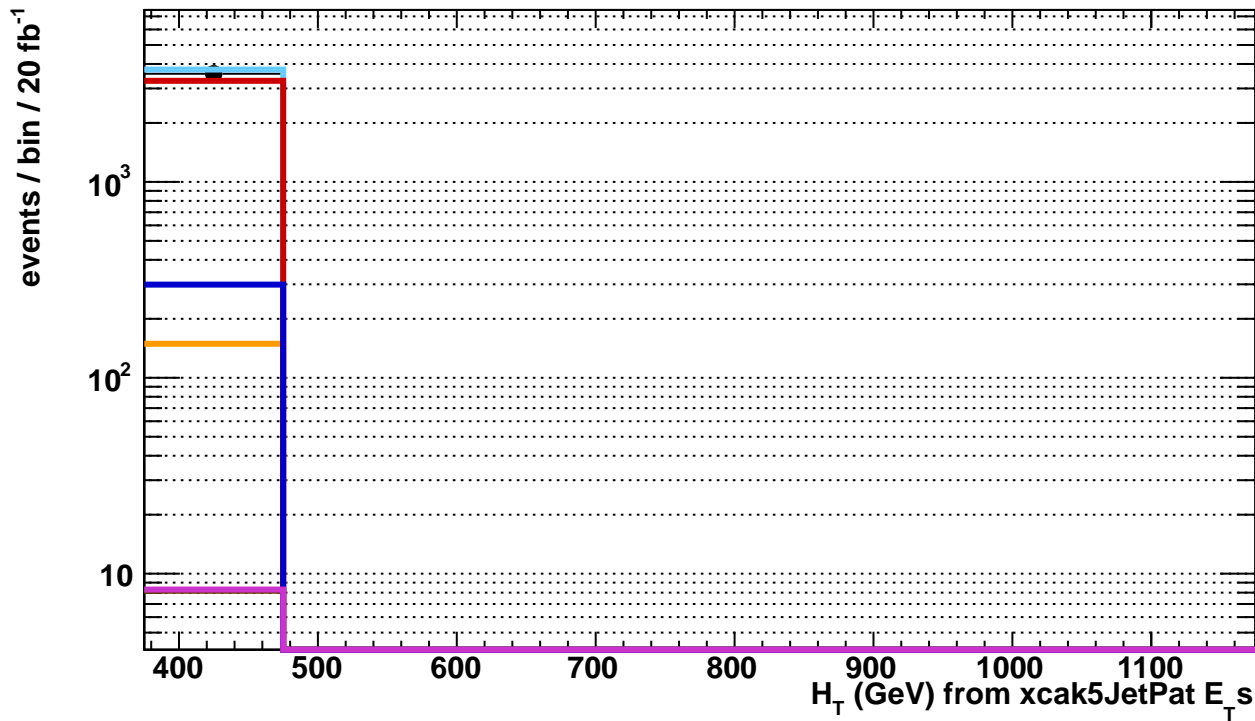
xcak5JetSumEtPat_eq3_eq0b	
Entries	20939
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2.094e+04



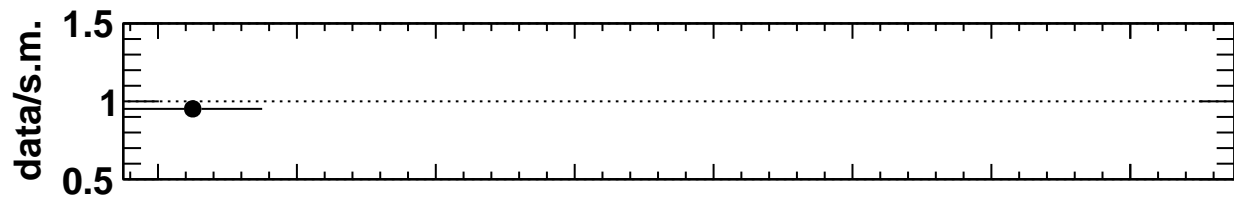
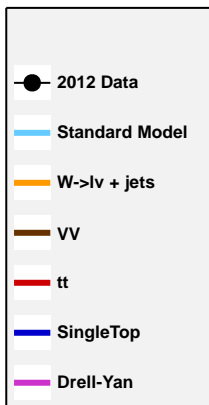


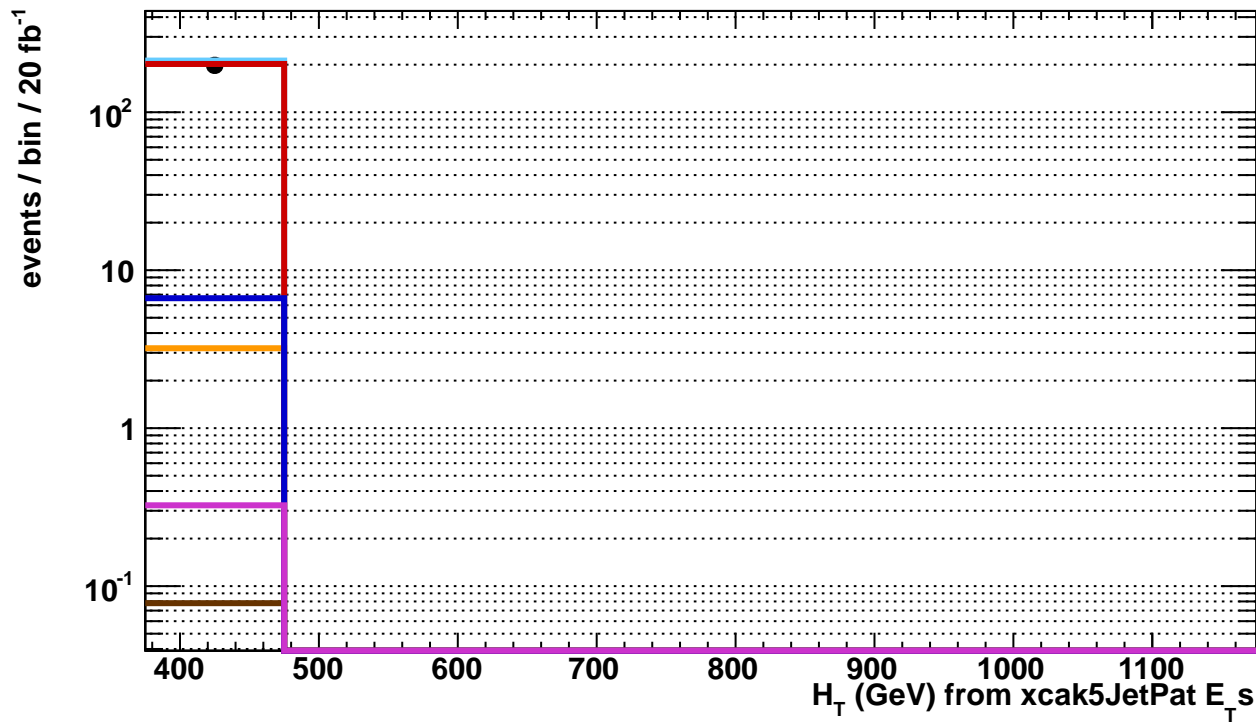
xcak5JetSumEtPat_eq3_eq1b	
Entries	8727
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	8727



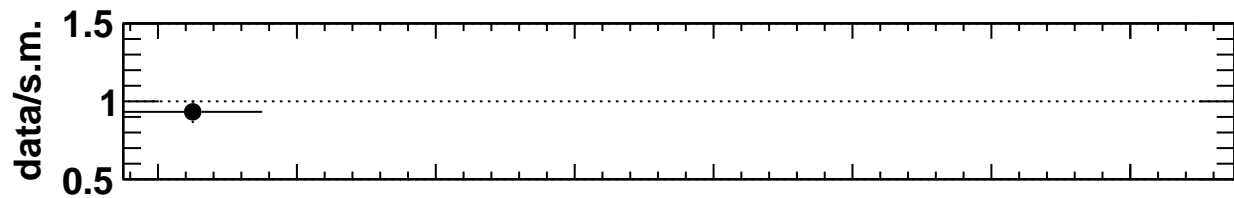


xcak5JetSumEtPat_eq3j_eq2b	
Entries	3565
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3565

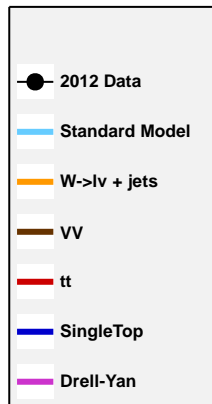
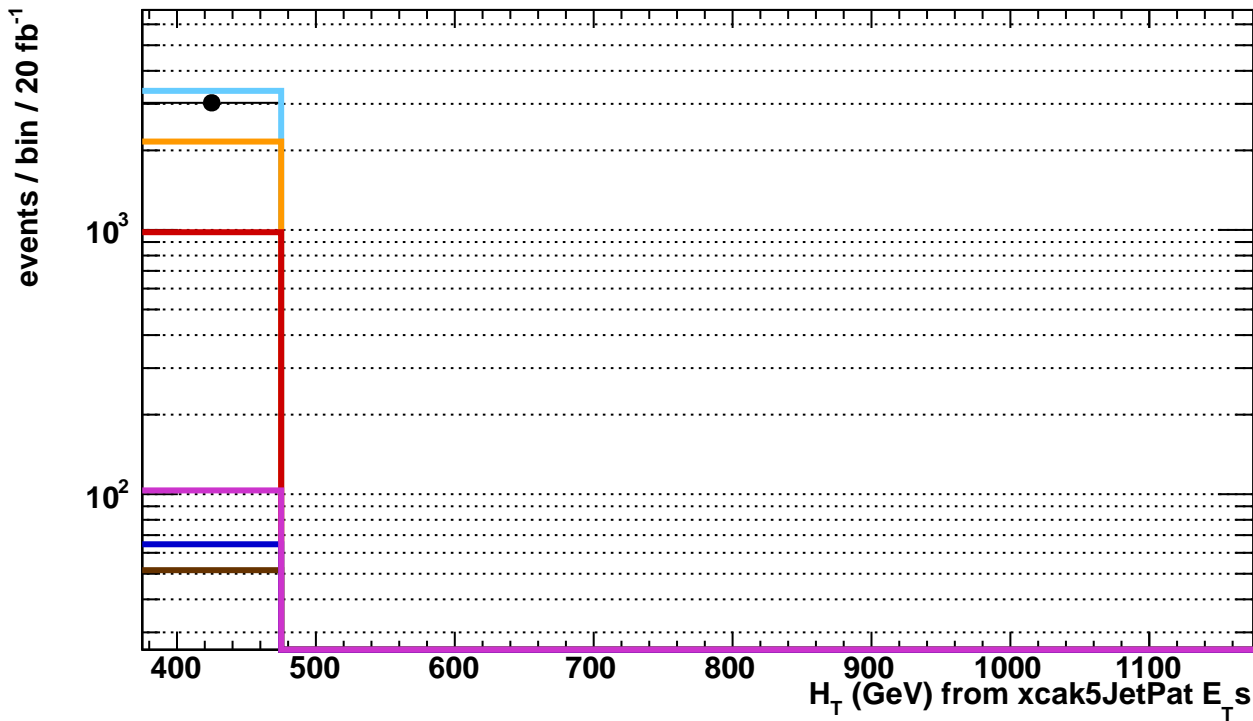


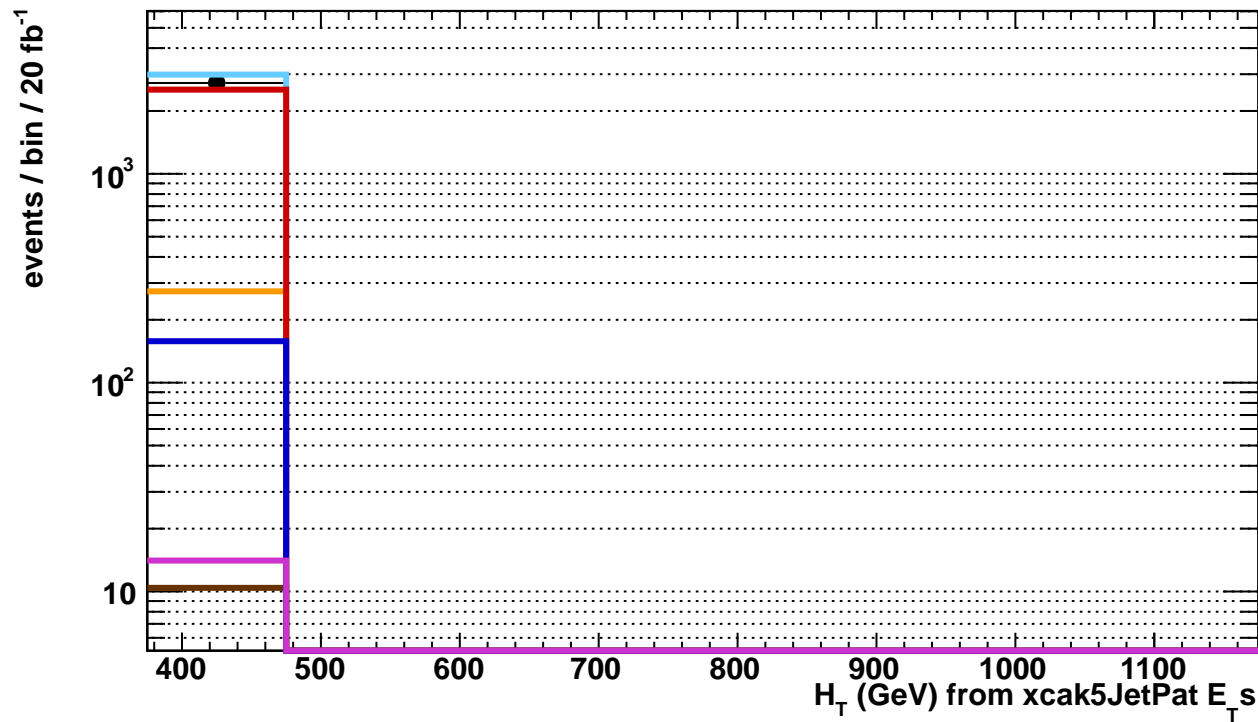


xcak5JetSumEtPat_eq3j_eq3b	
Entries	198
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	198

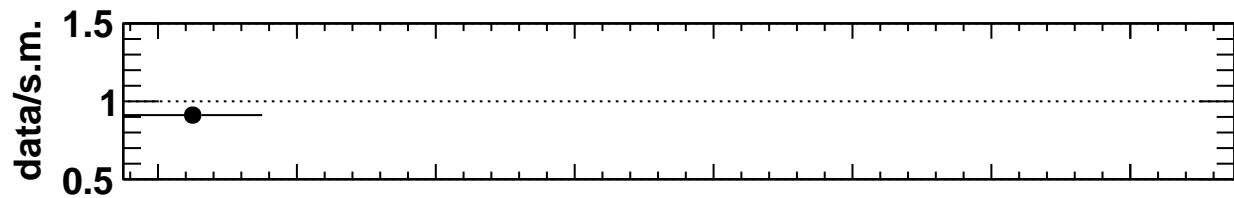


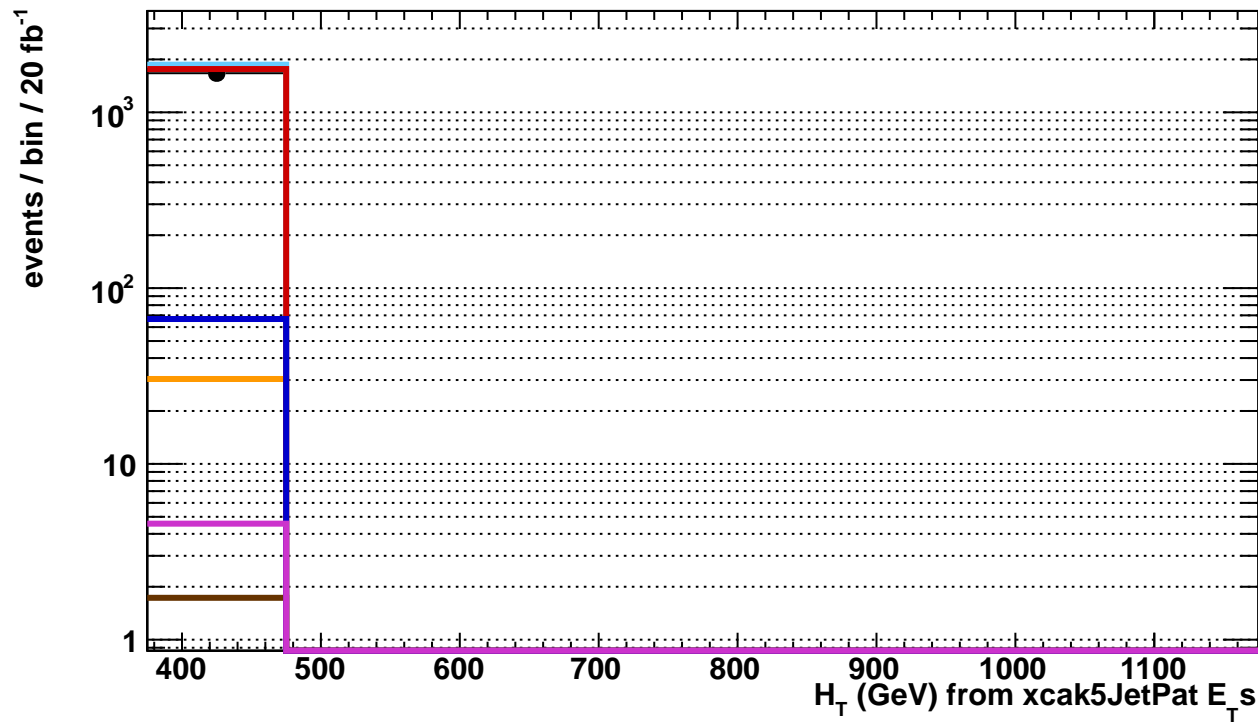
xcak5JetSumEtPat_ge4j_eq0b	
Entries	3027
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3027



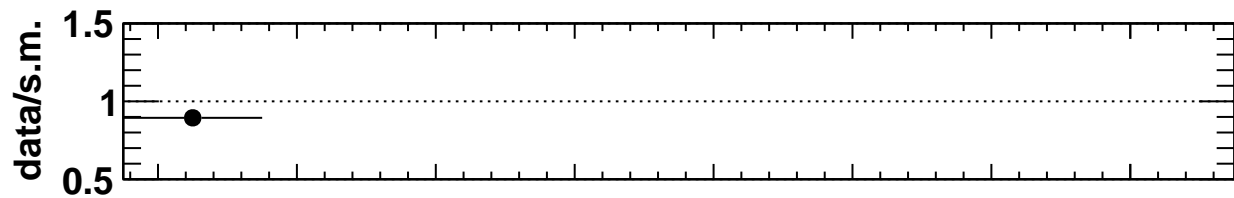
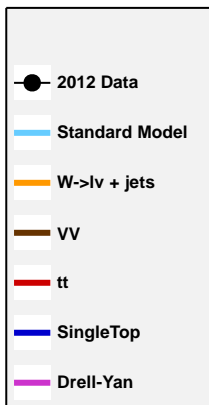


xcak5JetSumEtPat_ge4j_eq1b	
Entries	2723
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2723

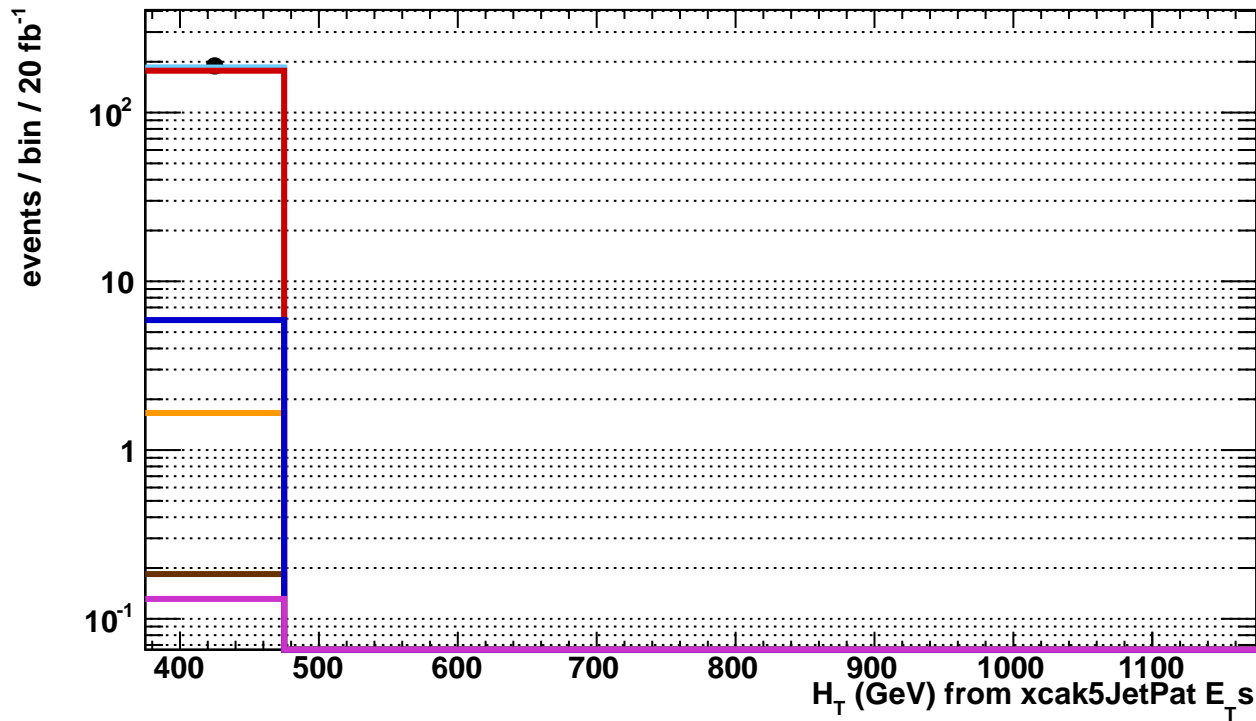




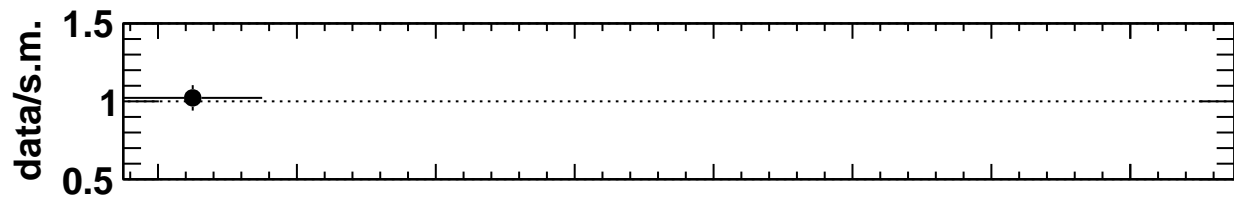
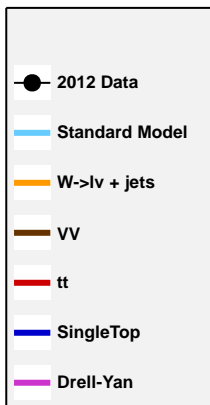
xcak5JetSumEtPat_ge4j_eq2b	
Entries	1669
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1669



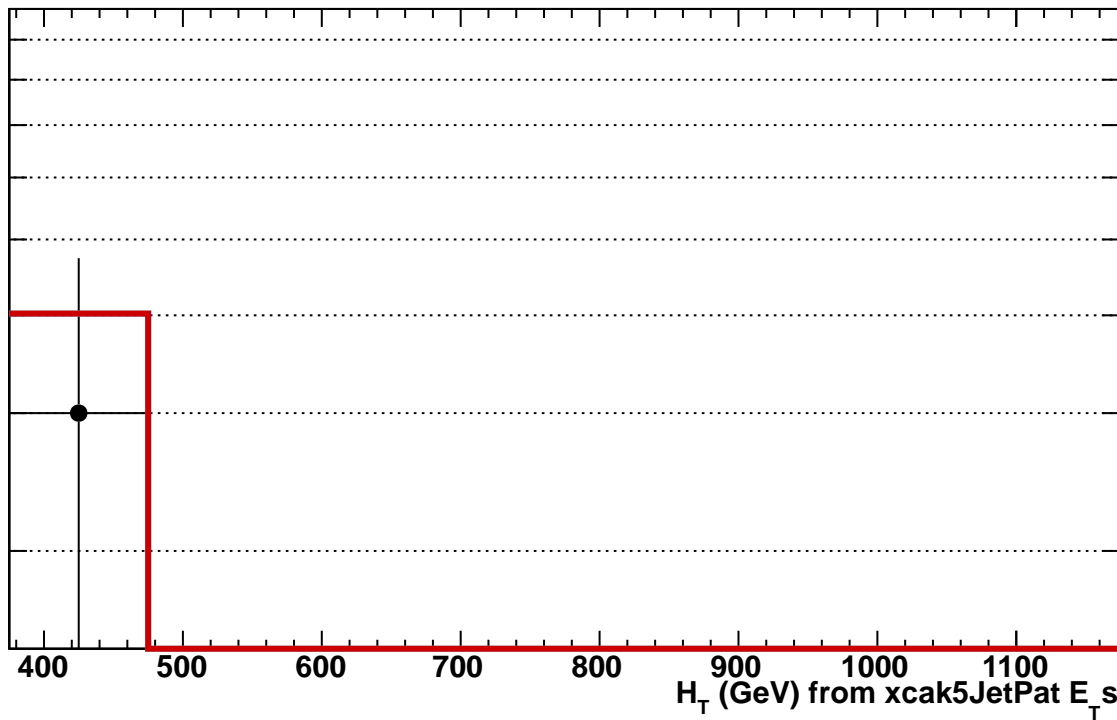




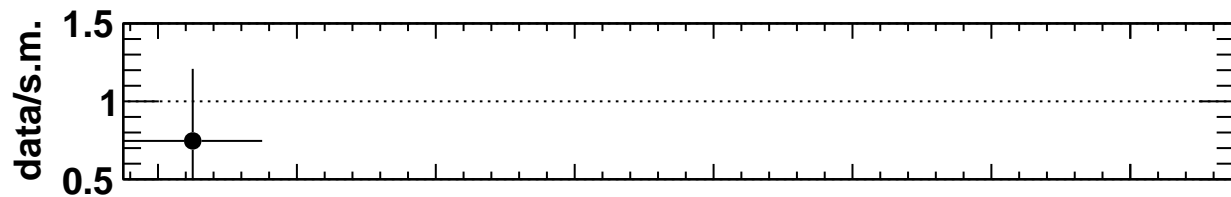
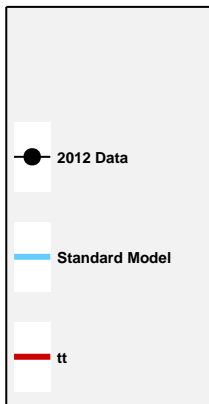
xcak5JetSumEtPat_ge4j_eq3b	
Entries	189
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	189



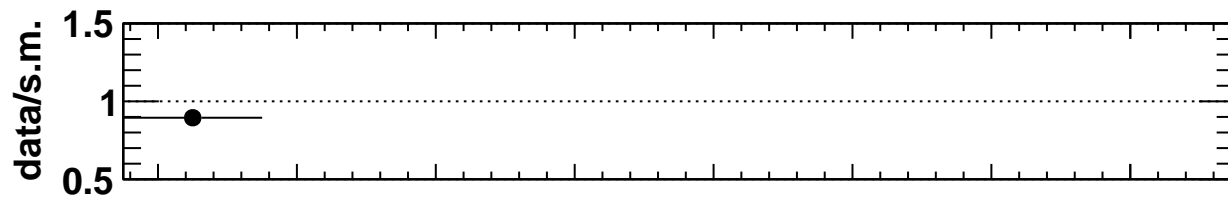
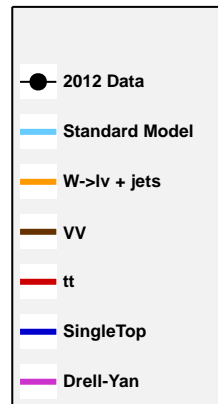
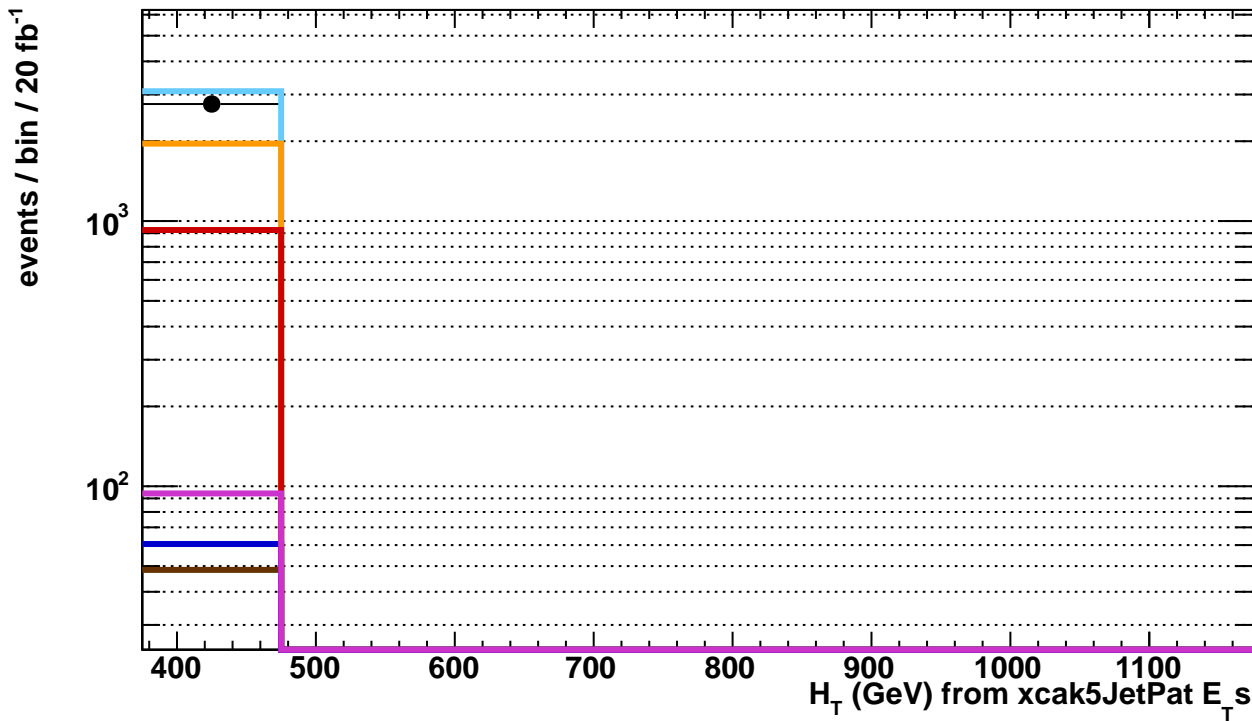
events / bin / 20 fb<sup>-1</sup>



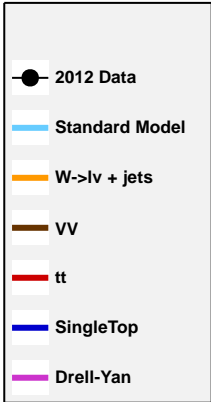
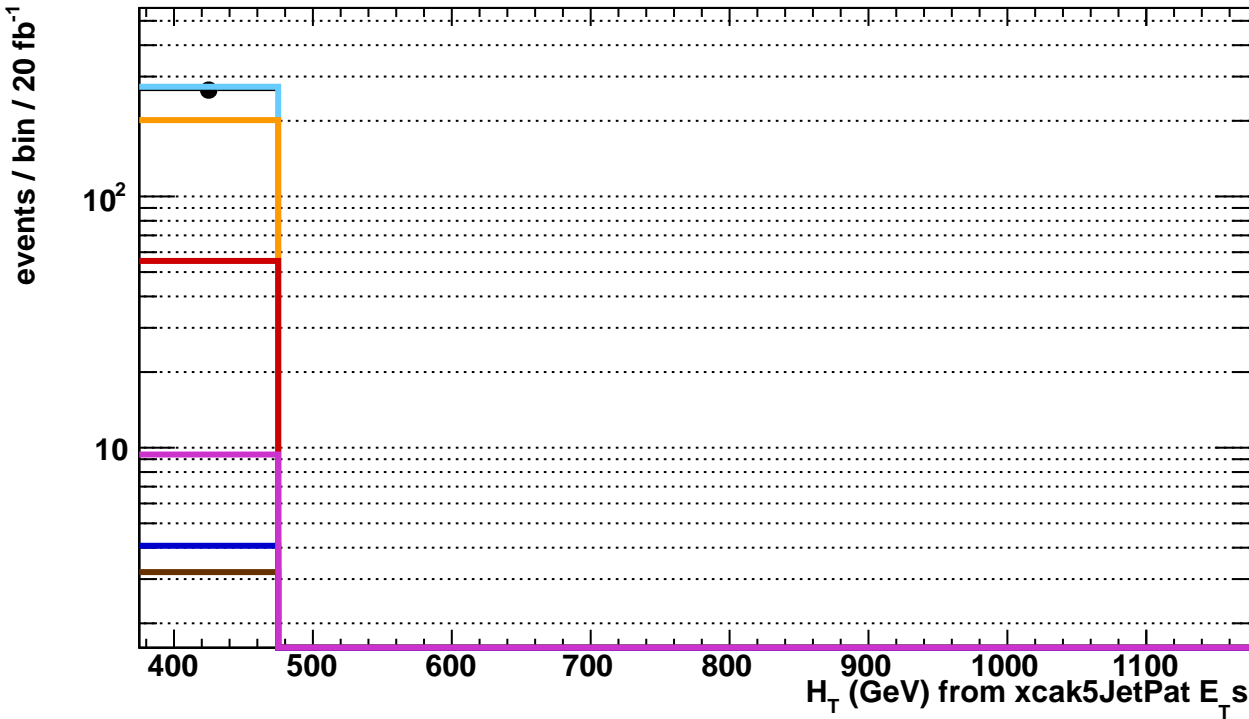
xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3

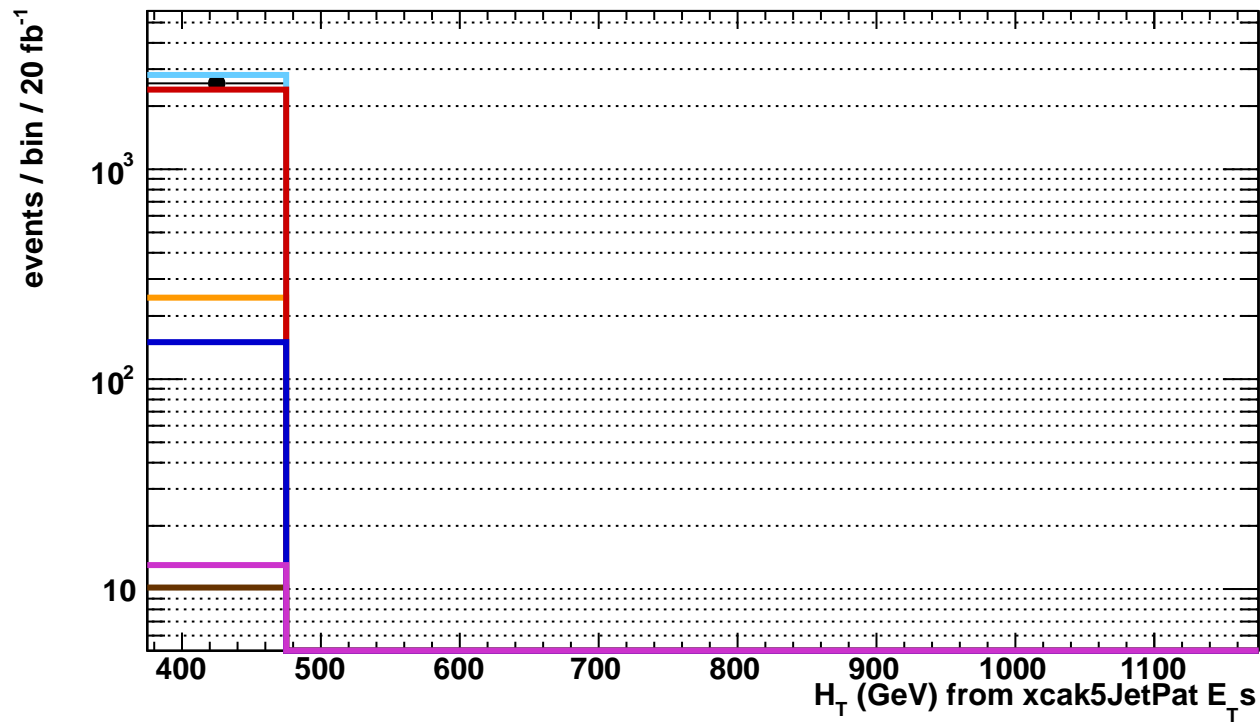


xcak5JetSumEtPat_ge4j_eq0b_dRge65	
Entries	2762
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2762

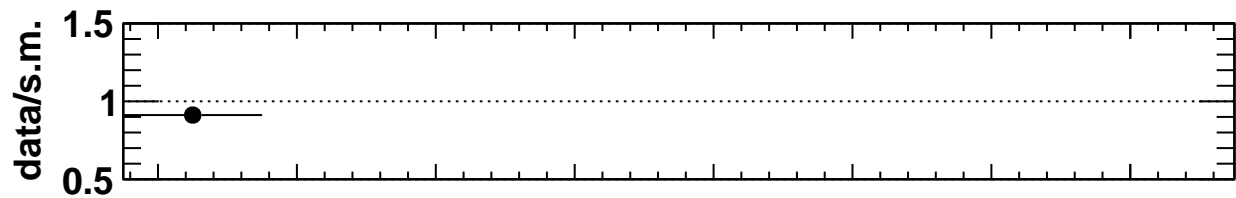
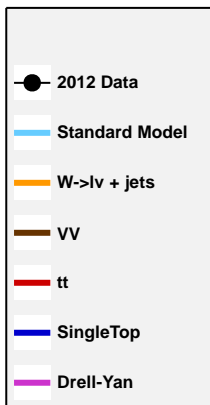


xcak5JetSumEtPat_ge4j_eq0b_dR165	
Entries	265
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	265

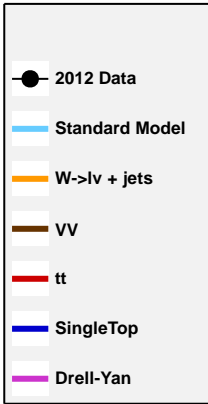
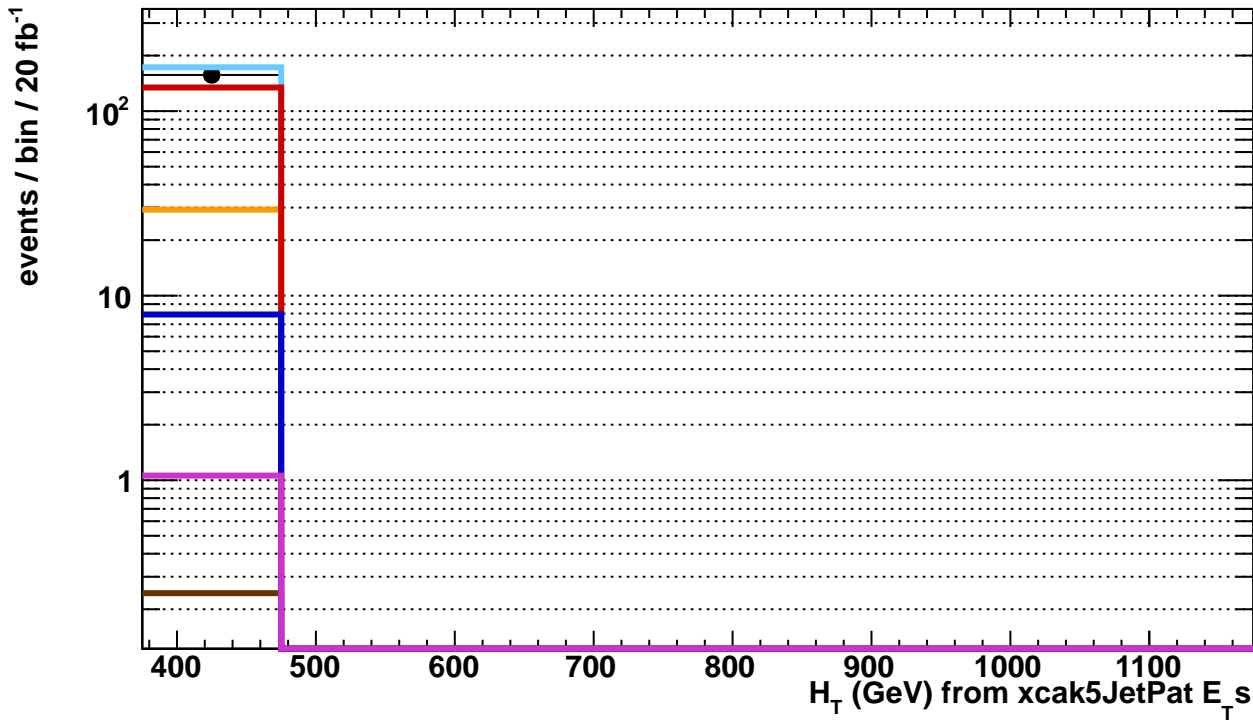




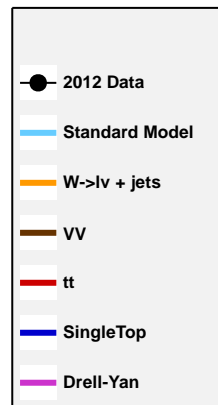
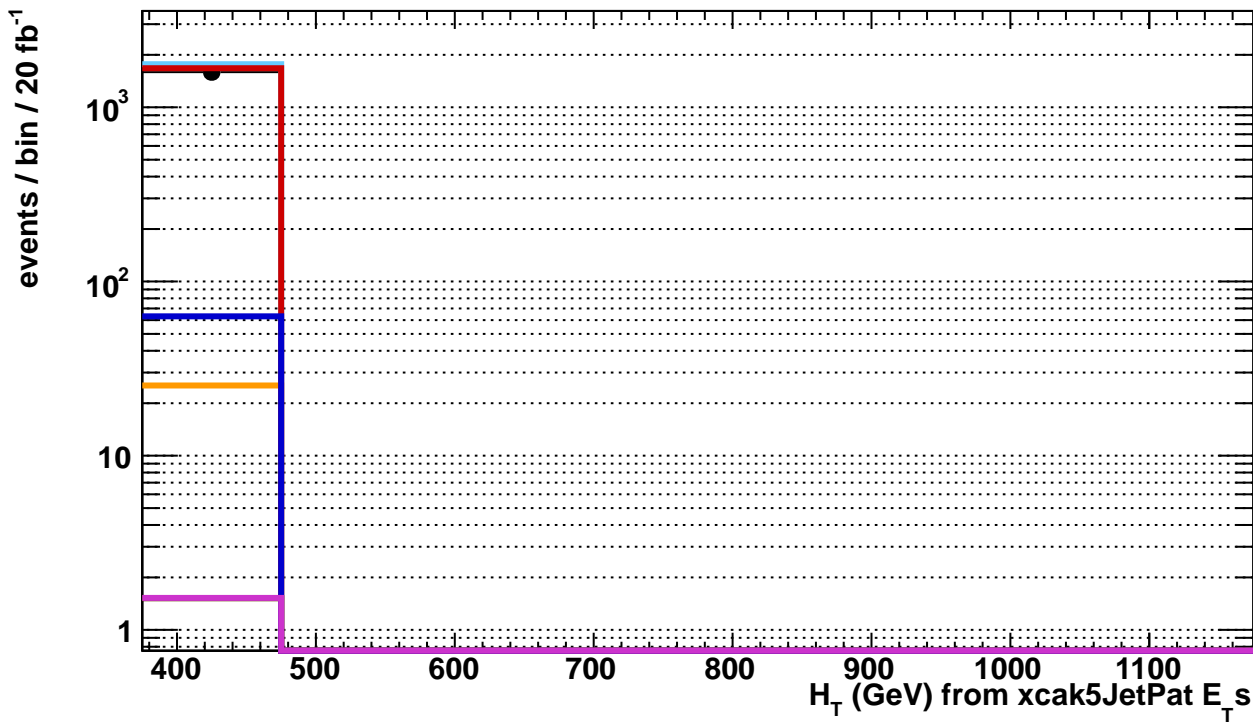
xcak5JetSumEtPat_ge4j_eq1b_dRge65	
Entries	2566
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2566



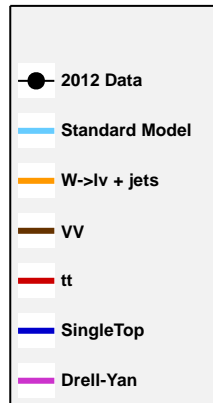
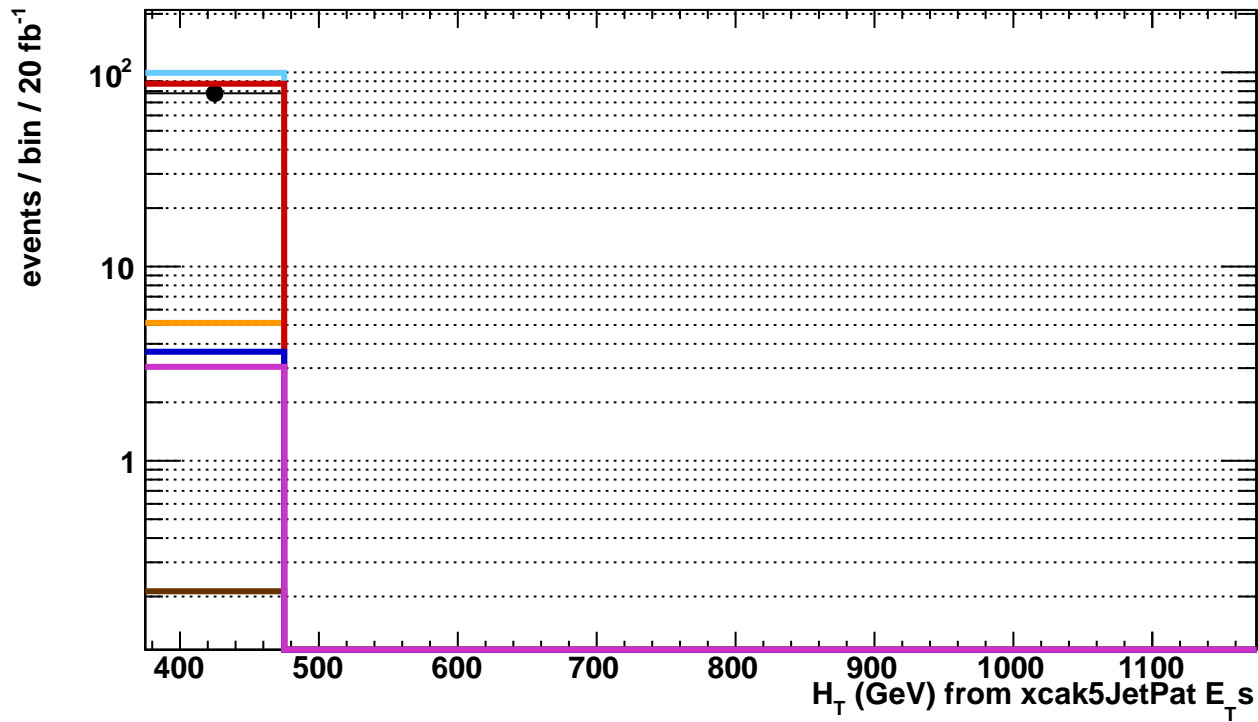
xcak5JetSumEtPat_ge4j_eq1b_dR165	
Entries	157
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	157



xcak5JetSumEtPat_ge4j_eq2b_dRge65	
Entries	1591
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1591

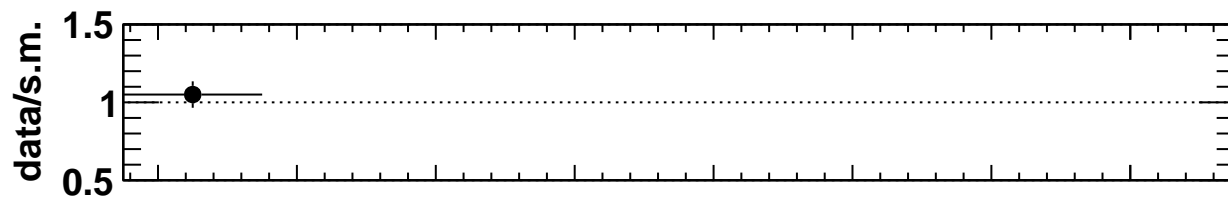
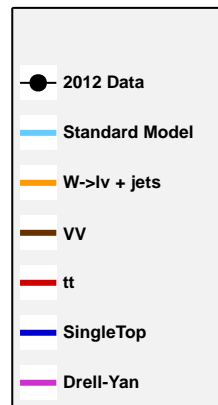
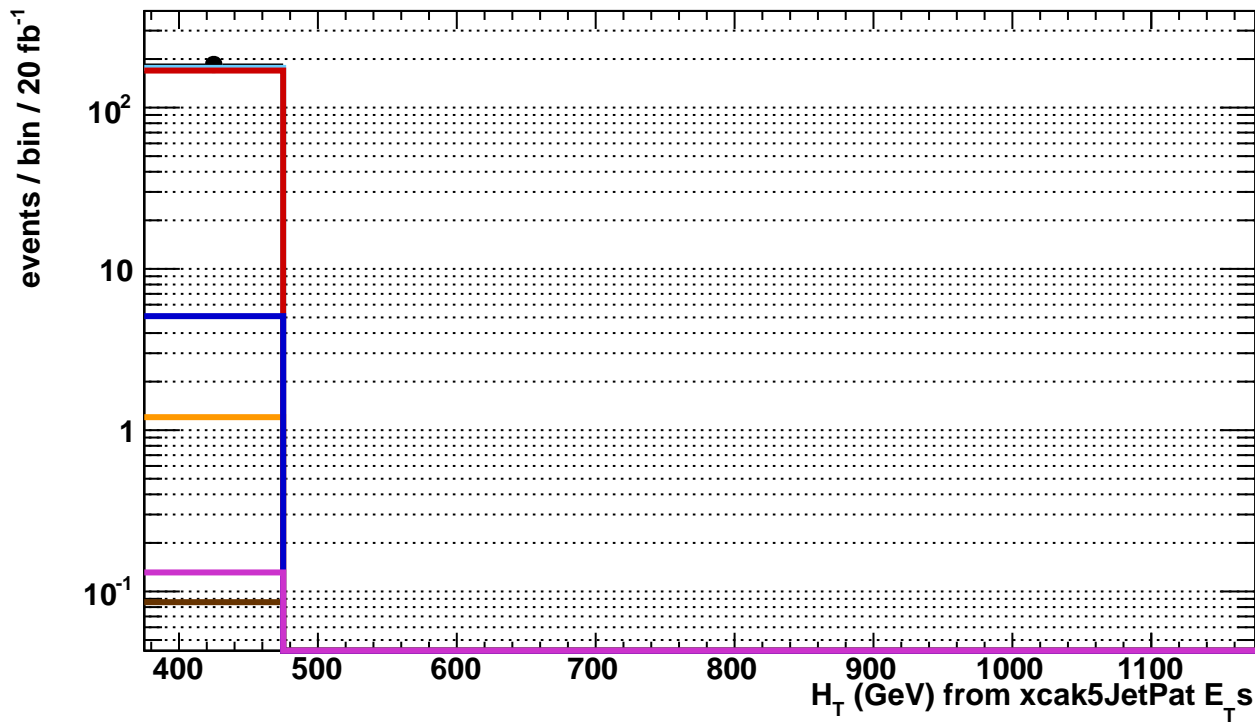


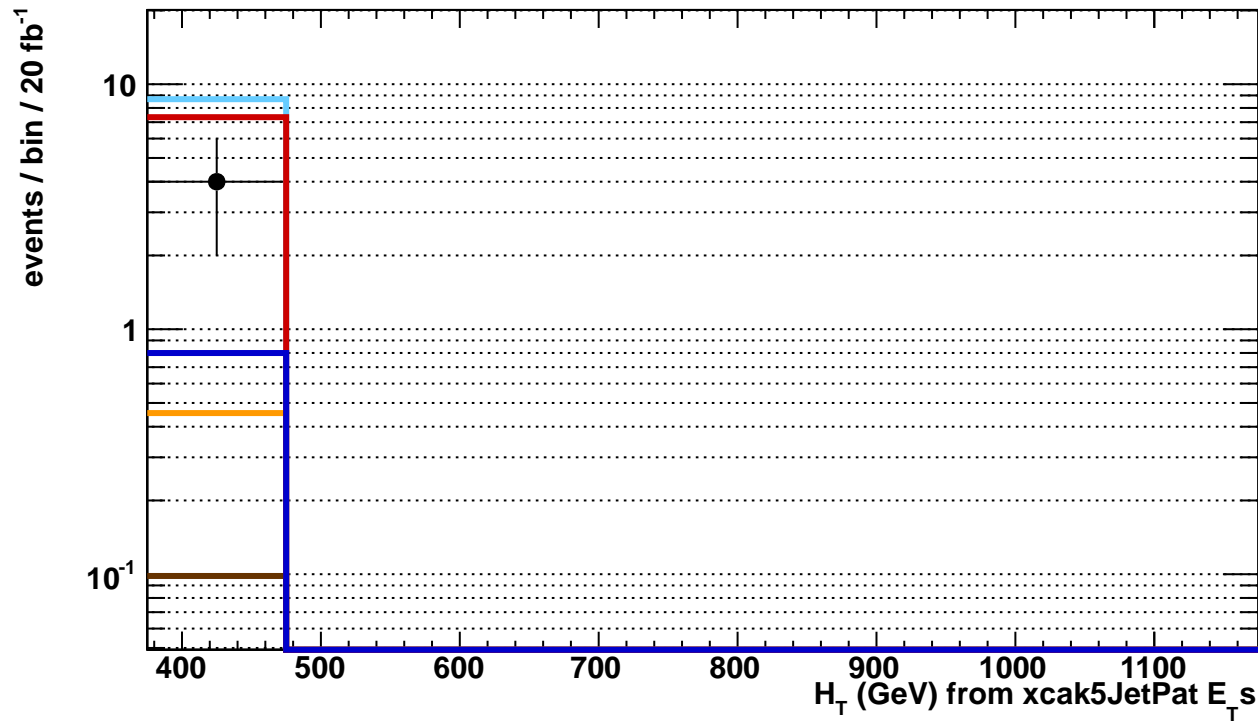
xcak5JetSumEtPat_ge4j_eq2b_dR165	
Entries	78
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	78



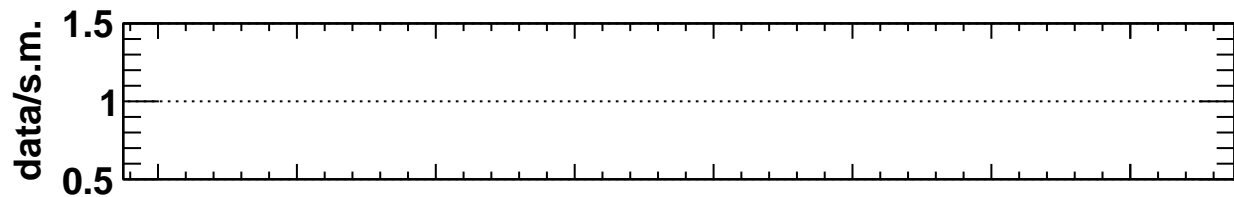
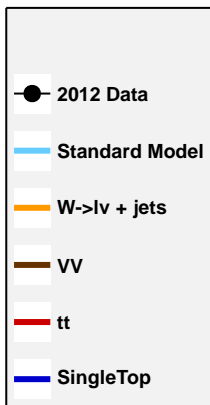


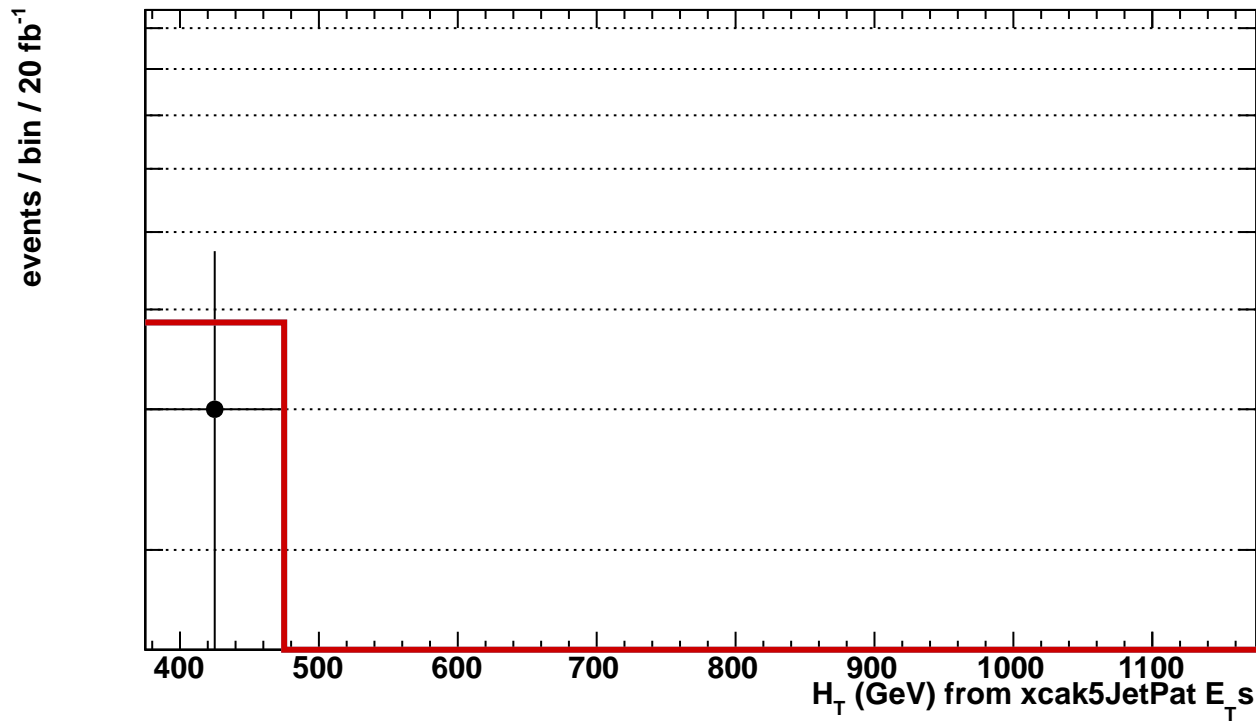
xcak5JetSumEtPat_ge4j_eq3b_dRge65	
Entries	185
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	185



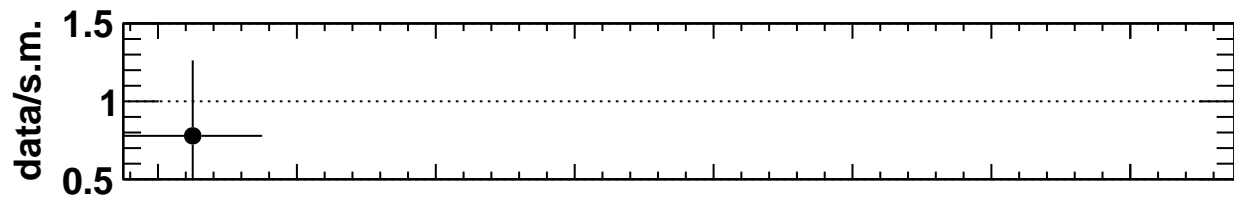
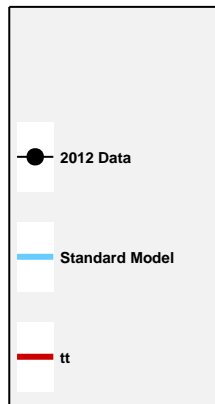


xcak5JetSumEtPat_ge4j_eq3b_dR165	
Entries	4
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4



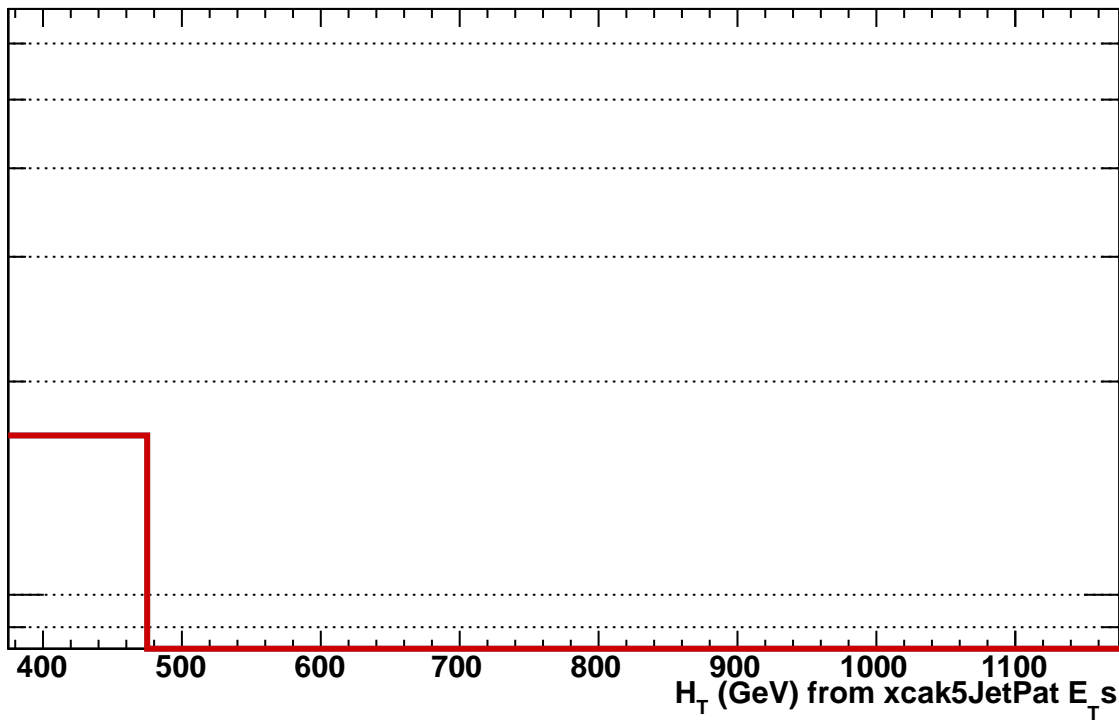


xcak5JetSumEtPat_ge4j_ge4b_dRge65	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3

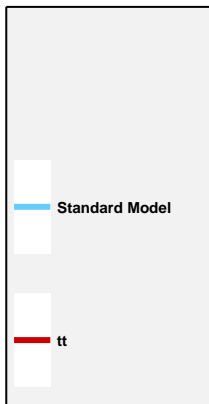


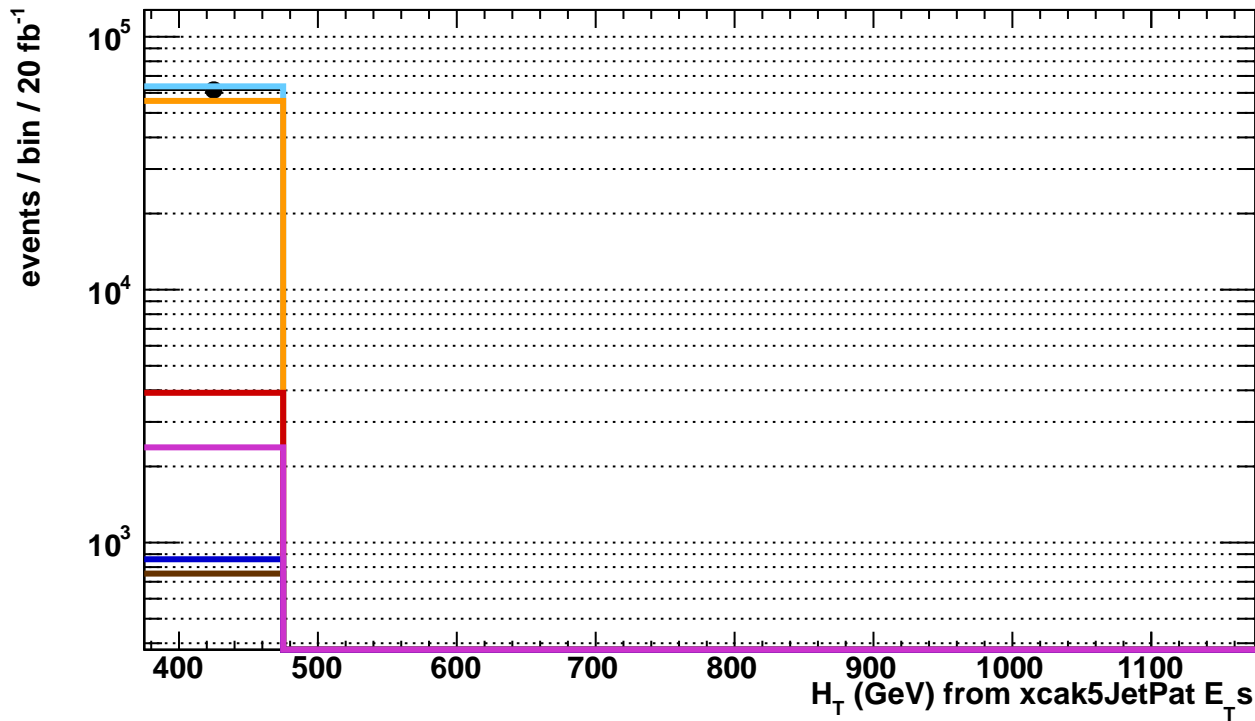
events / bin / 20 fb<sup>-1</sup>

10<sup>-1</sup>

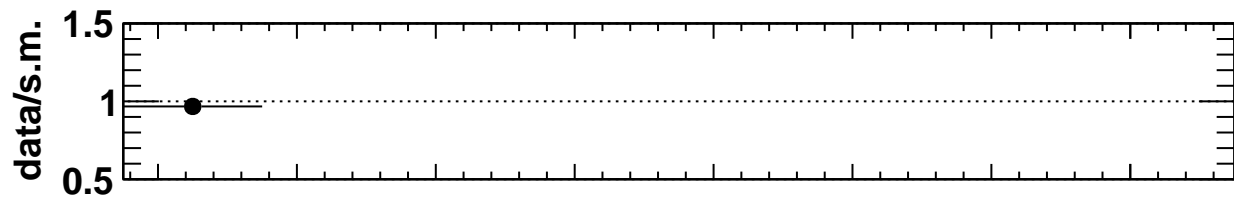
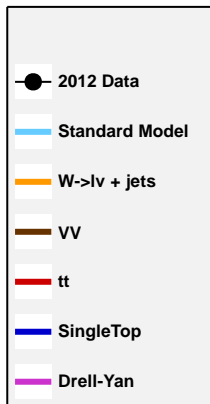


xcak5JetSumEtPat_ge4j_ge4b_dR165	
Entries	1
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	0.1678

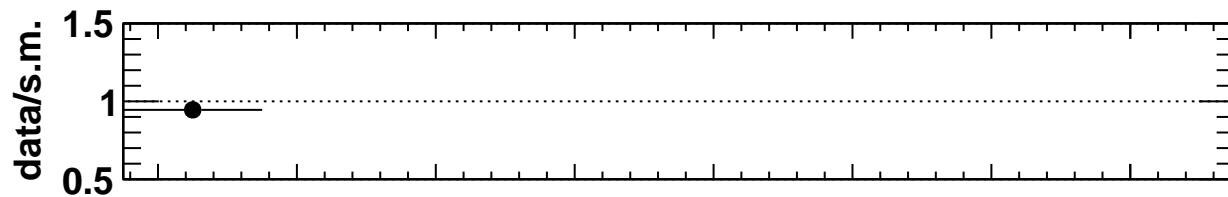
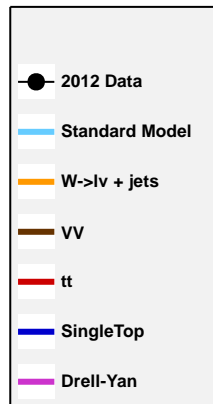
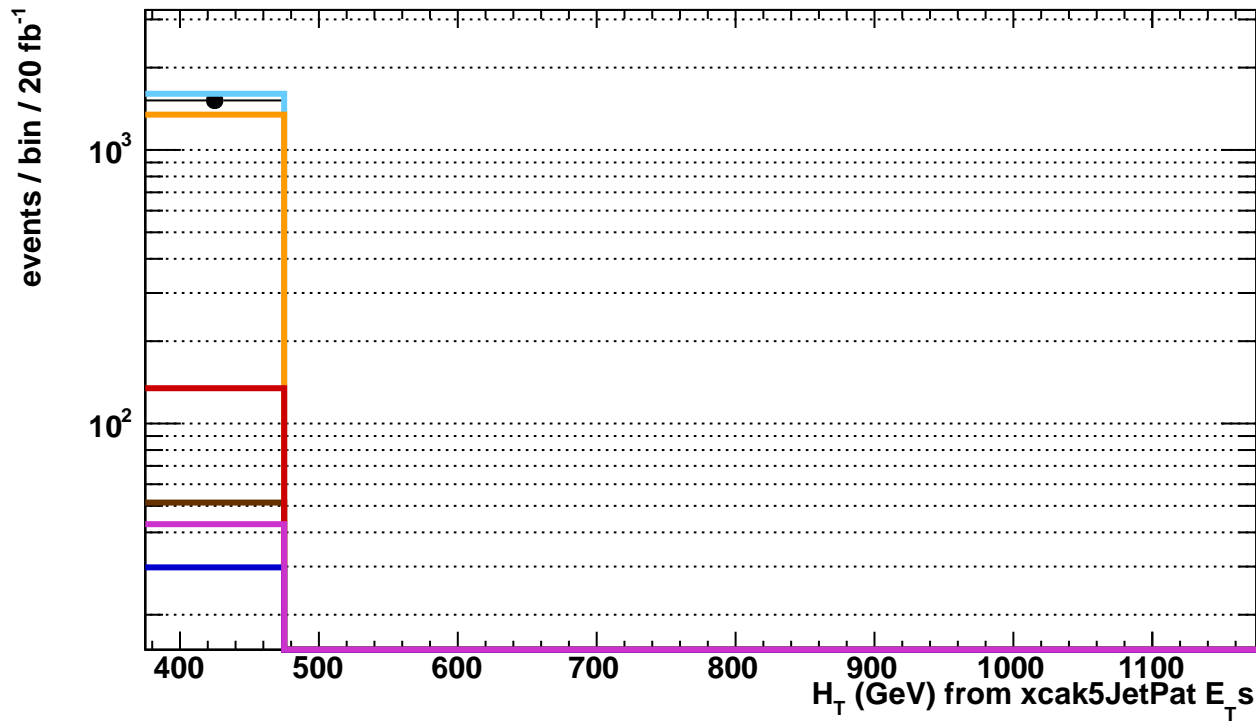


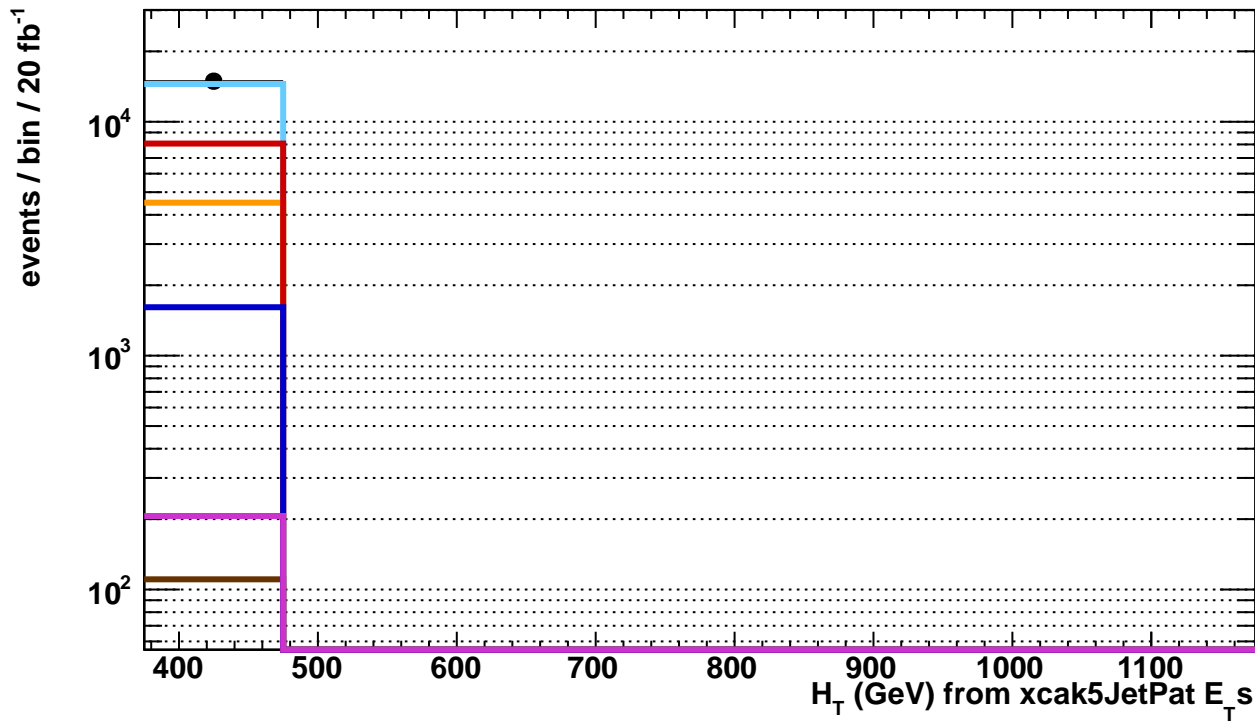


xcak5JetSumEtPat_le3_eq0b_dRge65	
Entries	61596
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.16e+04

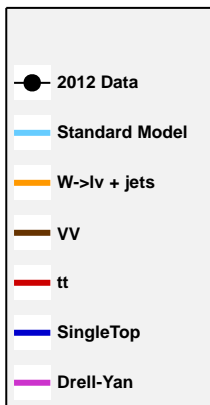


xcak5JetSumEtPat_le3j_eq0b_dRl65	
Entries	1517
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1517

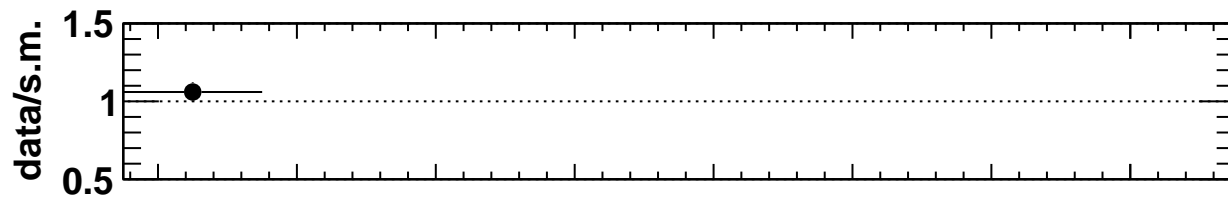
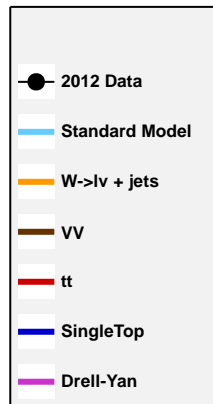
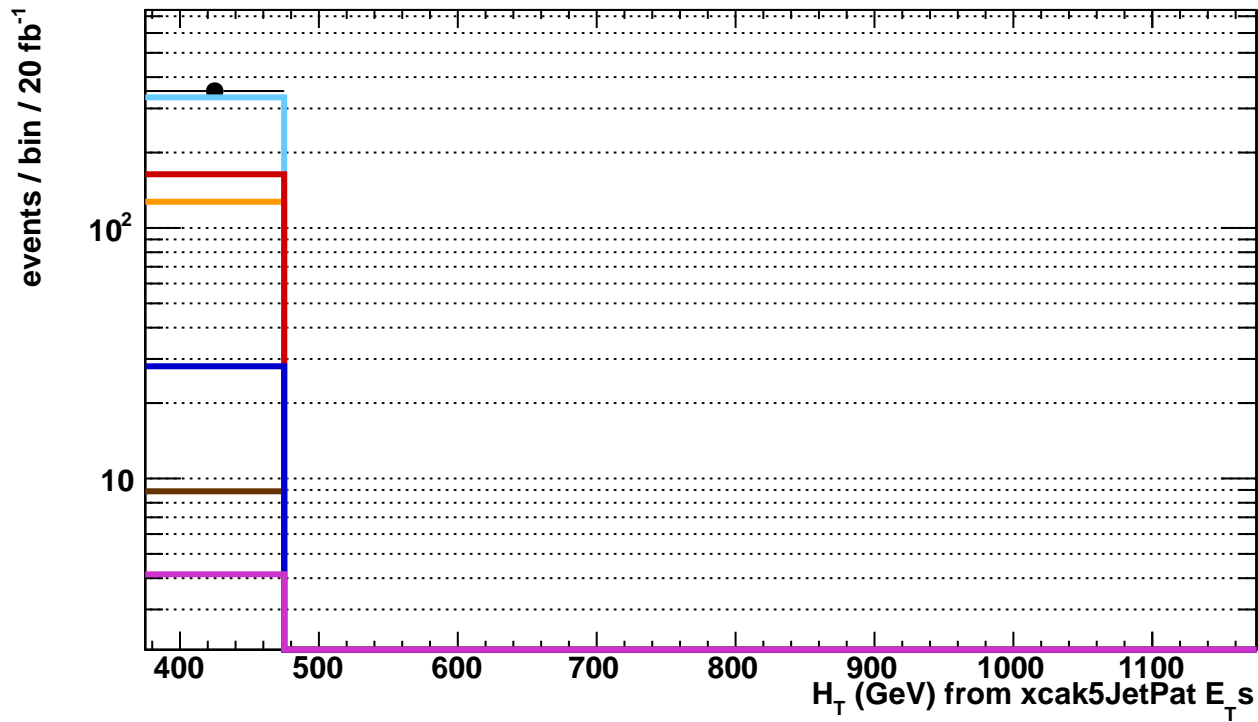




xcak5JetSumEtPat_le3_eq1b_dRge65	
Entries	14909
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.491e+04

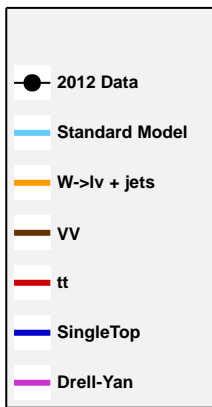
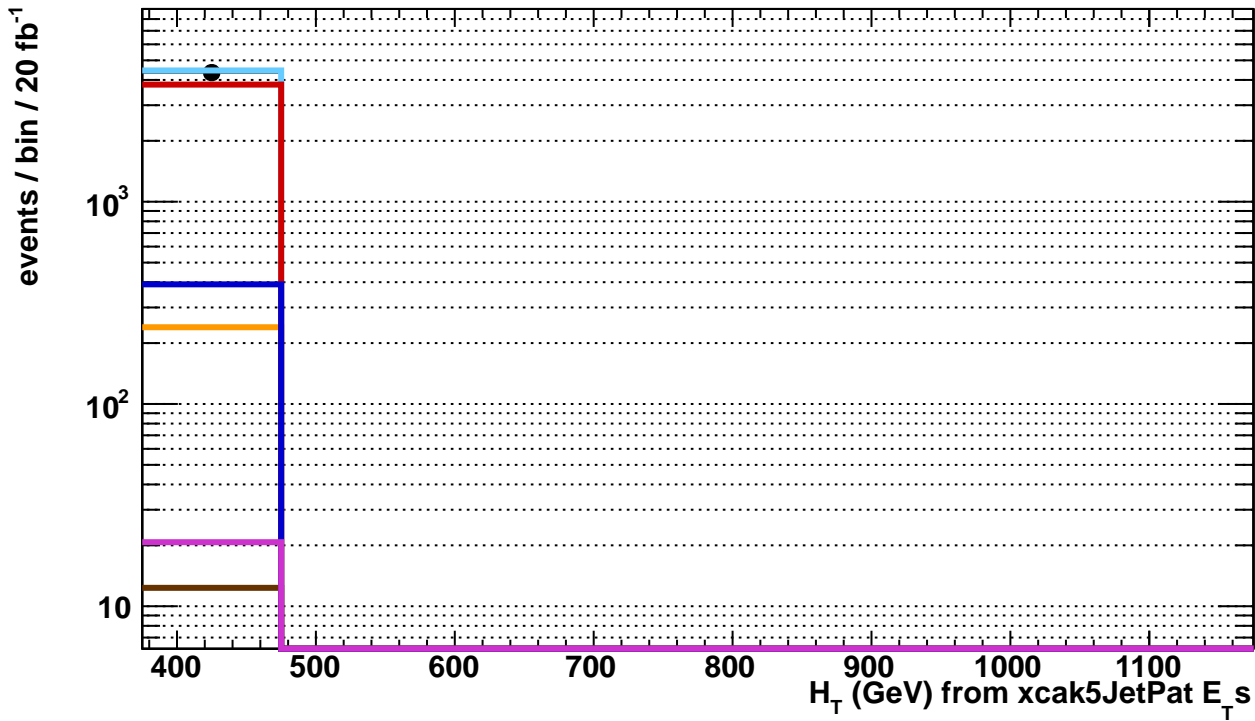


xcak5JetSumEtPat_le3j_eq1b_dRl65	
Entries	352
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	352

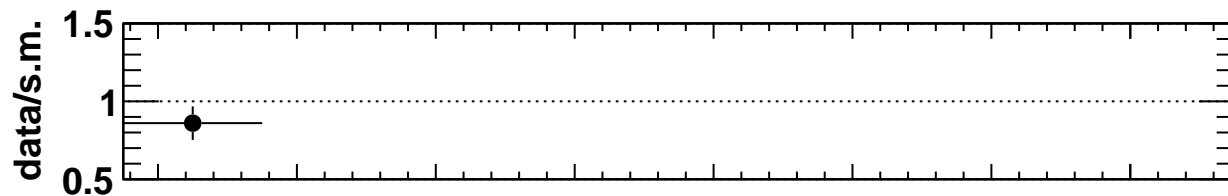
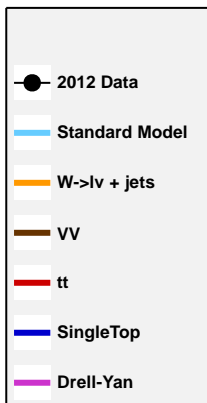
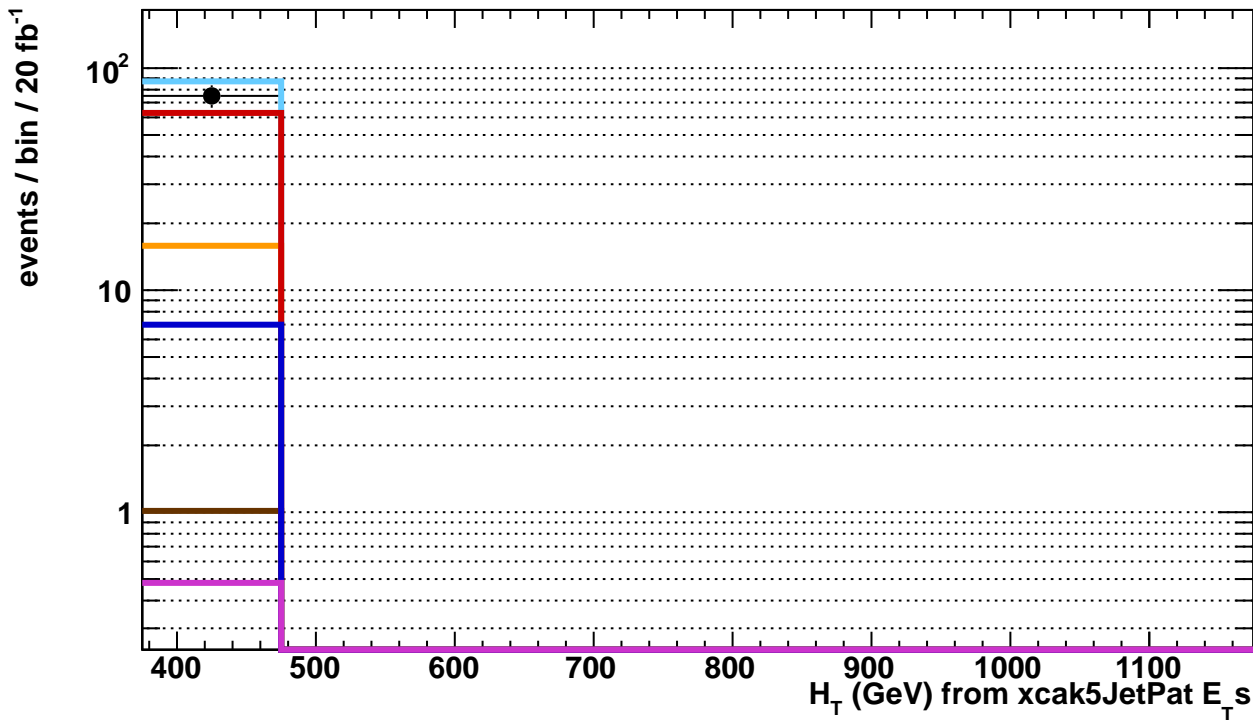




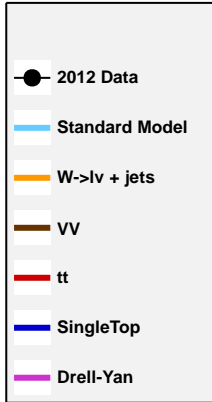
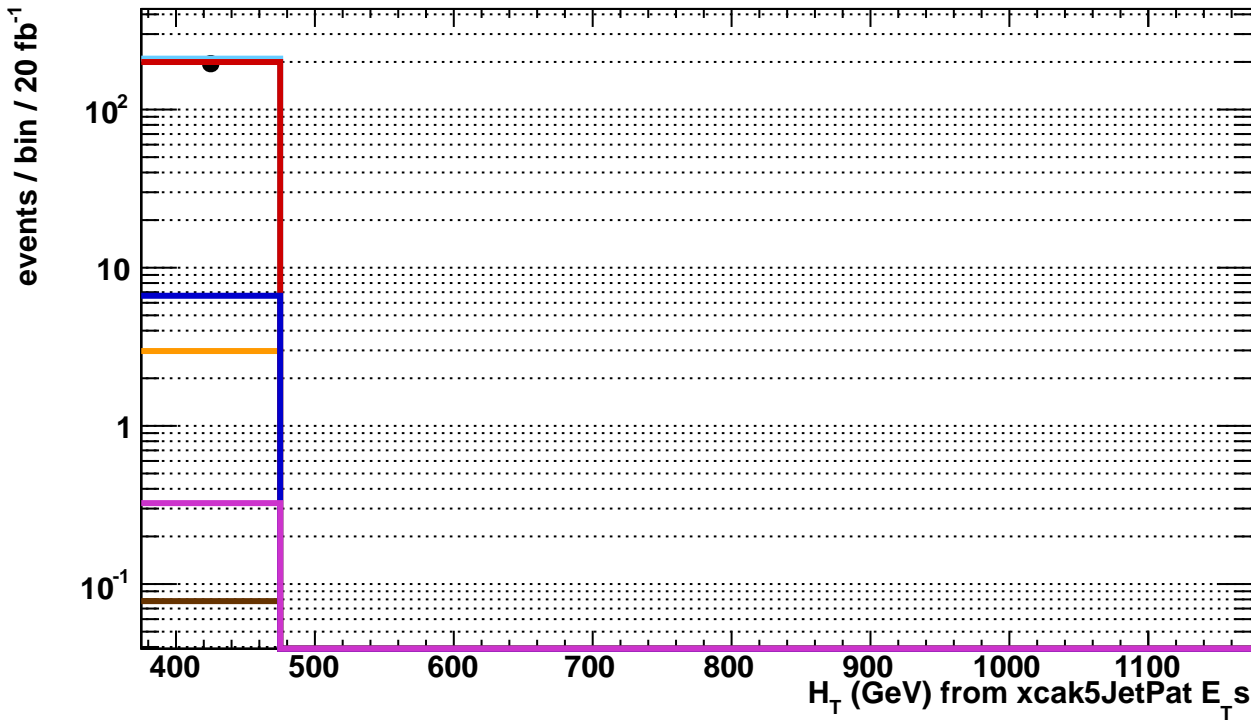
xcak5JetSumEtPat_le3_eq2b_dRge65	
Entries	4347
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4347



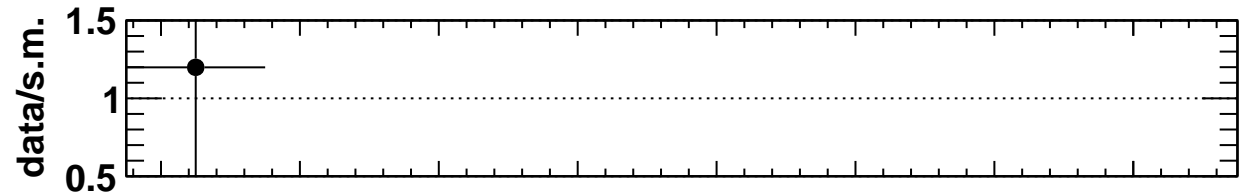
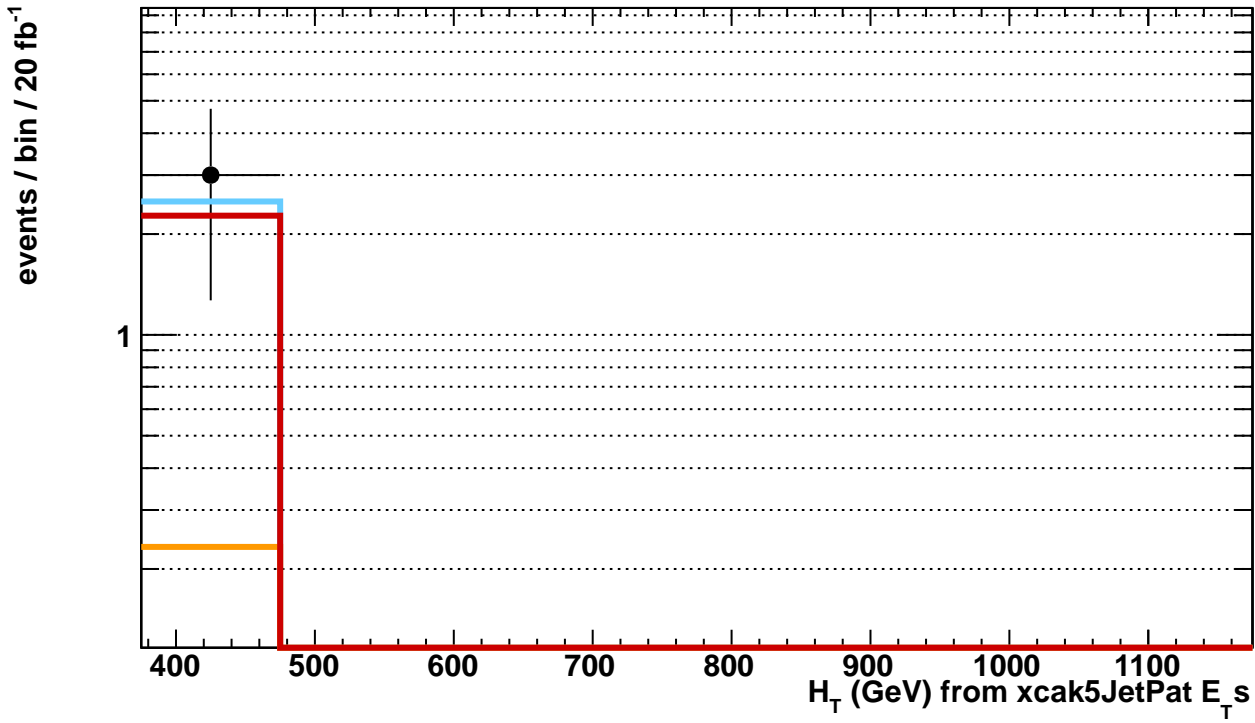
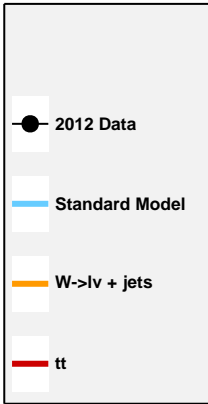
<b>Entries</b>	<b>75</b>
<b>Mean</b>	<b>425</b>
<b>RMS</b>	<b>0</b>
<b>Underflow</b>	<b>0</b>
<b>Overflow</b>	<b>0</b>
<b>Integral</b>	<b>75</b>

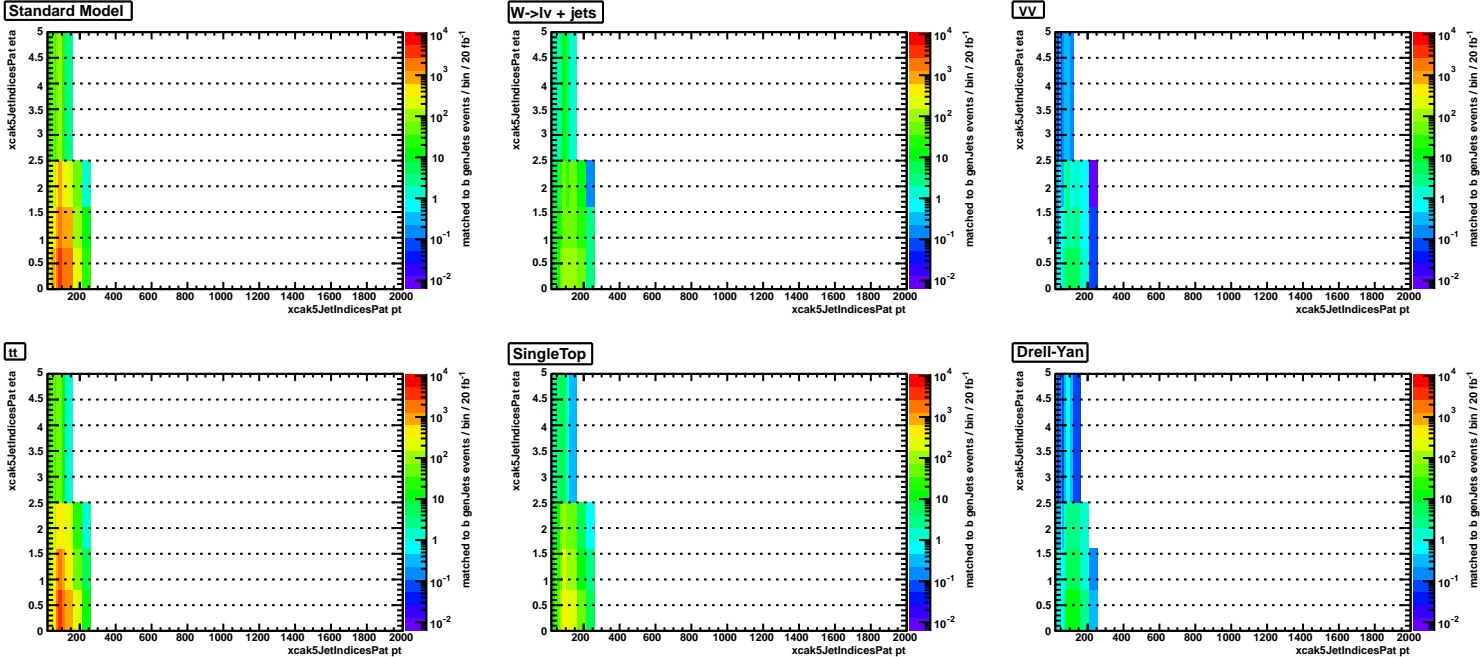


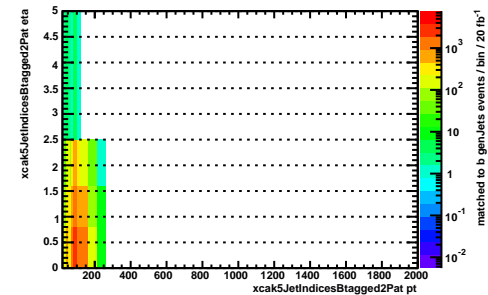
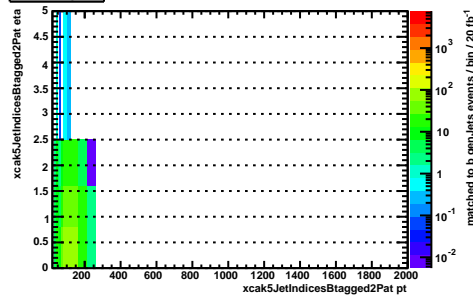
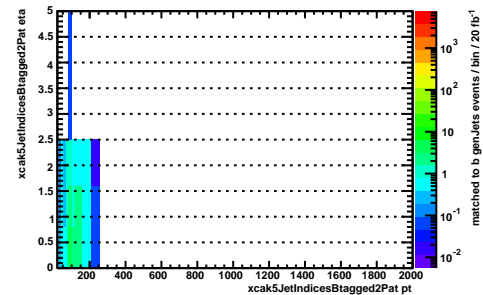
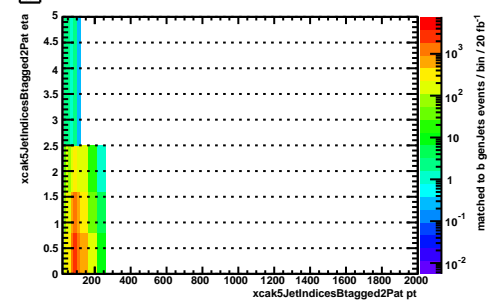
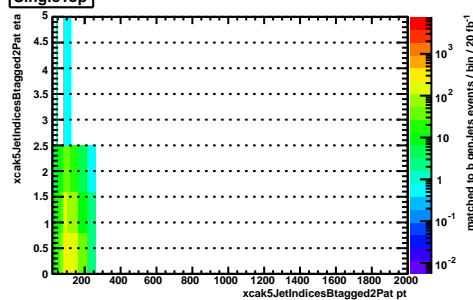
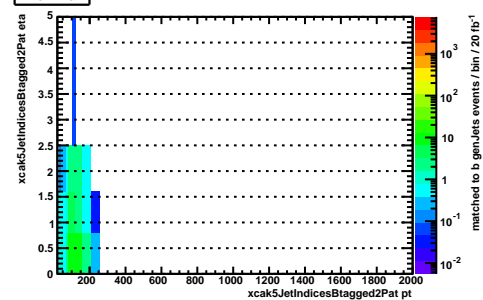
xcak5JetSumEtPat_le3_eq3b_dRge65	
Entries	195
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	195

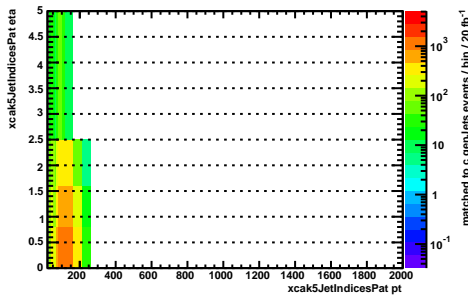
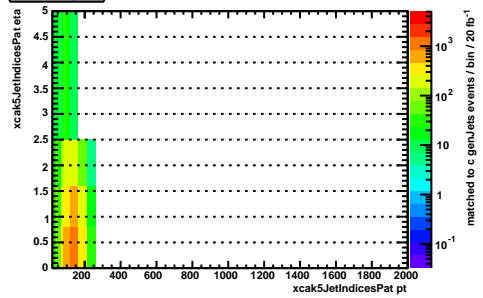
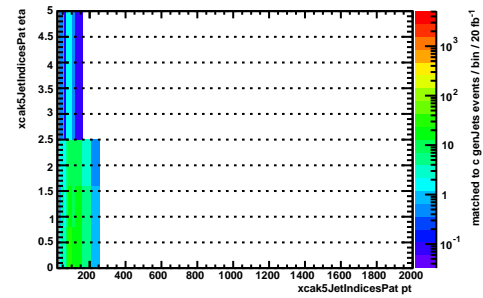
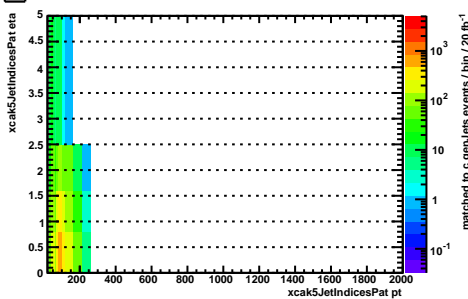
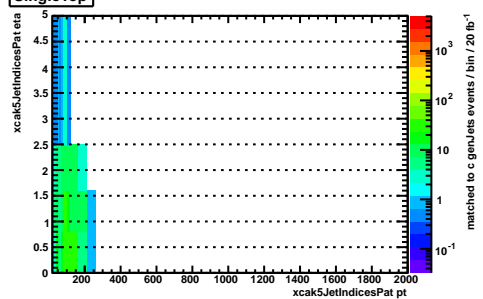
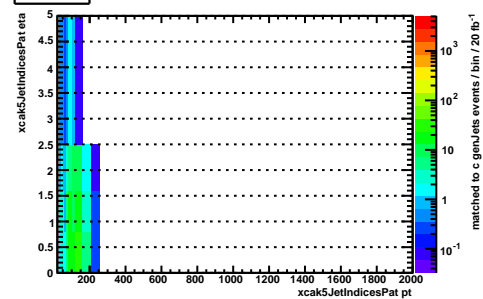


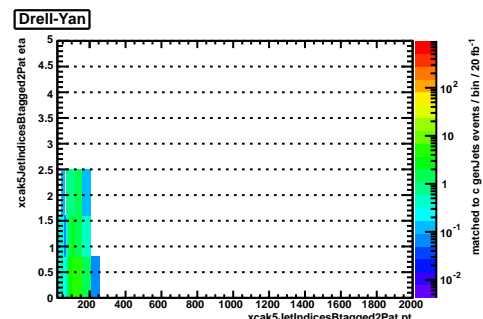
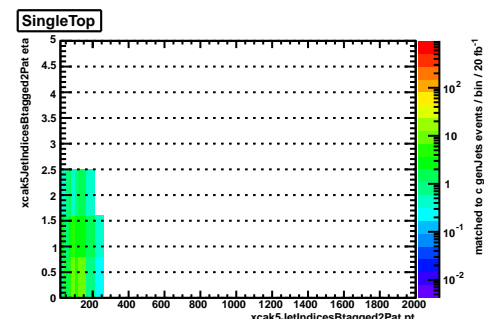
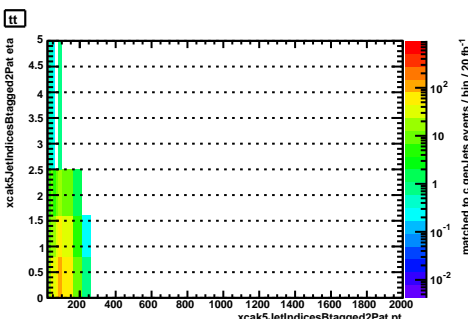
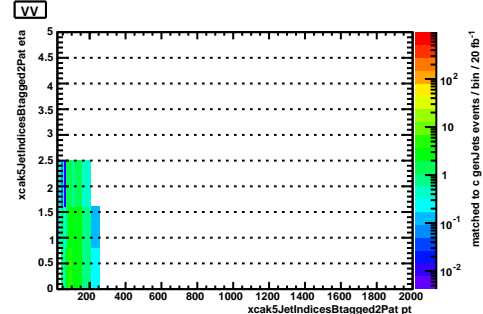
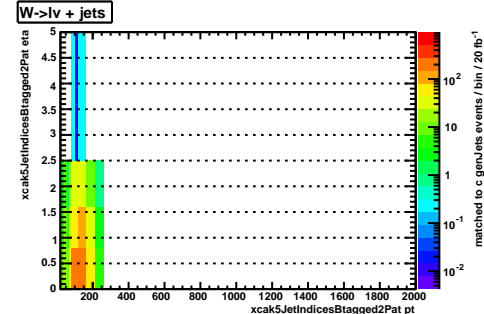
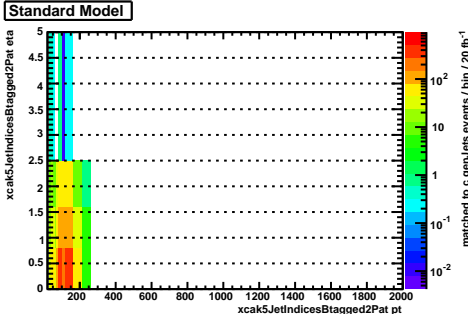
xcak5JetSumEtPat_l63j_eq3b_dRl65	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3



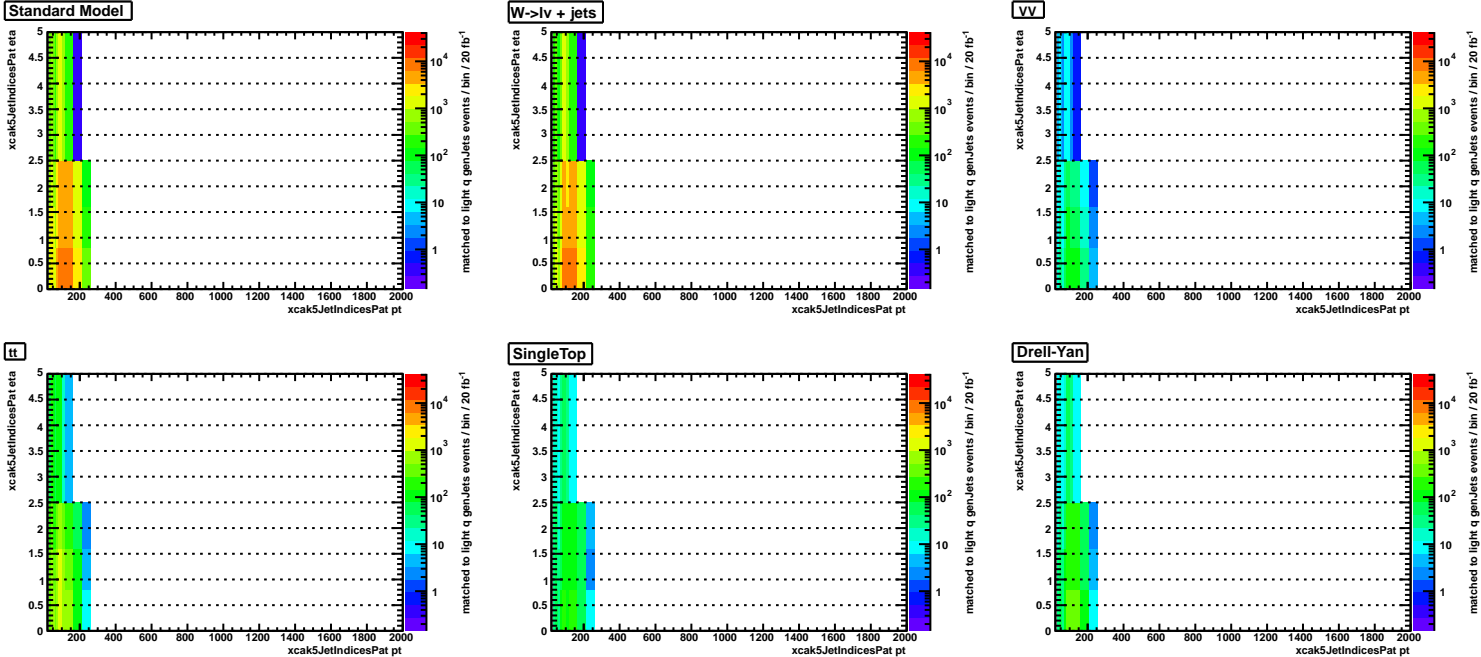


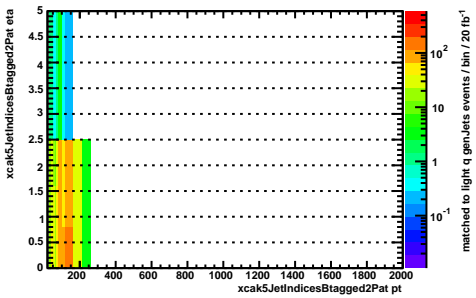
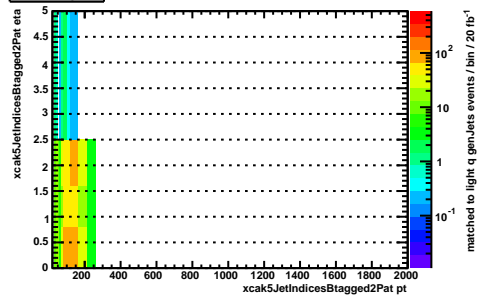
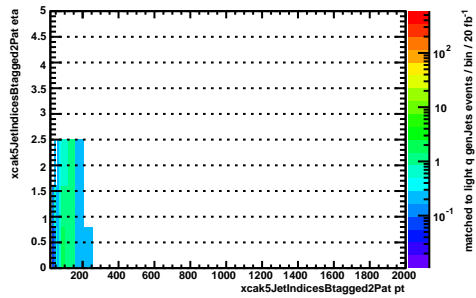
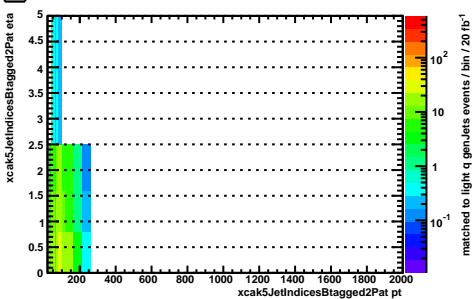
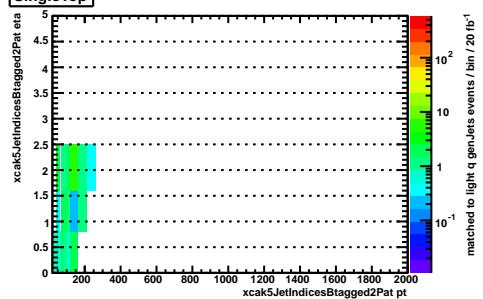
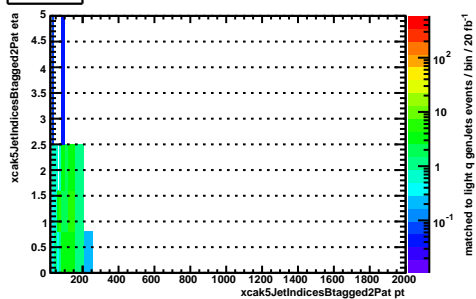
**Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

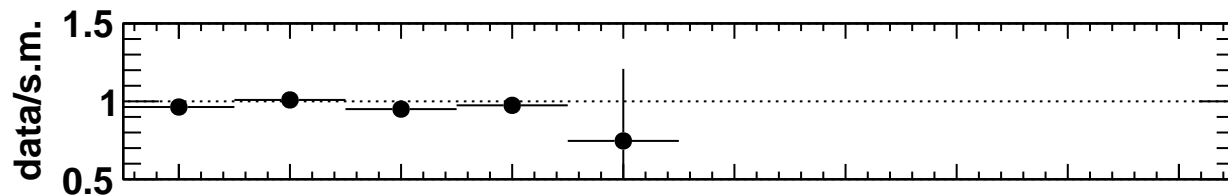
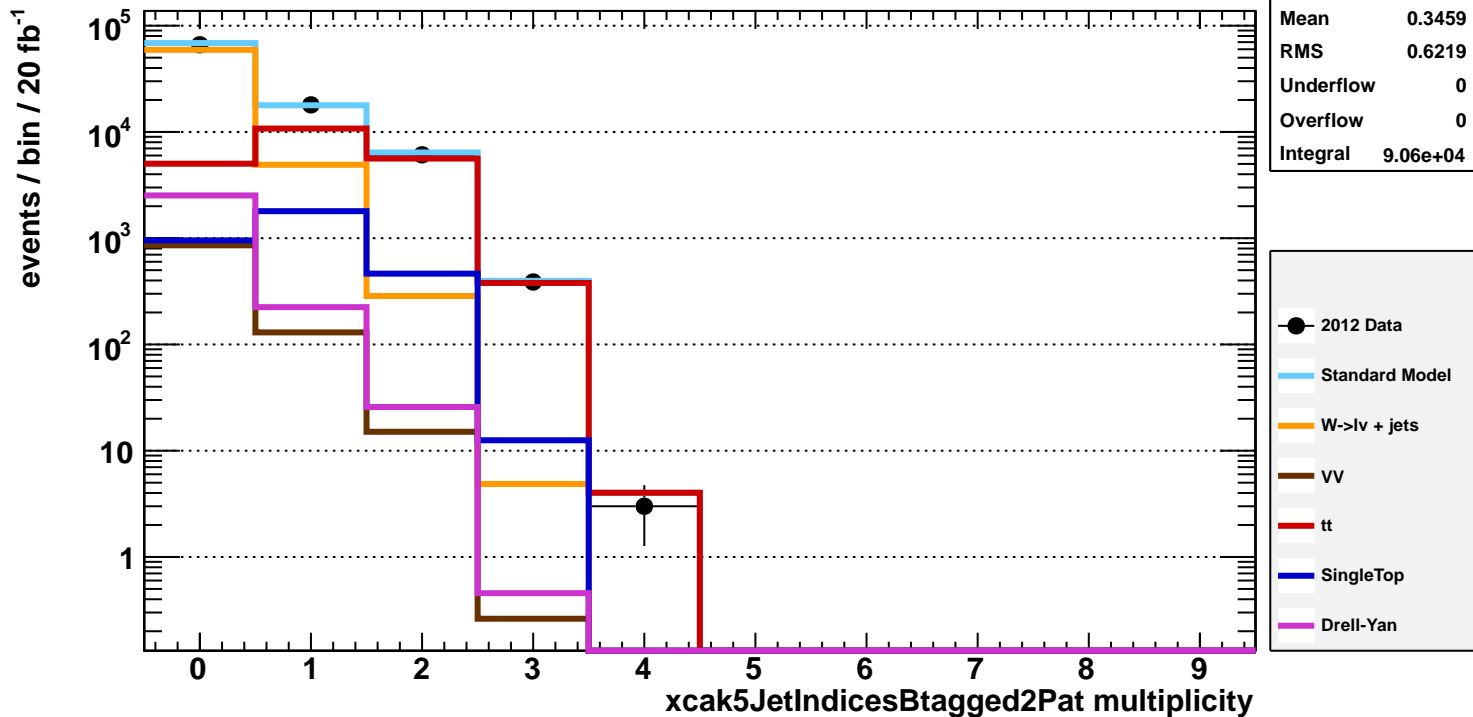
**Standard Model****W- $\rightarrow$ lv + jets****vv****tt****SingleTop****Drell-Yan**

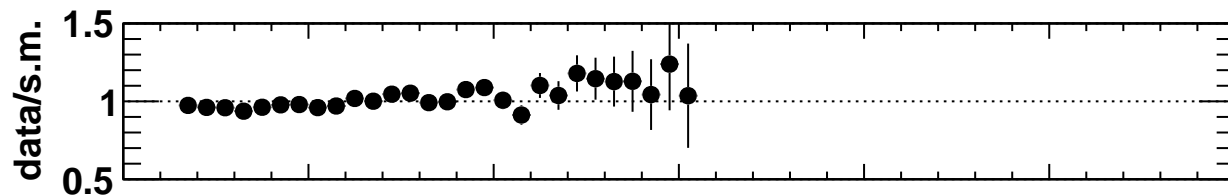
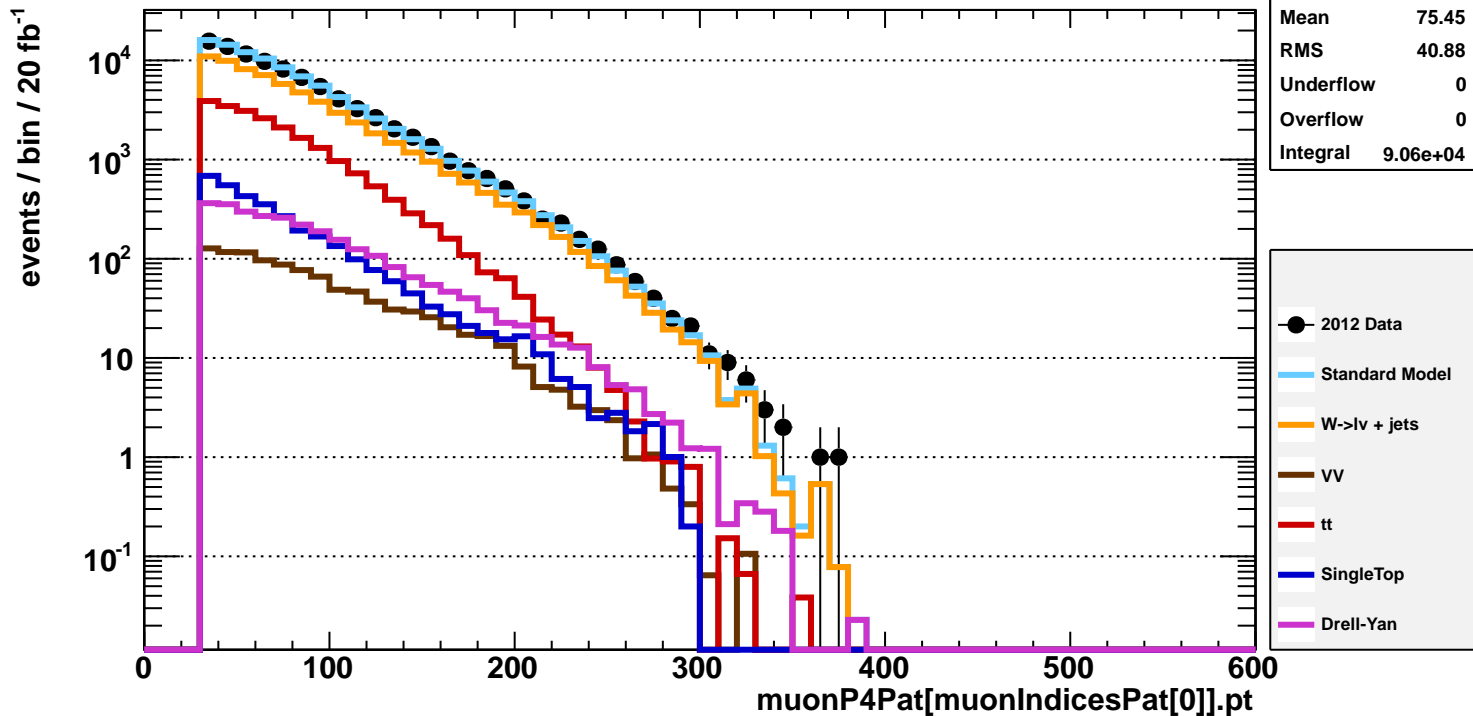


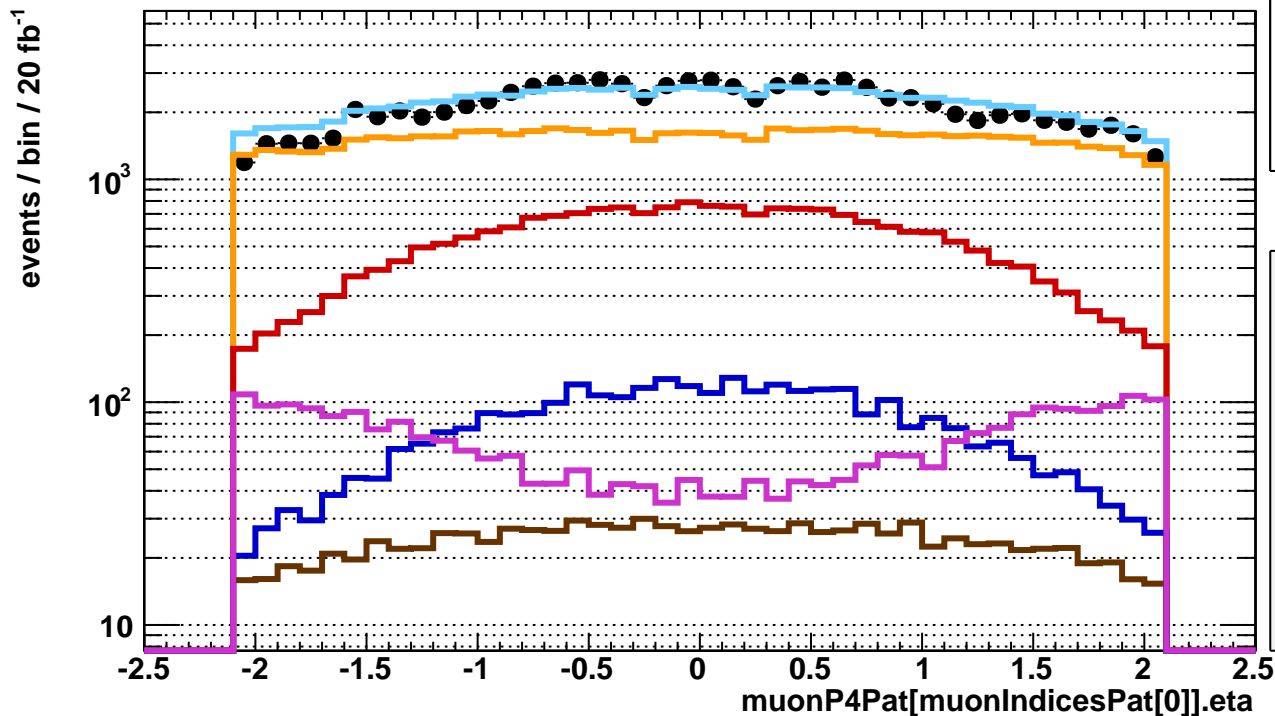




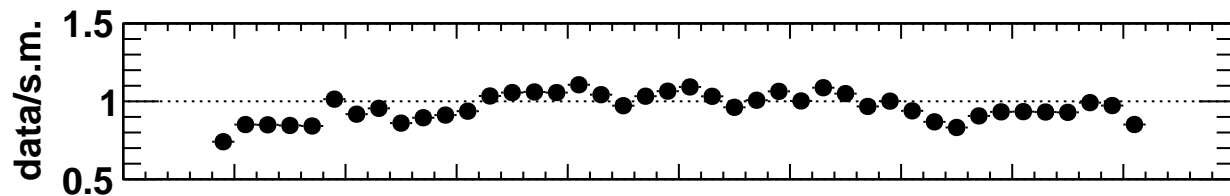
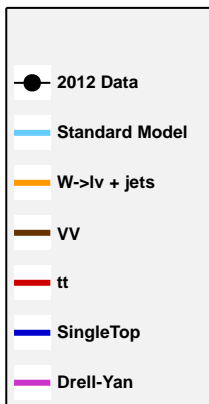
**Standard Model****W->lv + jets****vv****tt****SingleTop****Drell-Yan**

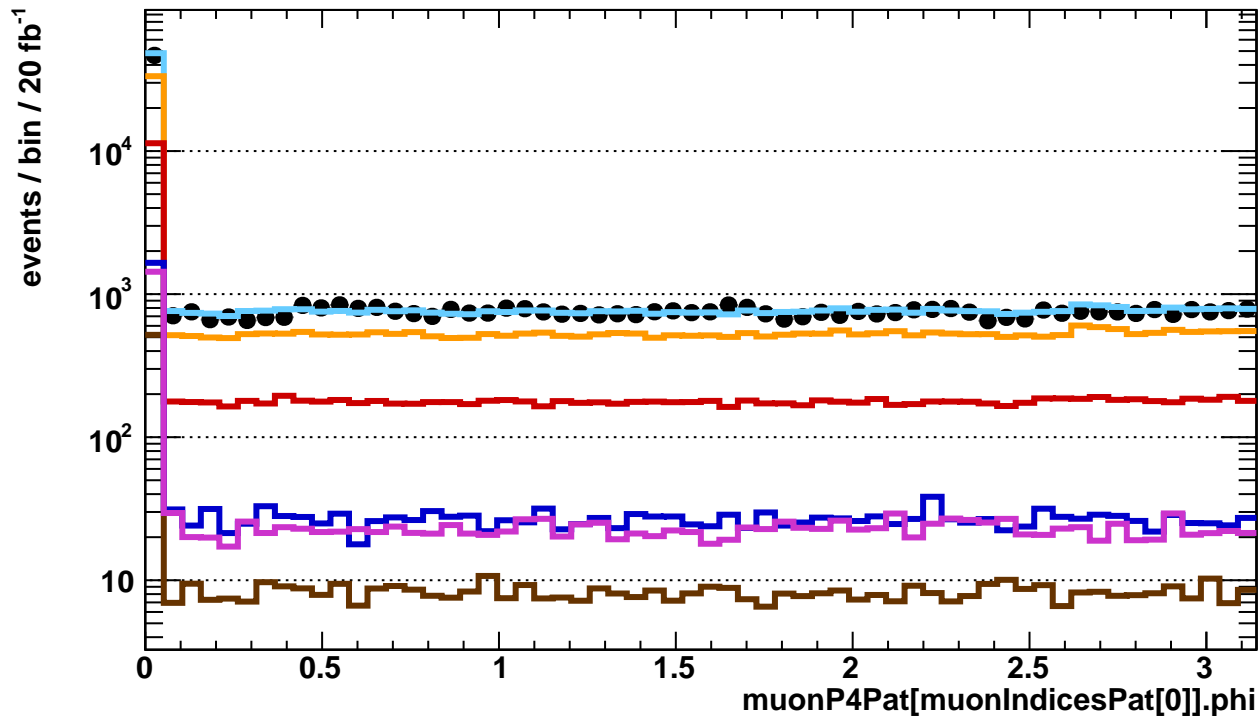




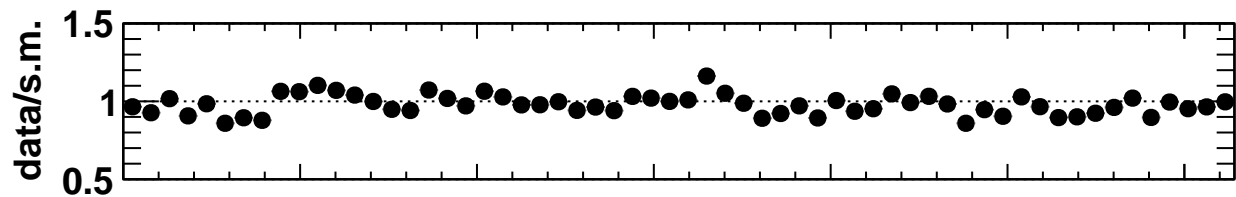
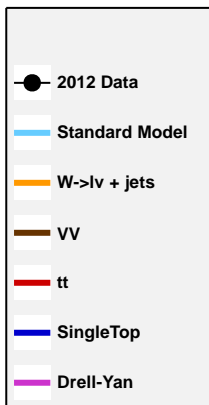


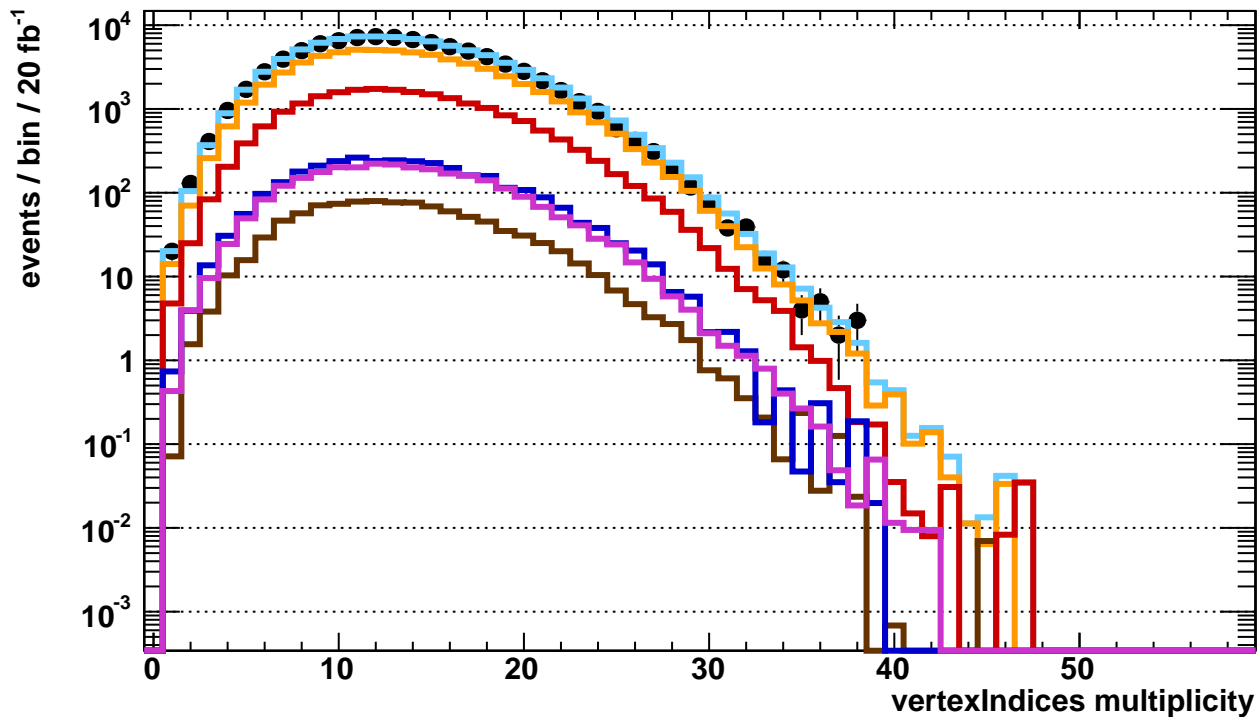
muonP4Pat.eta[[0]]; muonIndicesPat	
Entries	90605
Mean	0.01384
RMS	1.096
Underflow	0
Overflow	0
Integral	9.06e+04



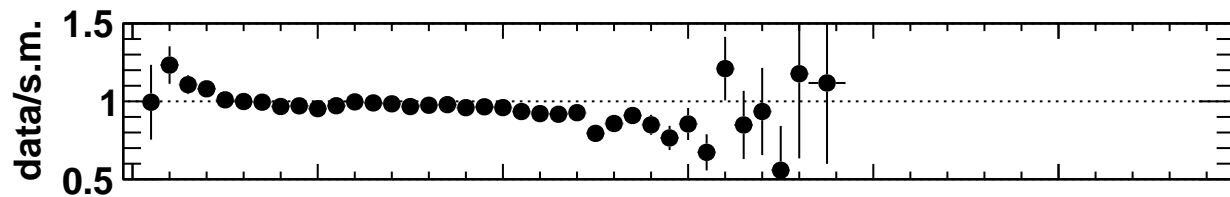


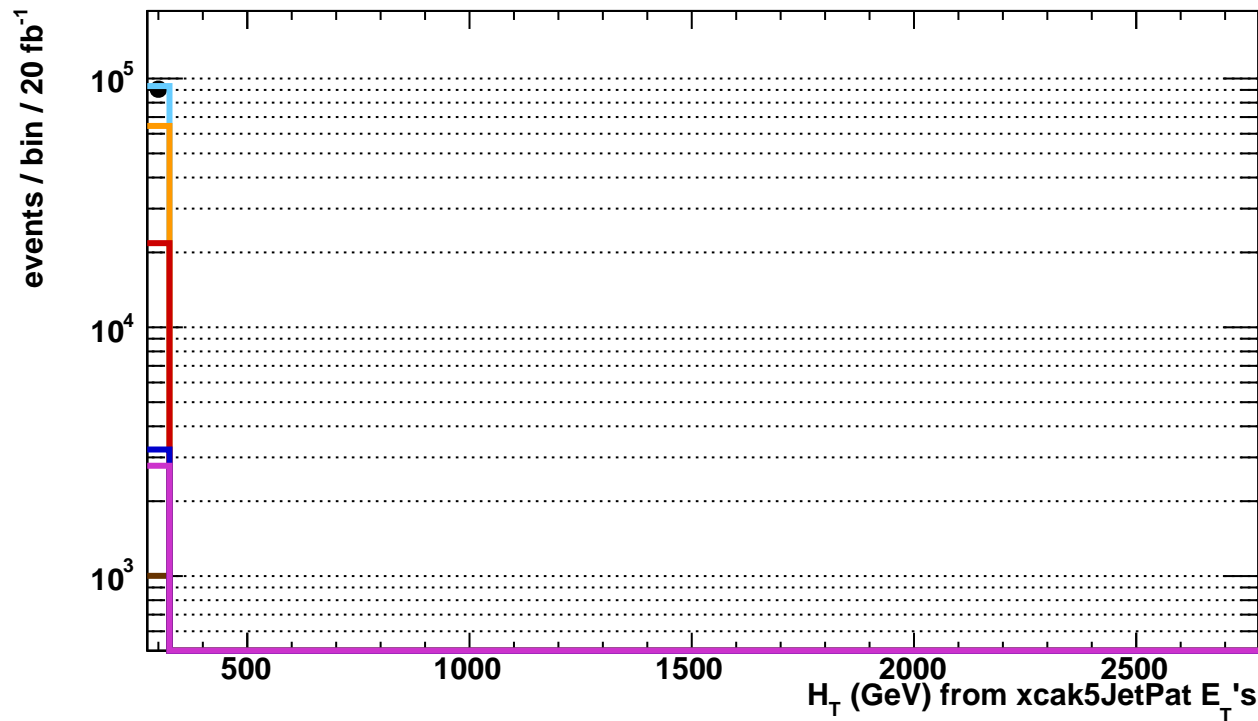
muonP4Pat.phi[[0]]; muonIndicesPat	
Entries	90605
Mean	0.7902
RMS	1.002
Underflow	0
Overflow	0
Integral	9.06e+04



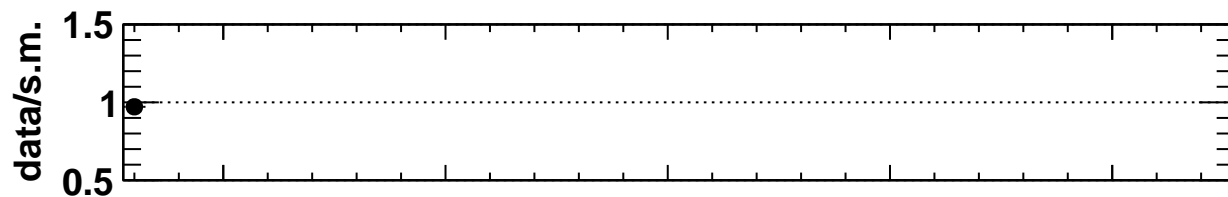
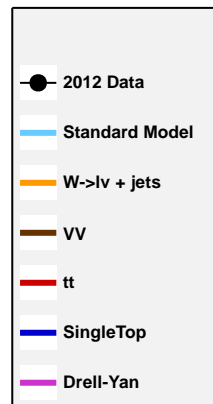


vertexIndicesMultiplicity	
Entries	90605
Mean	13.39
RMS	4.946
Underflow	0
Overflow	0
Integral	9.06e+04

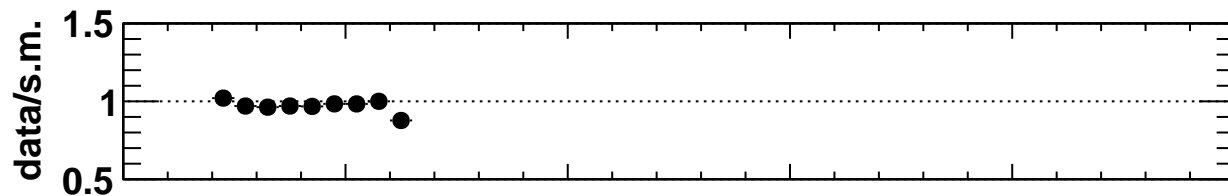
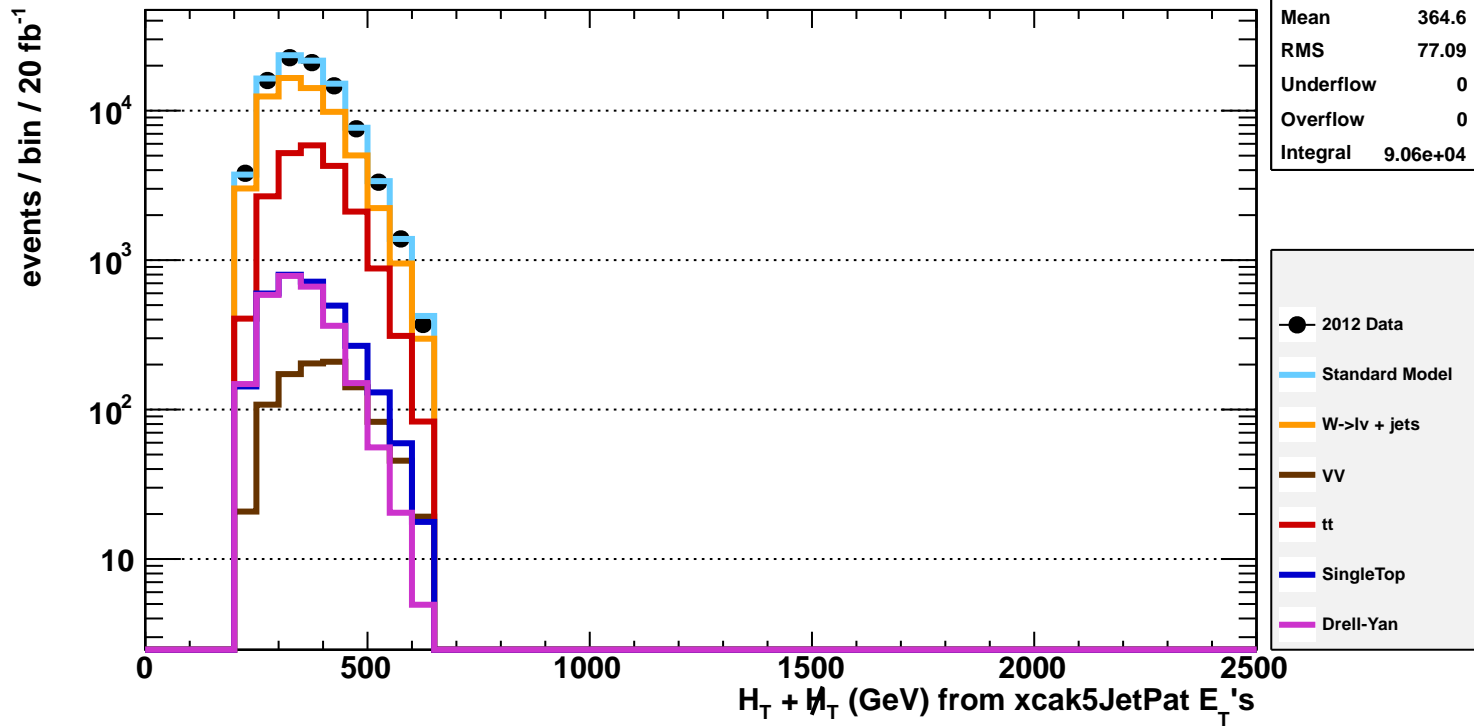


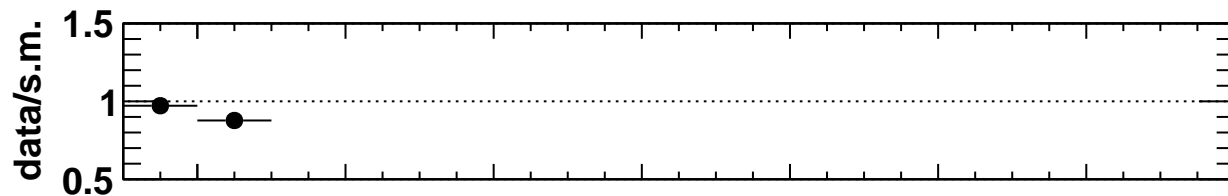
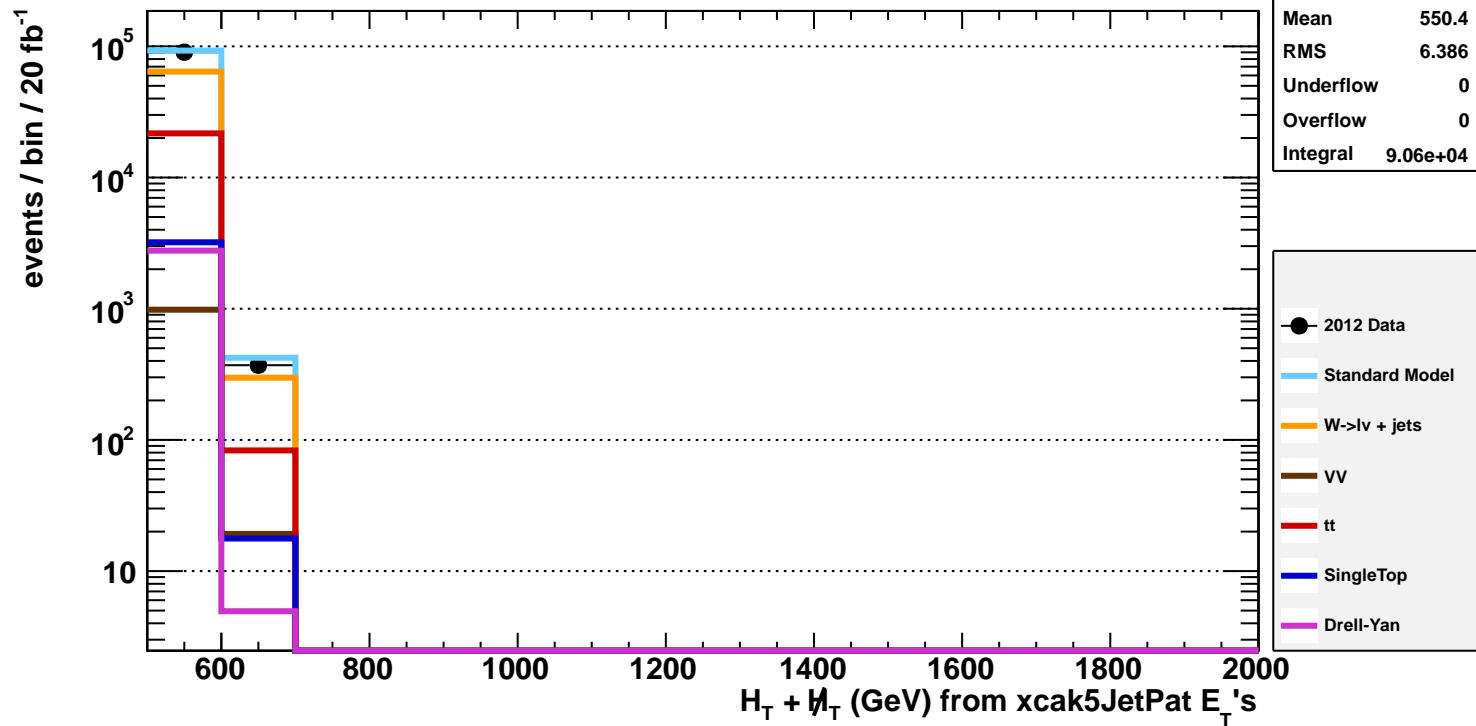


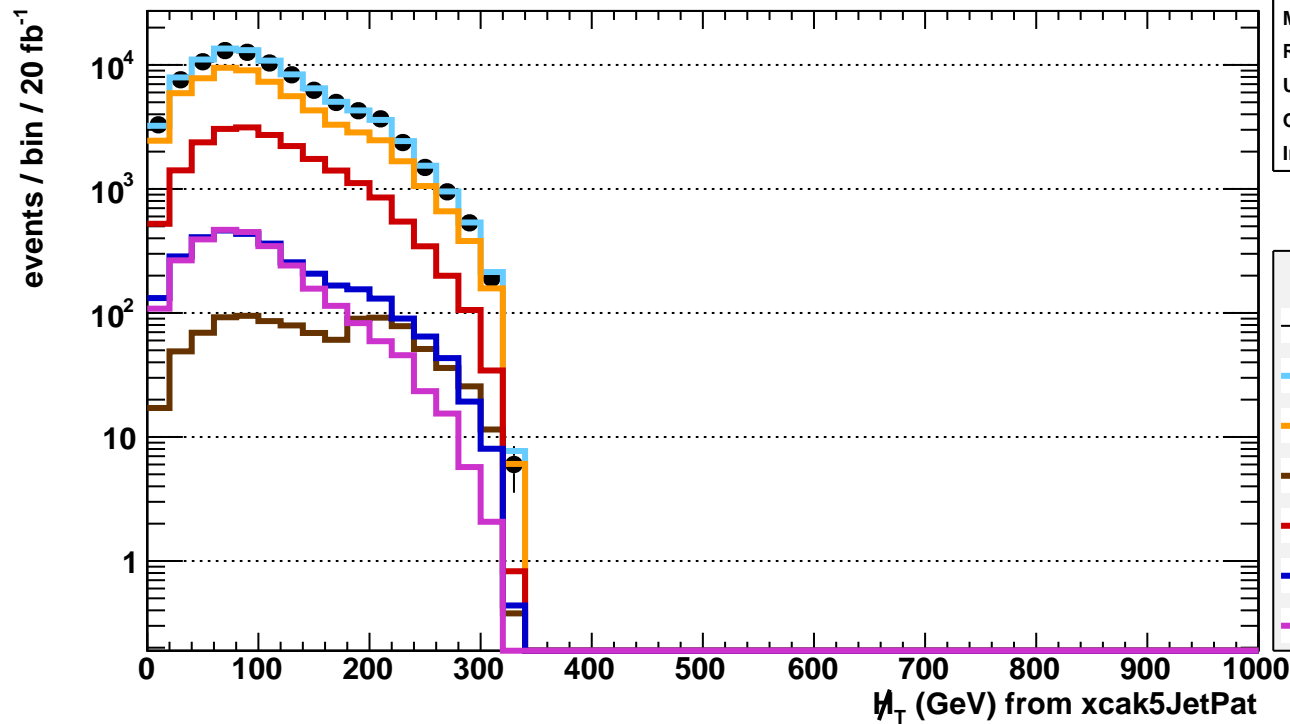
xcak5JetHtPat	
Entries	90605
Mean	300
RMS	0
Underflow	0
Overflow	0
Integral	9.06e+04



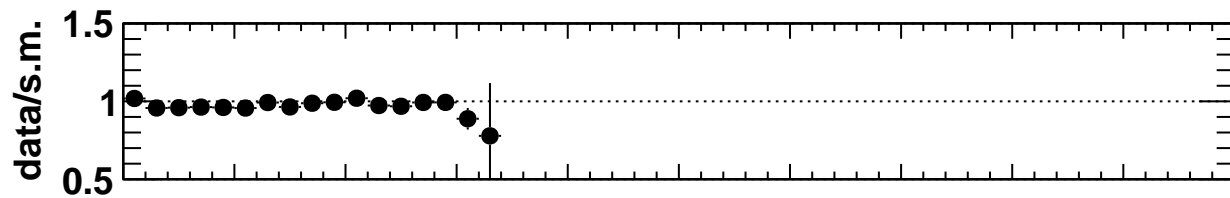
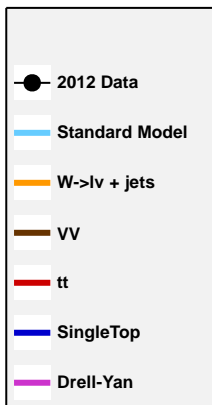


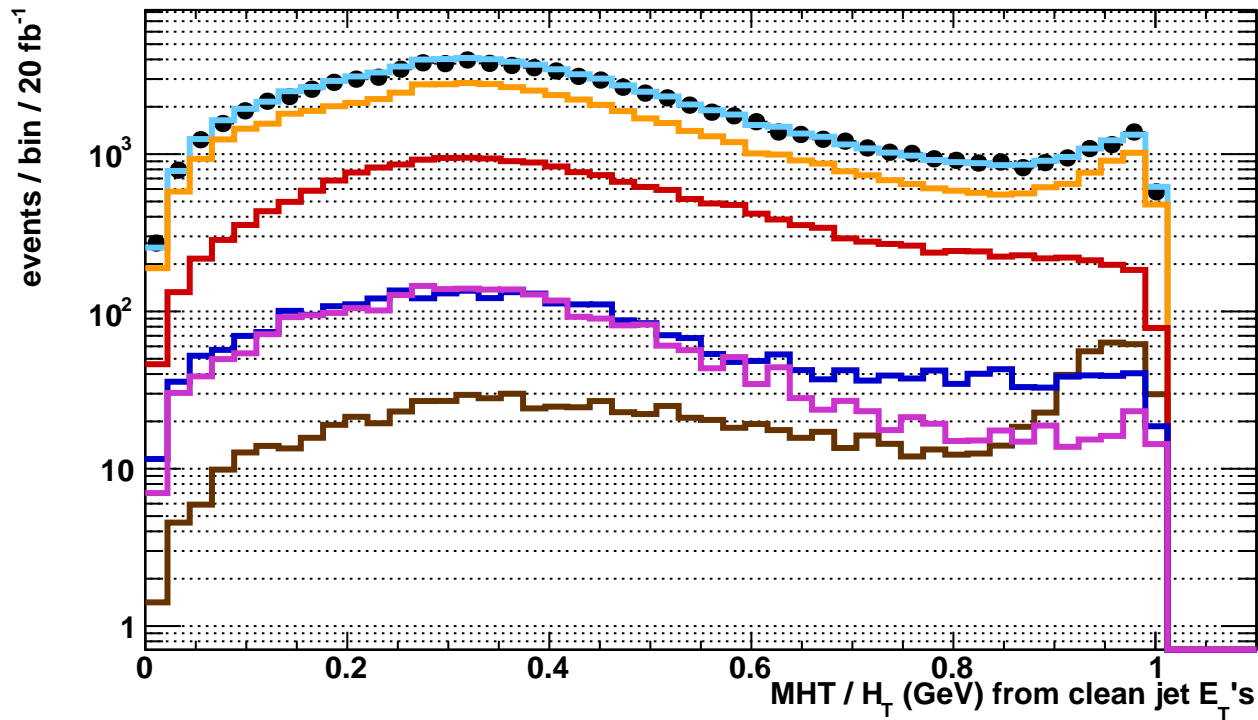




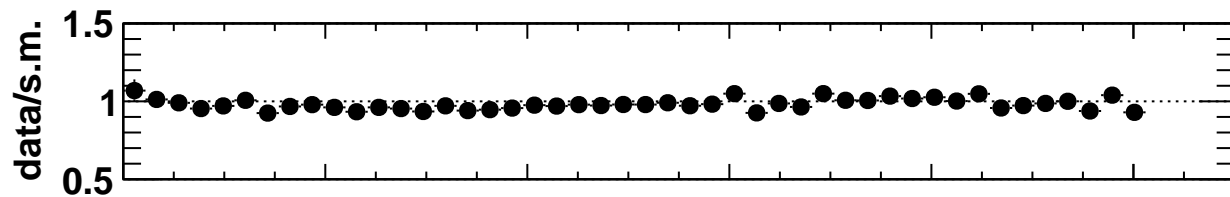
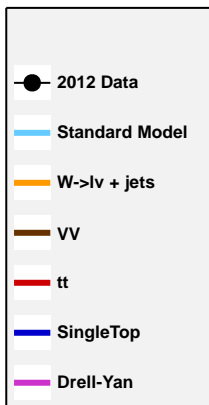


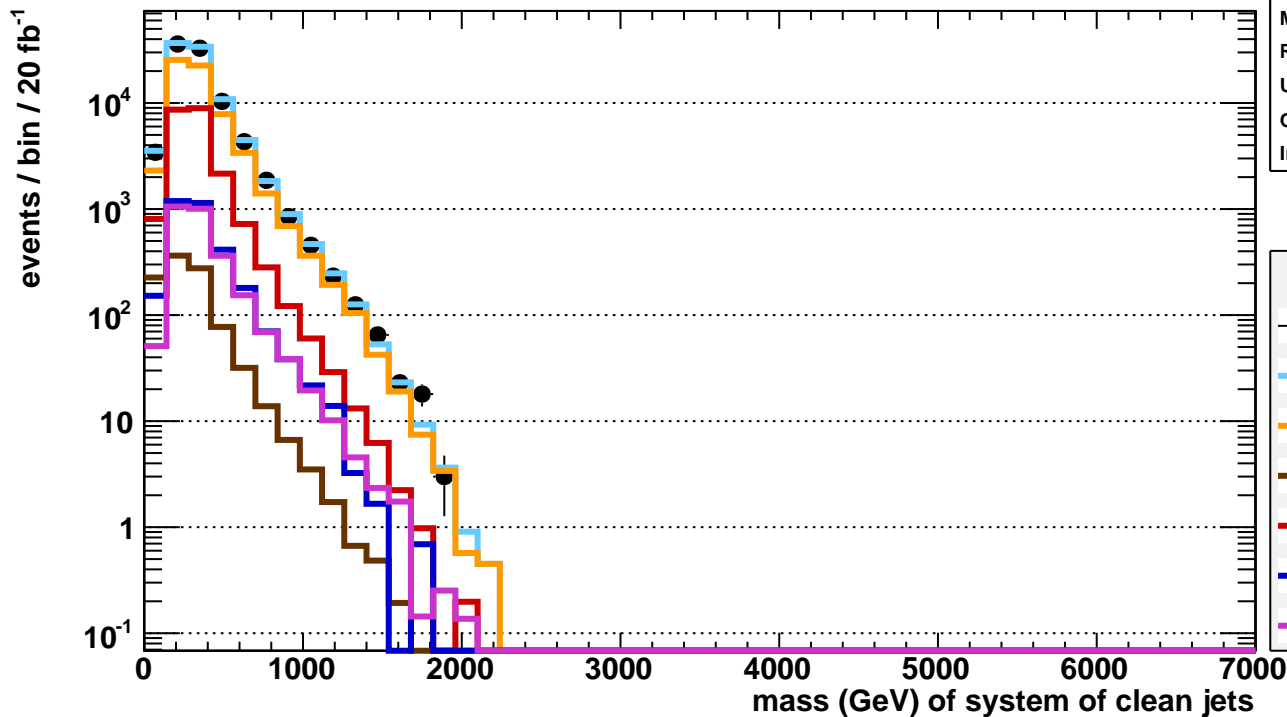
xcak5JetMhtPat	
Entries	90605
Mean	108.4
RMS	62.24
Underflow	0
Overflow	0
Integral	9.06e+04



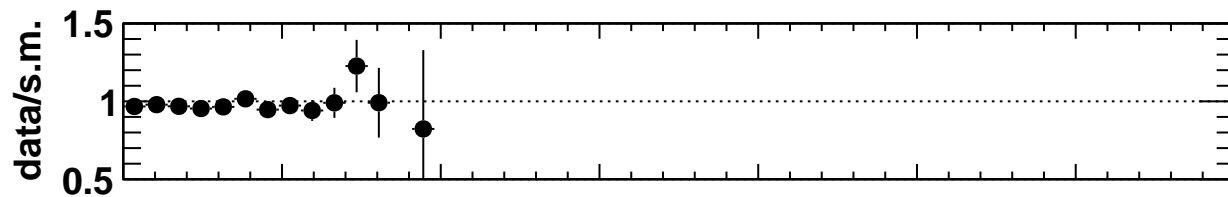
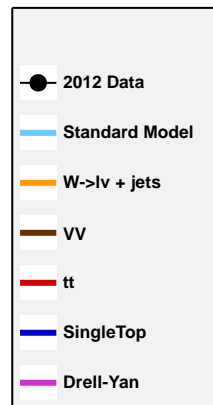


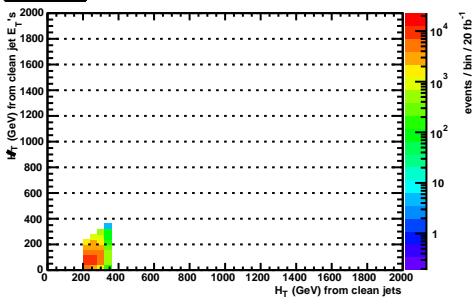
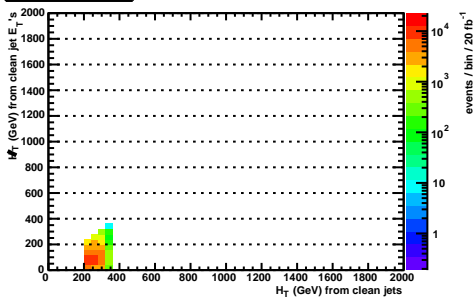
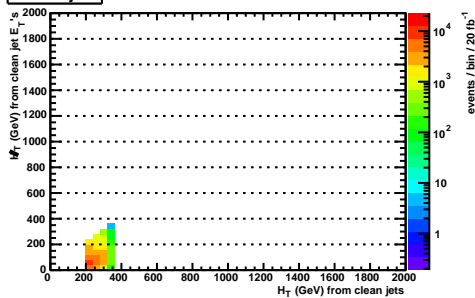
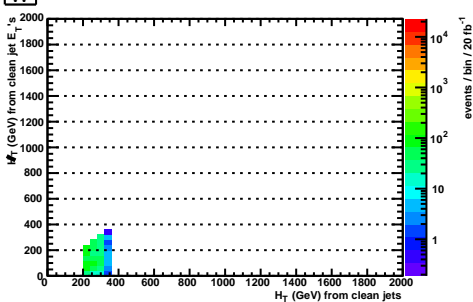
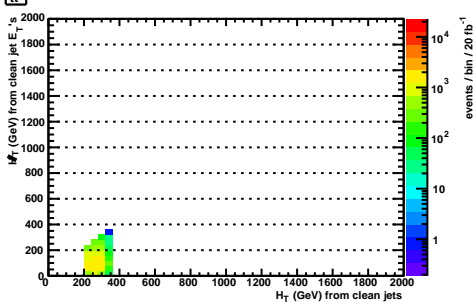
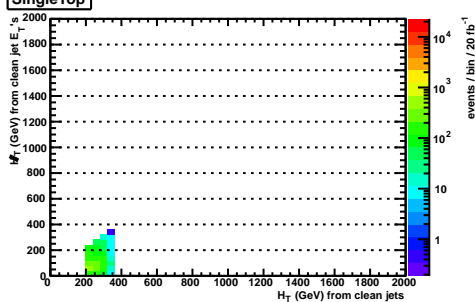
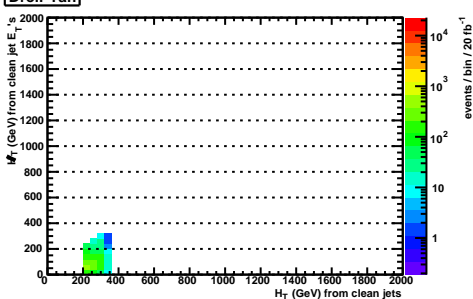
xcak5JetmHtOverHtPat	
Entries	90605
Mean	0.4247
RMS	0.2391
Underflow	0
Overflow	0
Integral	9.06e+04

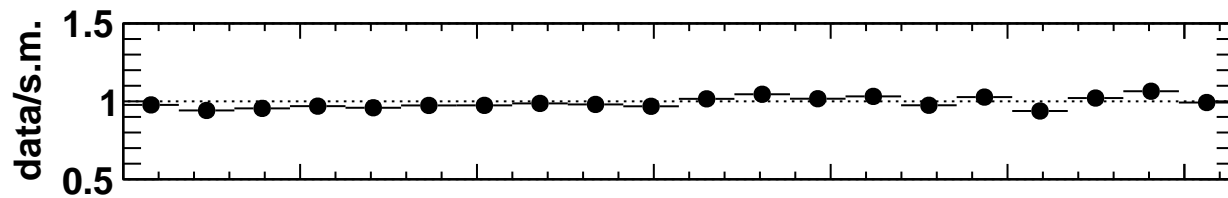
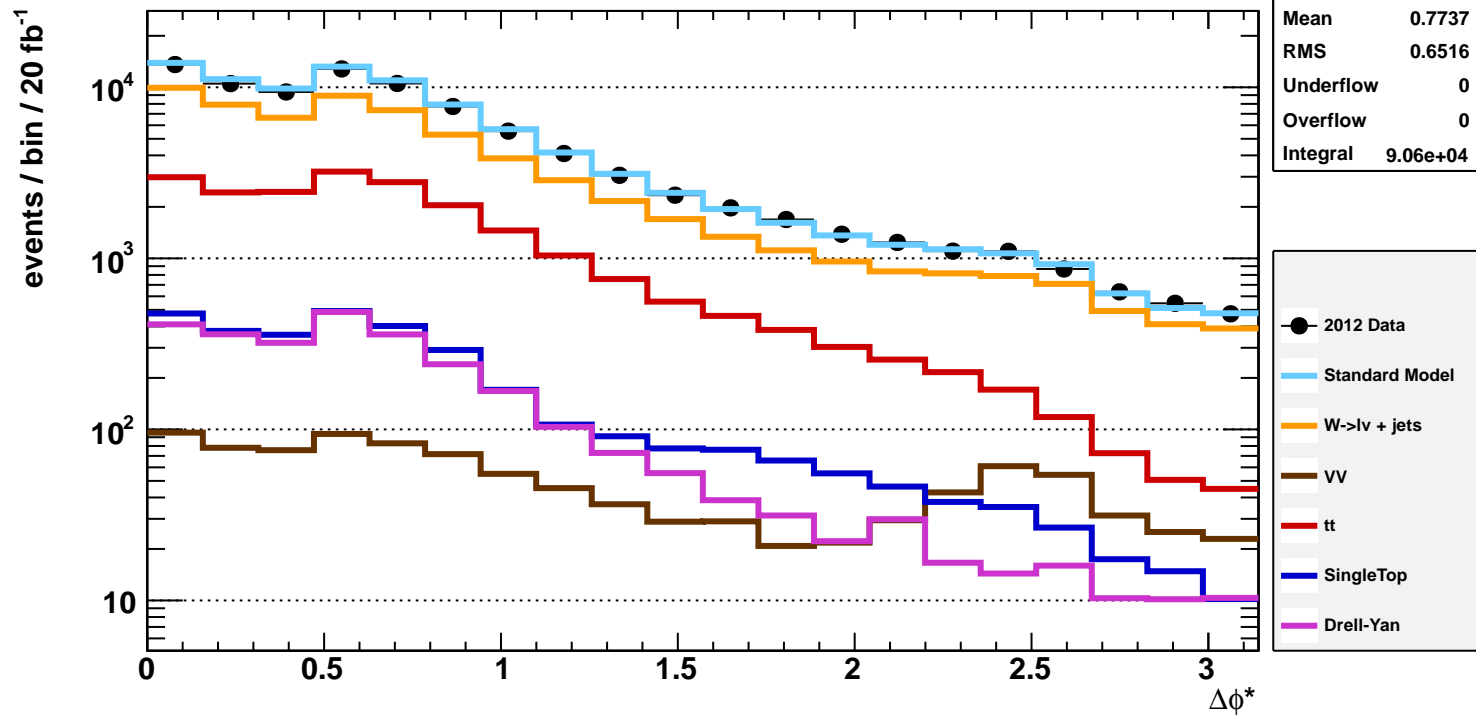


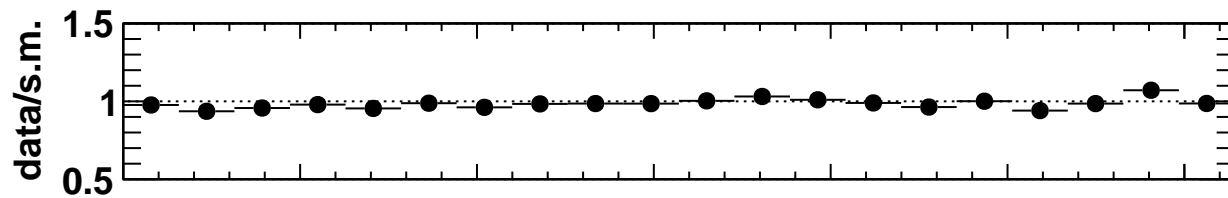
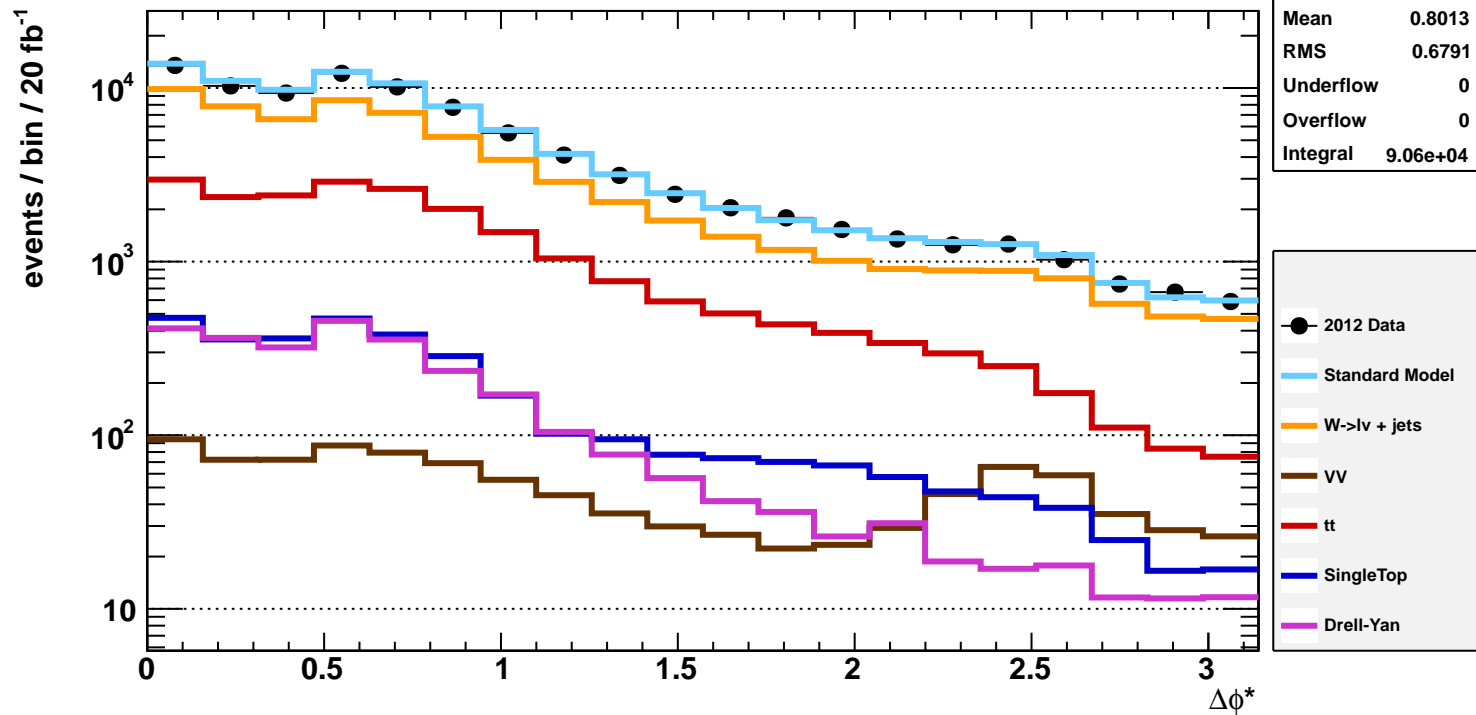


xcak5JetmPat	
Entries	90605
Mean	337.4
RMS	167.8
Underflow	0
Overflow	0
Integral	9.06e+04

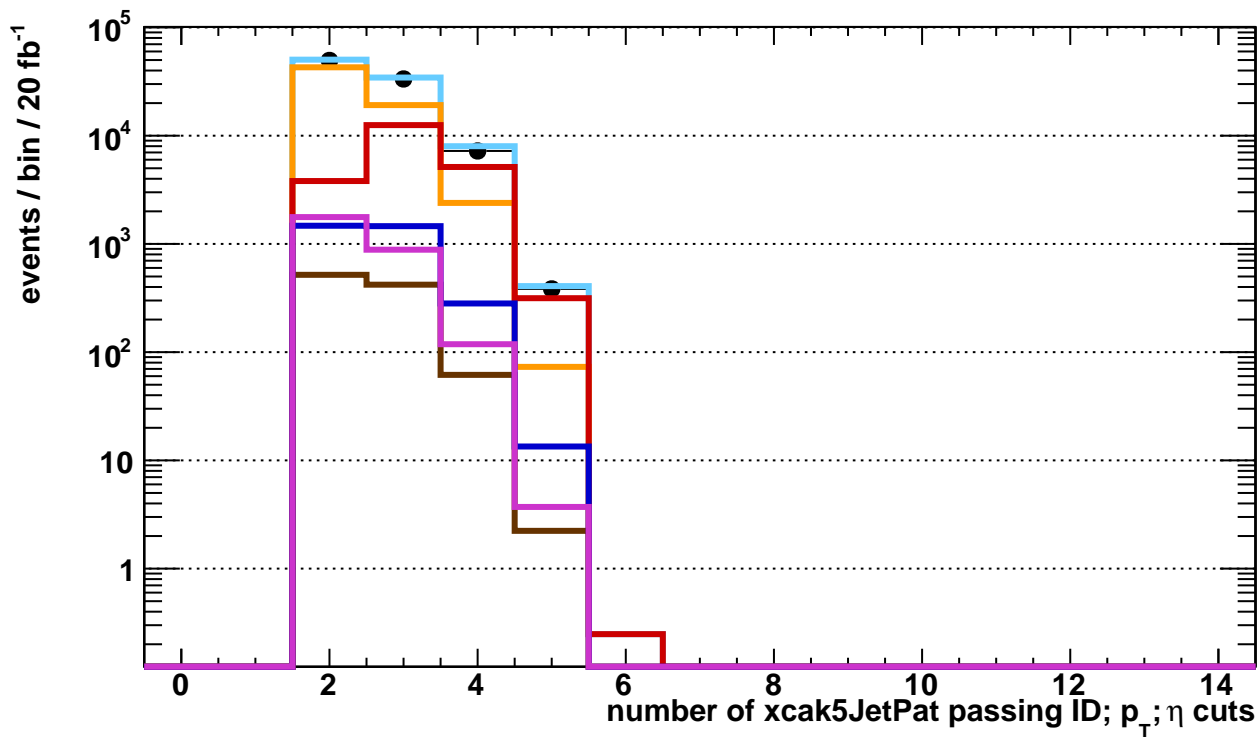


**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

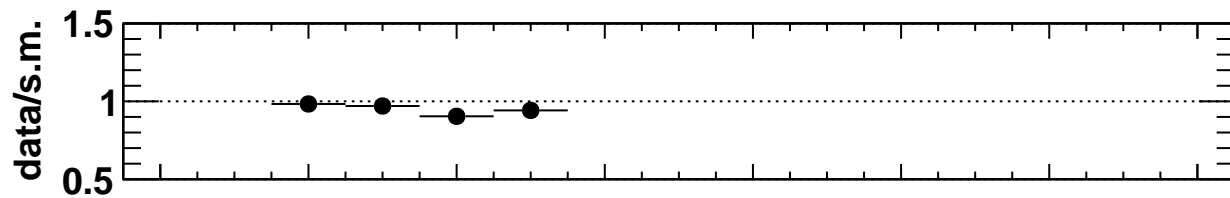
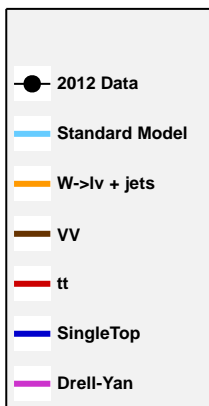


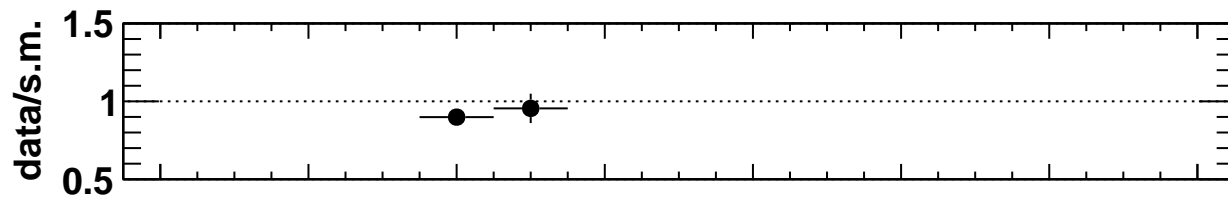
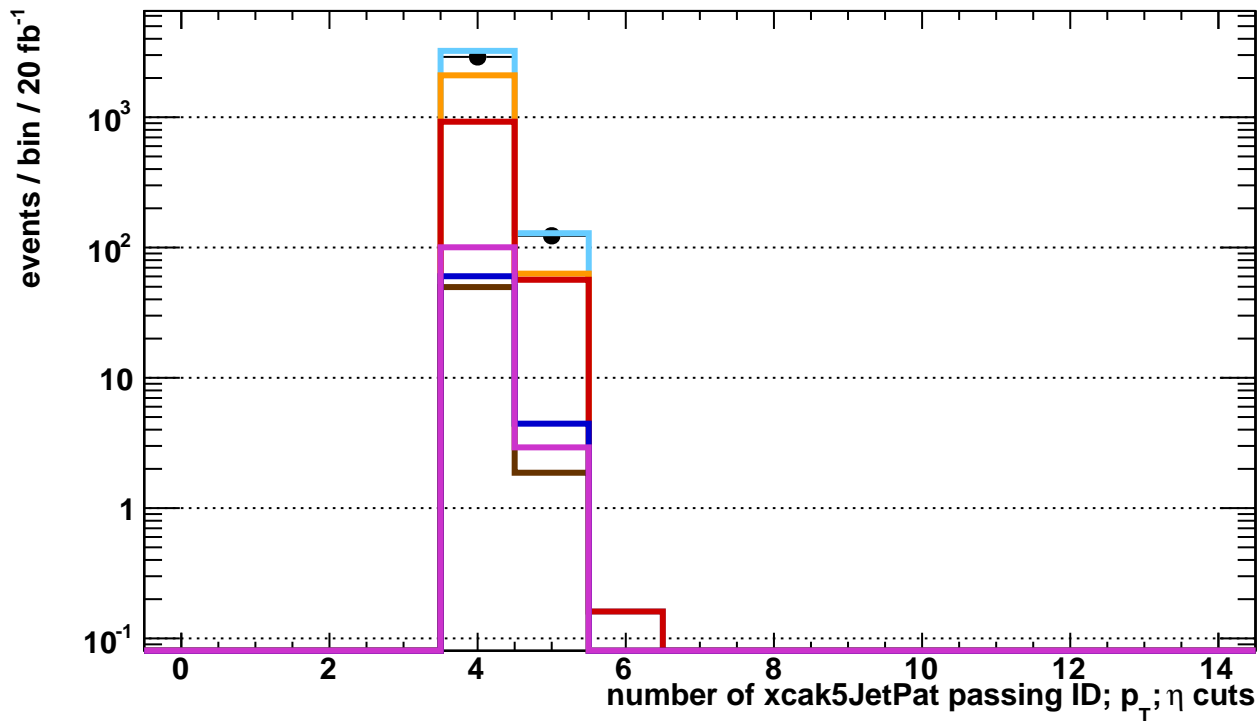


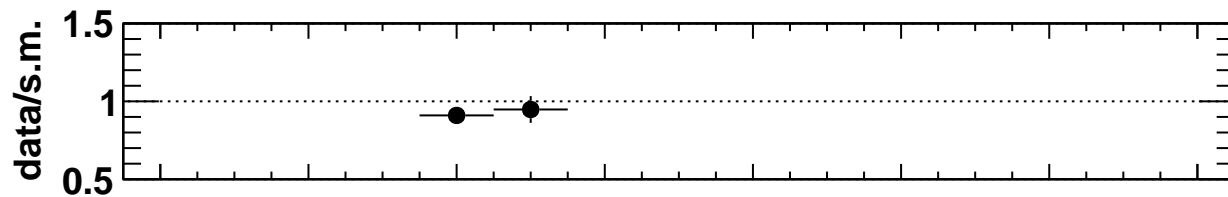
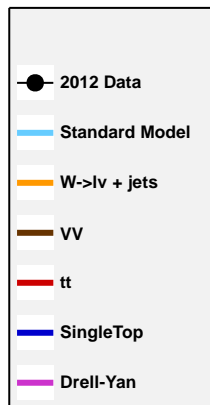
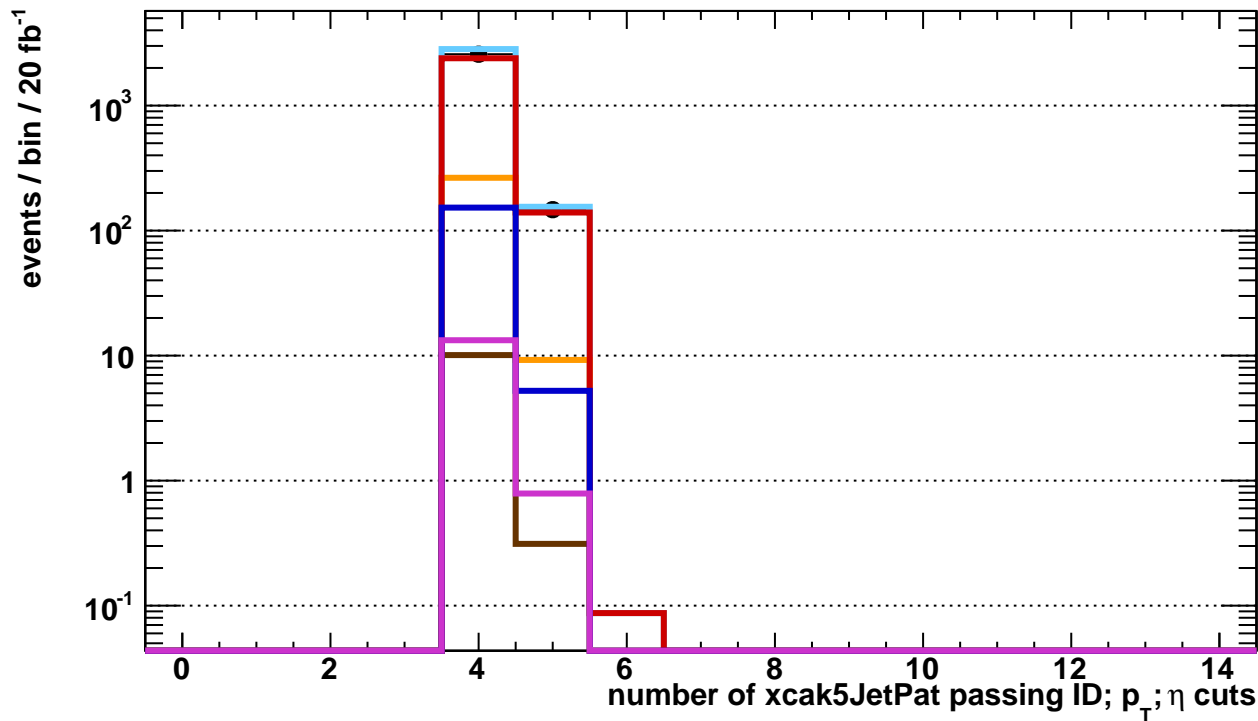


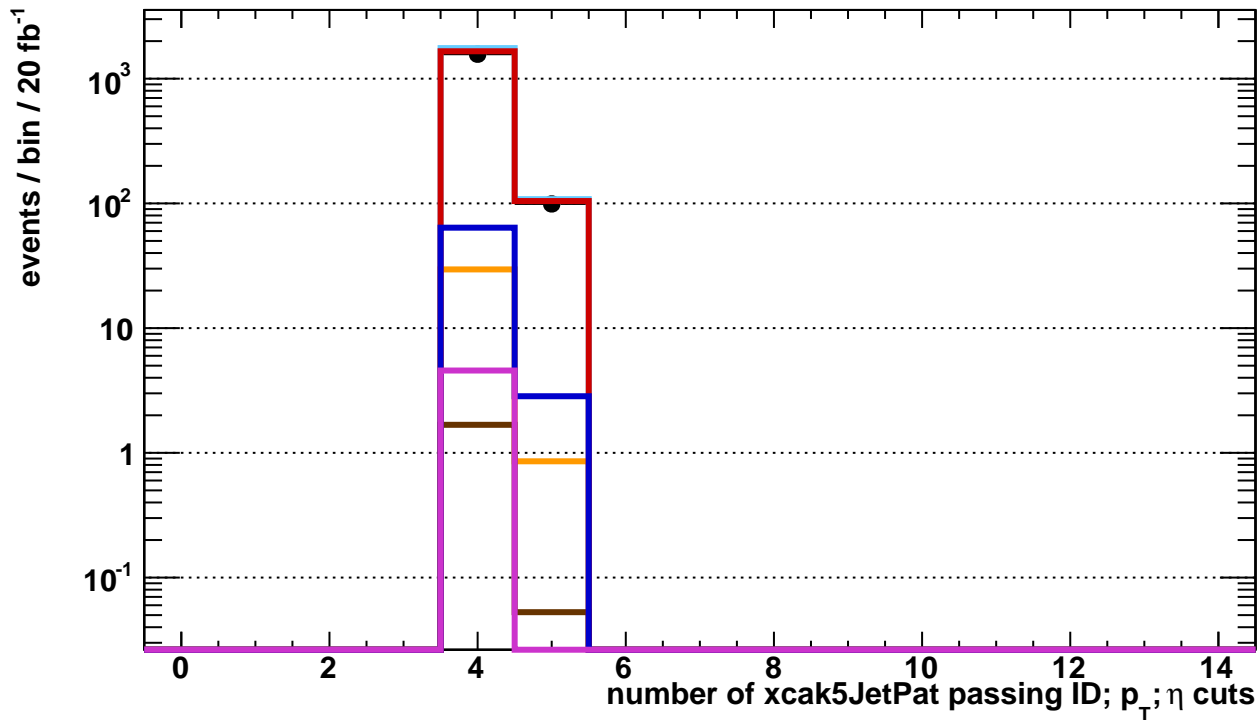


xcak5JetIndicesPat	
Entries	90605
Mean	2.541
RMS	0.6582
Underflow	0
Overflow	0
Integral	9.06e+04

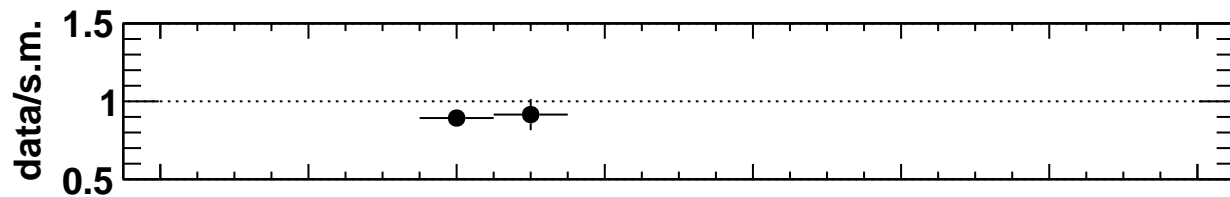
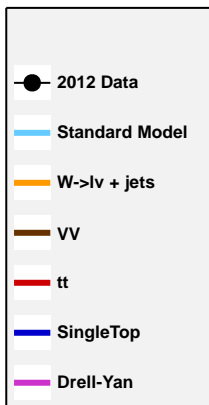


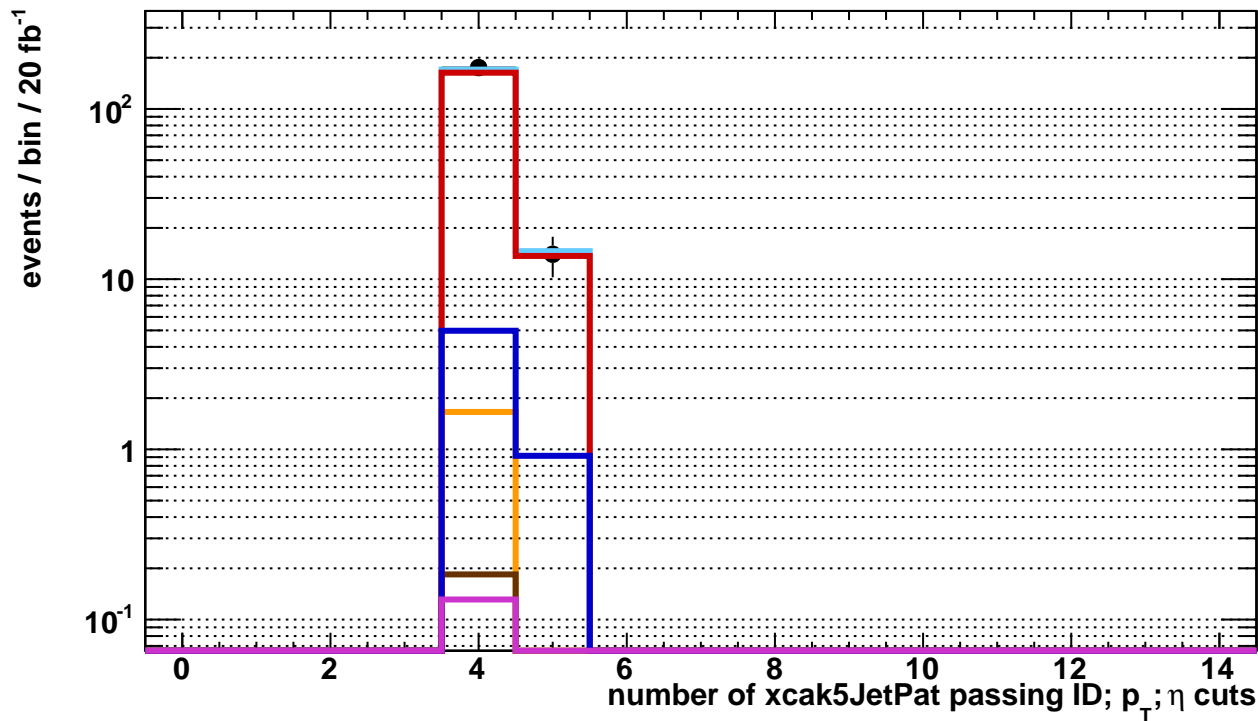




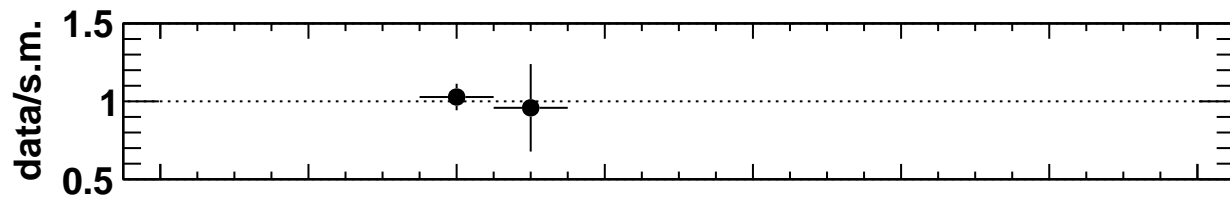


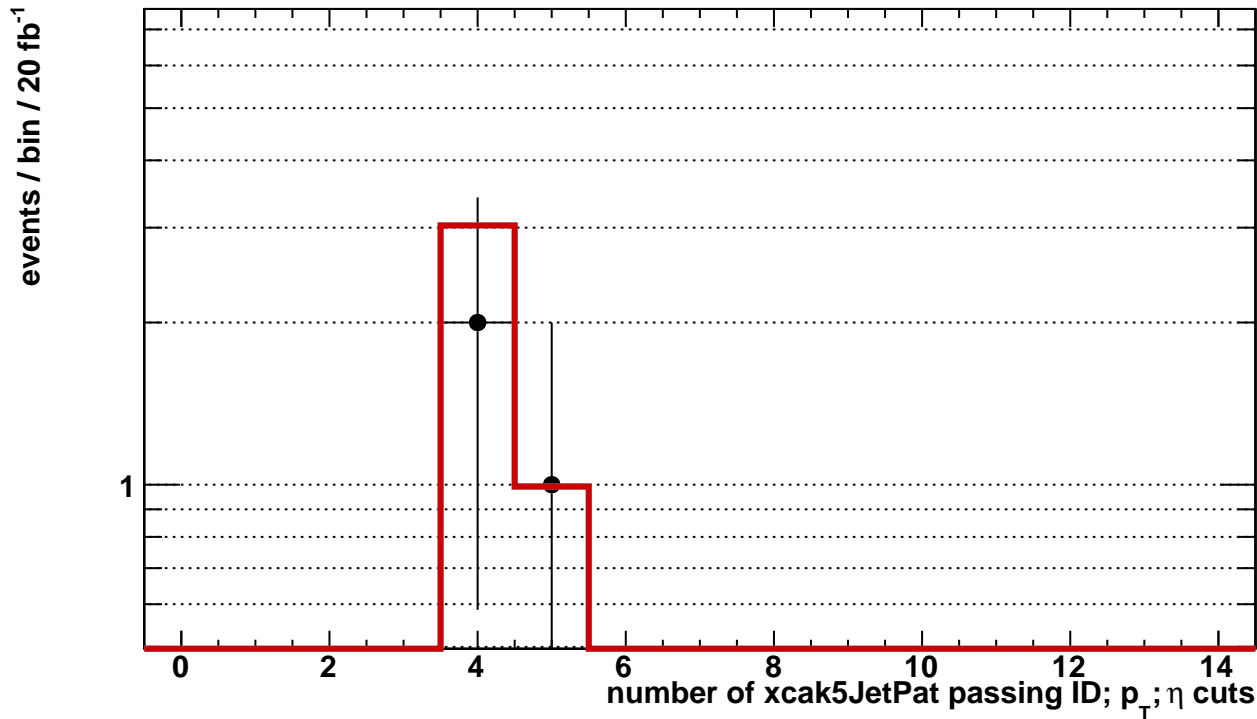
xcak5JetIndicesPat_ge4j_eq2b	
Entries	1669
Mean	4.059
RMS	0.2362
Underflow	0
Overflow	0
Integral	1669



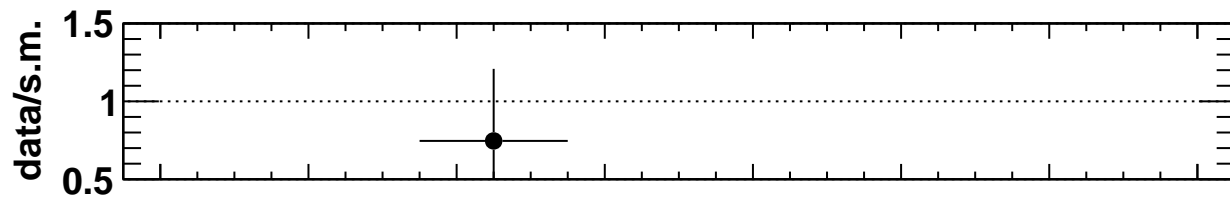
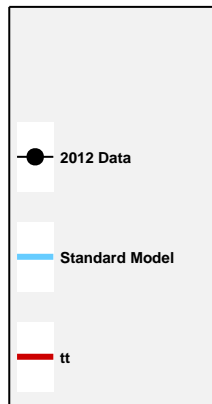


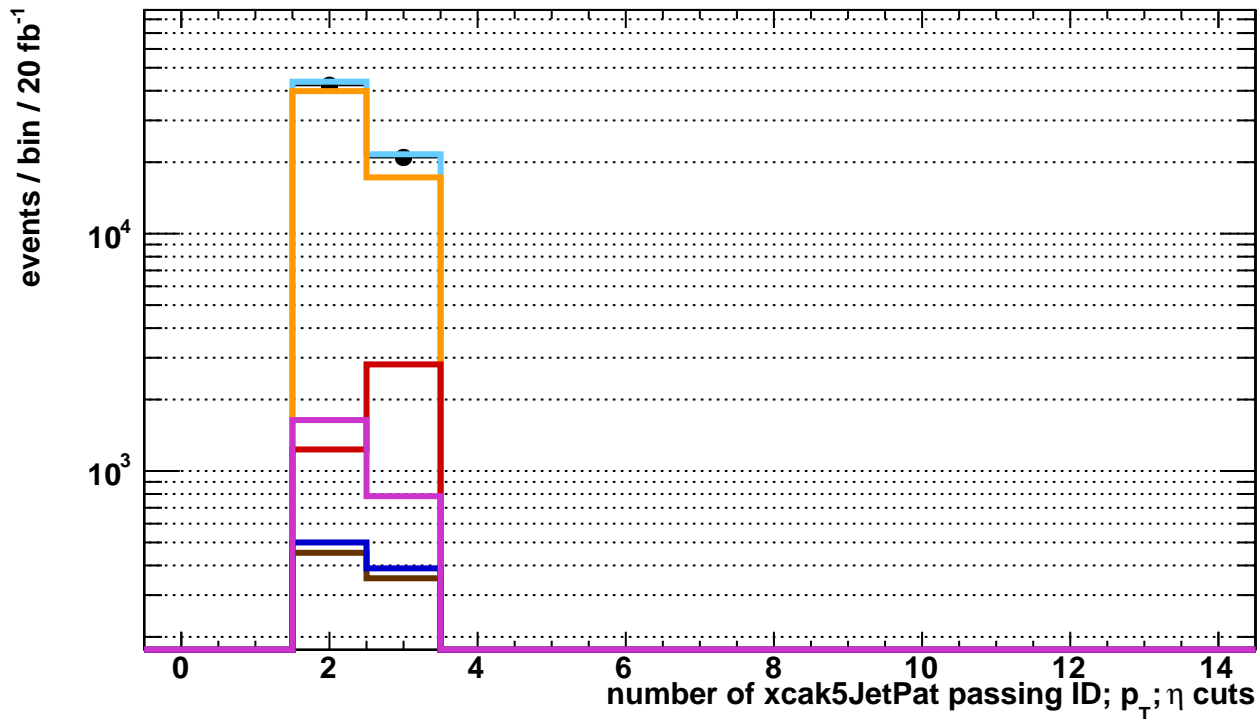
xcak5JetIndicesPat_ge4j_eq3b	
Entries	189
Mean	4.074
RMS	0.2619
Underflow	0
Overflow	0
Integral	189



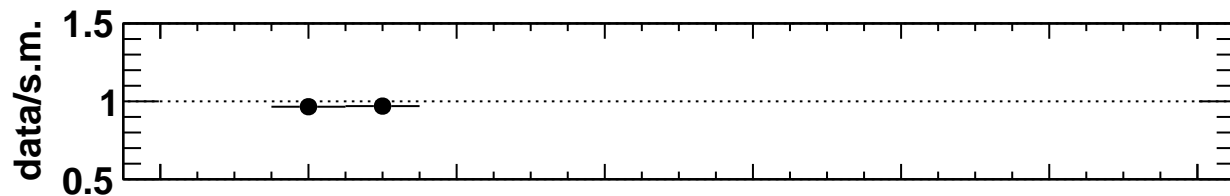


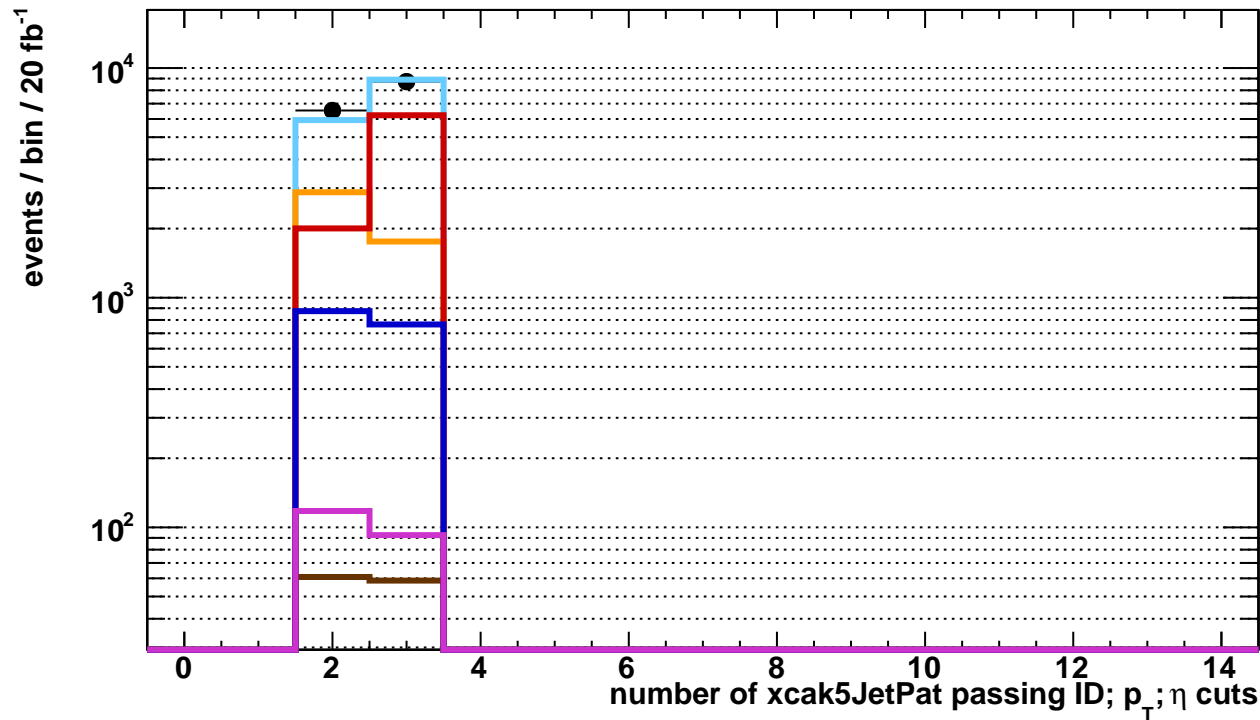
xcak5JetIndicesPat_ge4j_ge4b	
Entries	3
Mean	4.333
RMS	0.4714
Underflow	0
Overflow	0
Integral	3



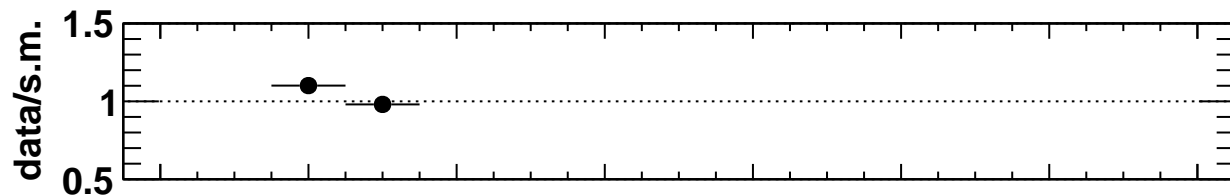
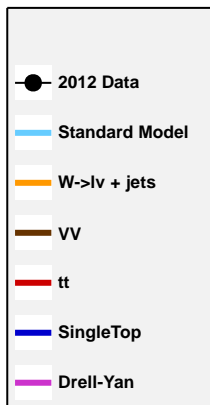


xcak5JetIndicesPat_le3j_eq0b	
Entries	63113
Mean	2.332
RMS	0.4708
Underflow	0
Overflow	0
Integral	6.311e+04

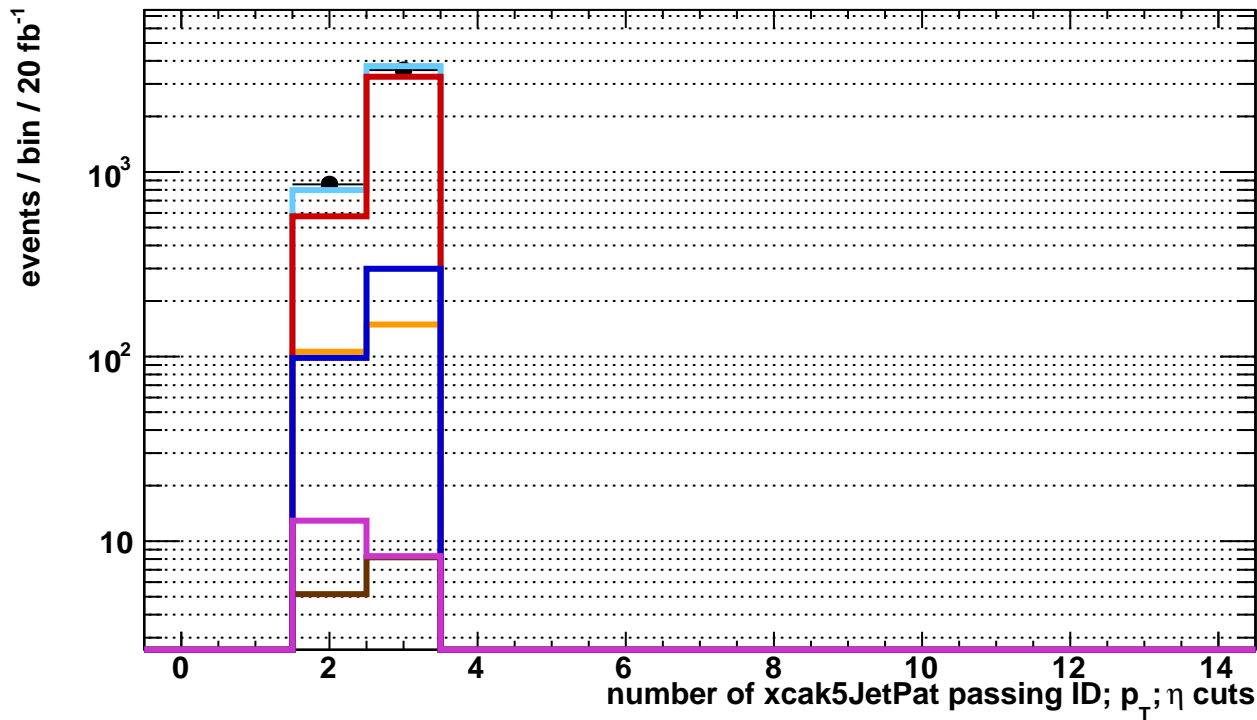




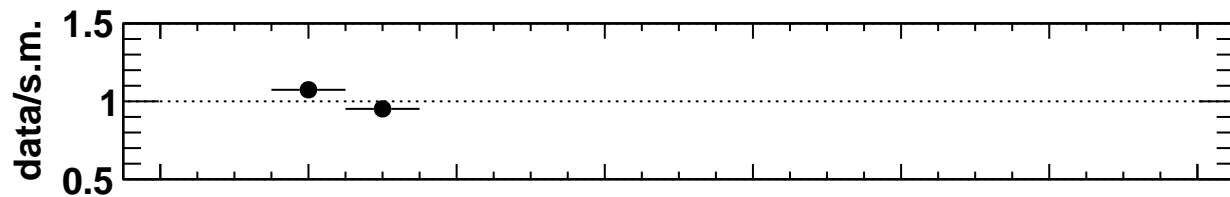
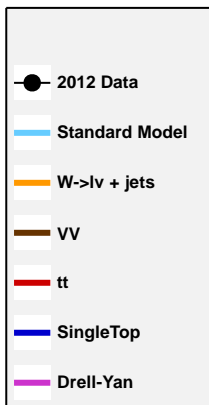
xcak5JetIndicesPat_le3j_eq1b	
Entries	15261
Mean	2.572
RMS	0.4948
Underflow	0
Overflow	0
Integral	1.526e+04

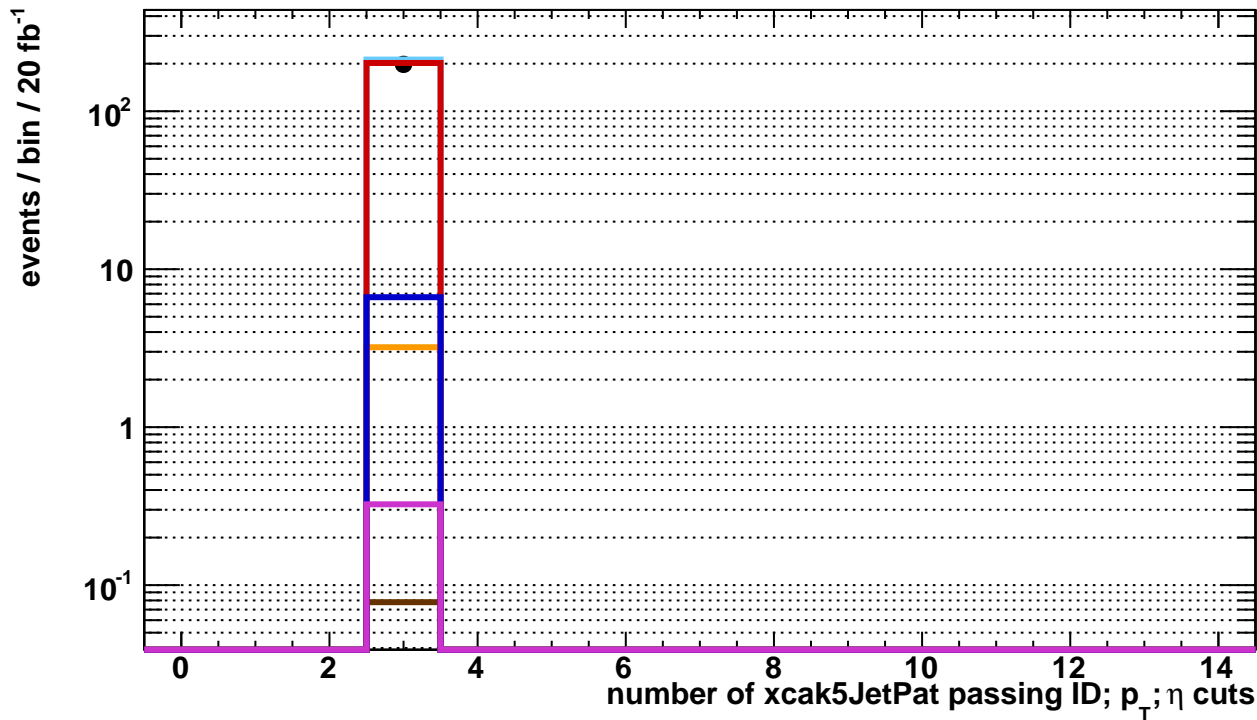




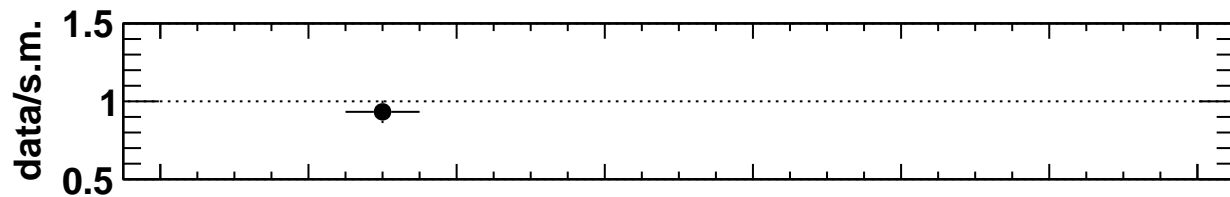
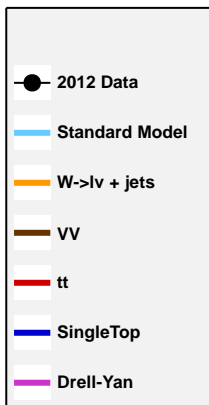


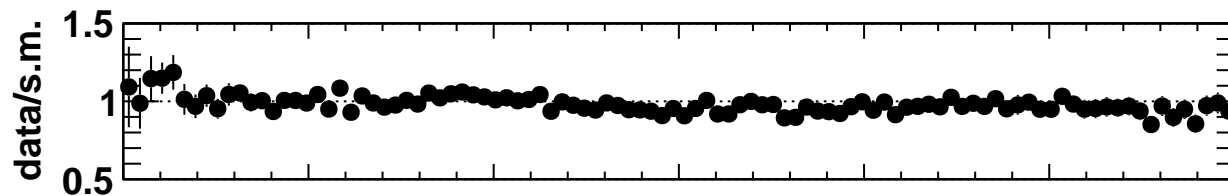
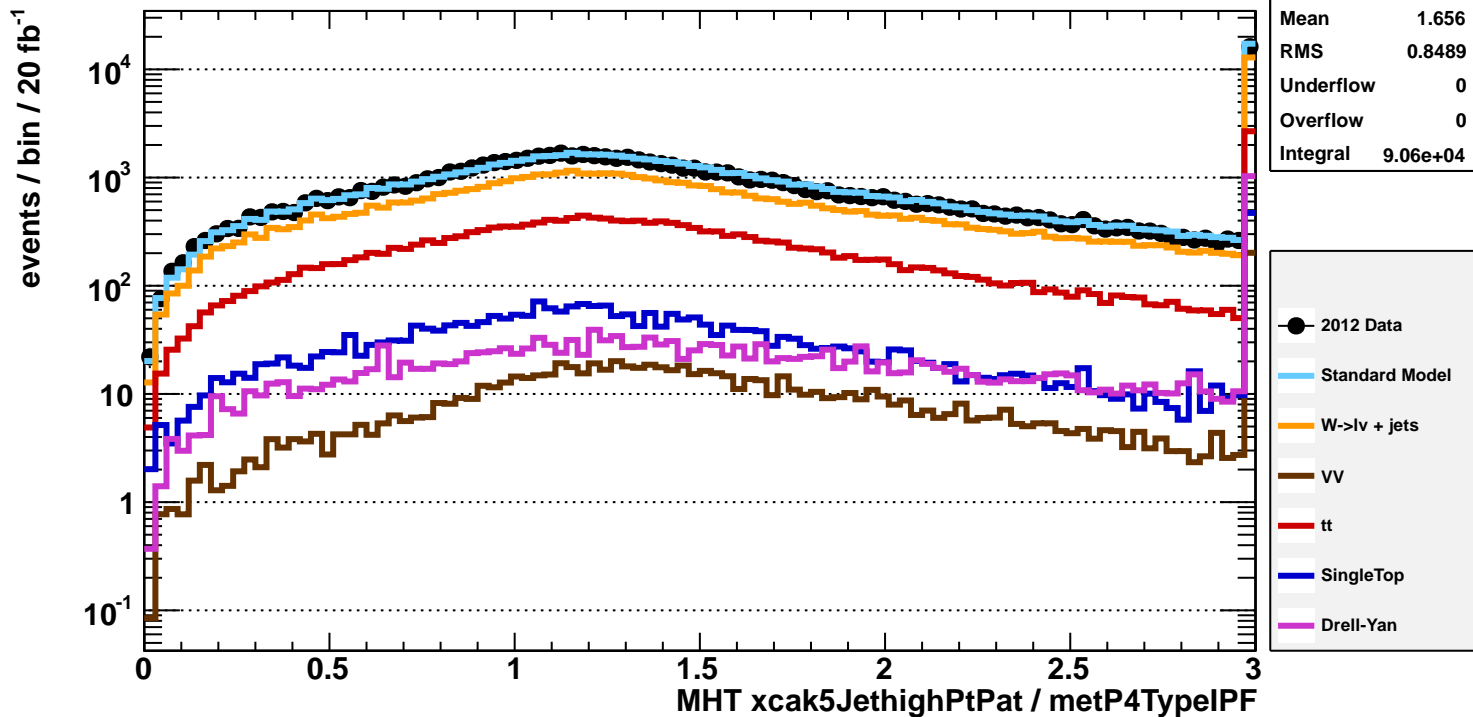
xcak5JetIndicesPat_le3l_eq2b	
Entries	4422
Mean	2.806
RMS	0.3953
Underflow	0
Overflow	0
Integral	4422

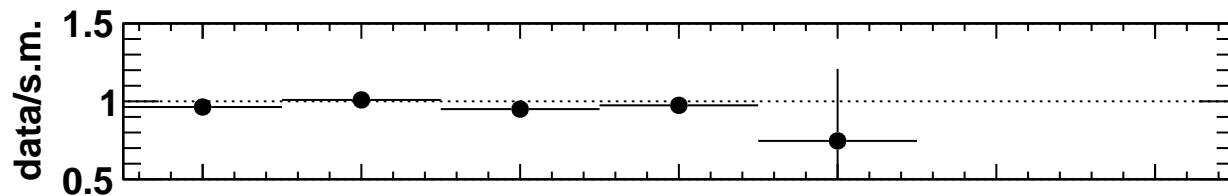
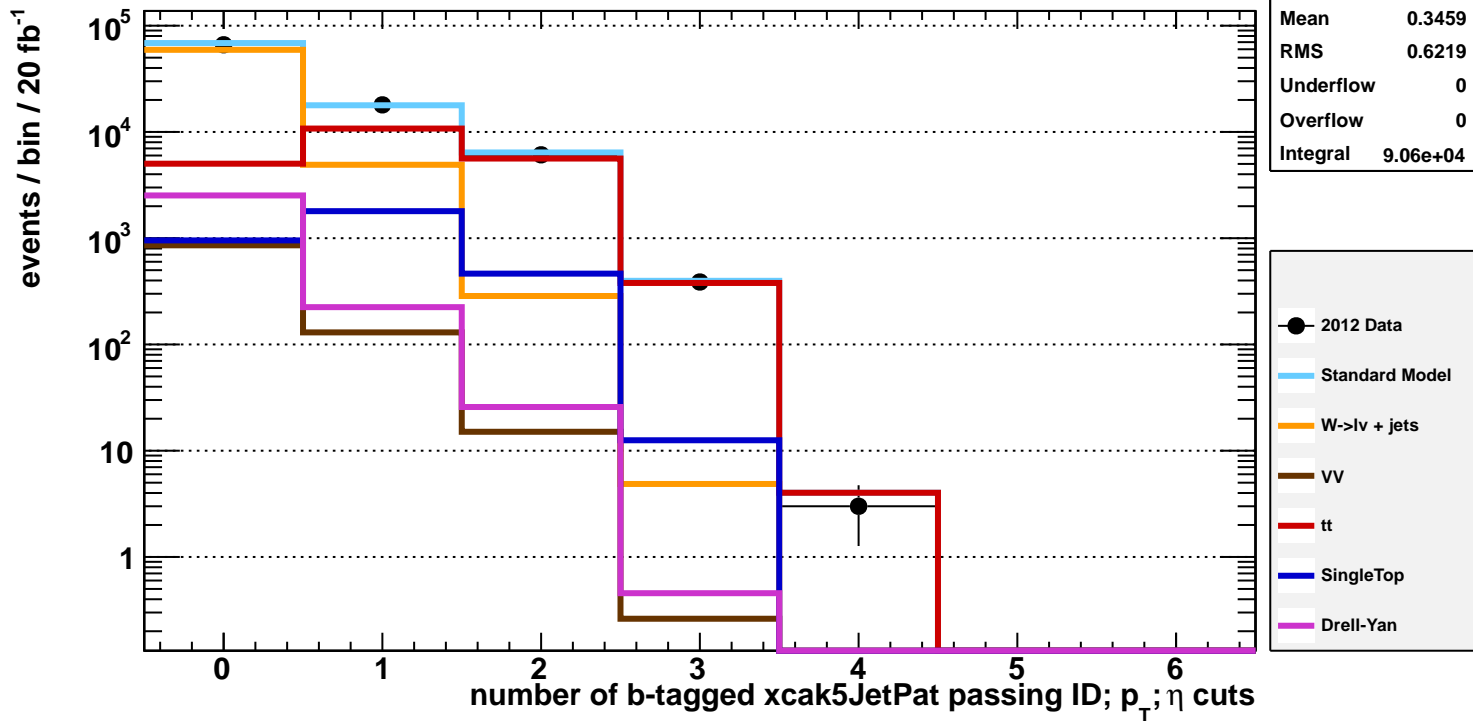


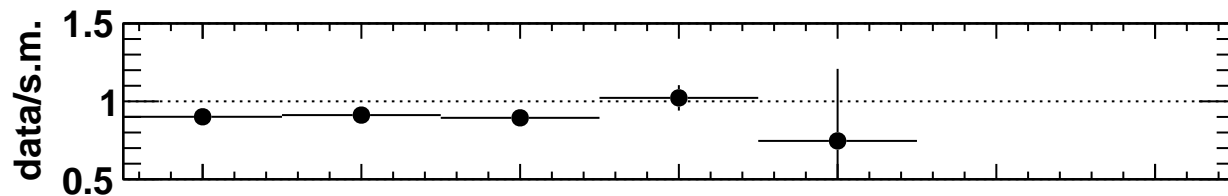
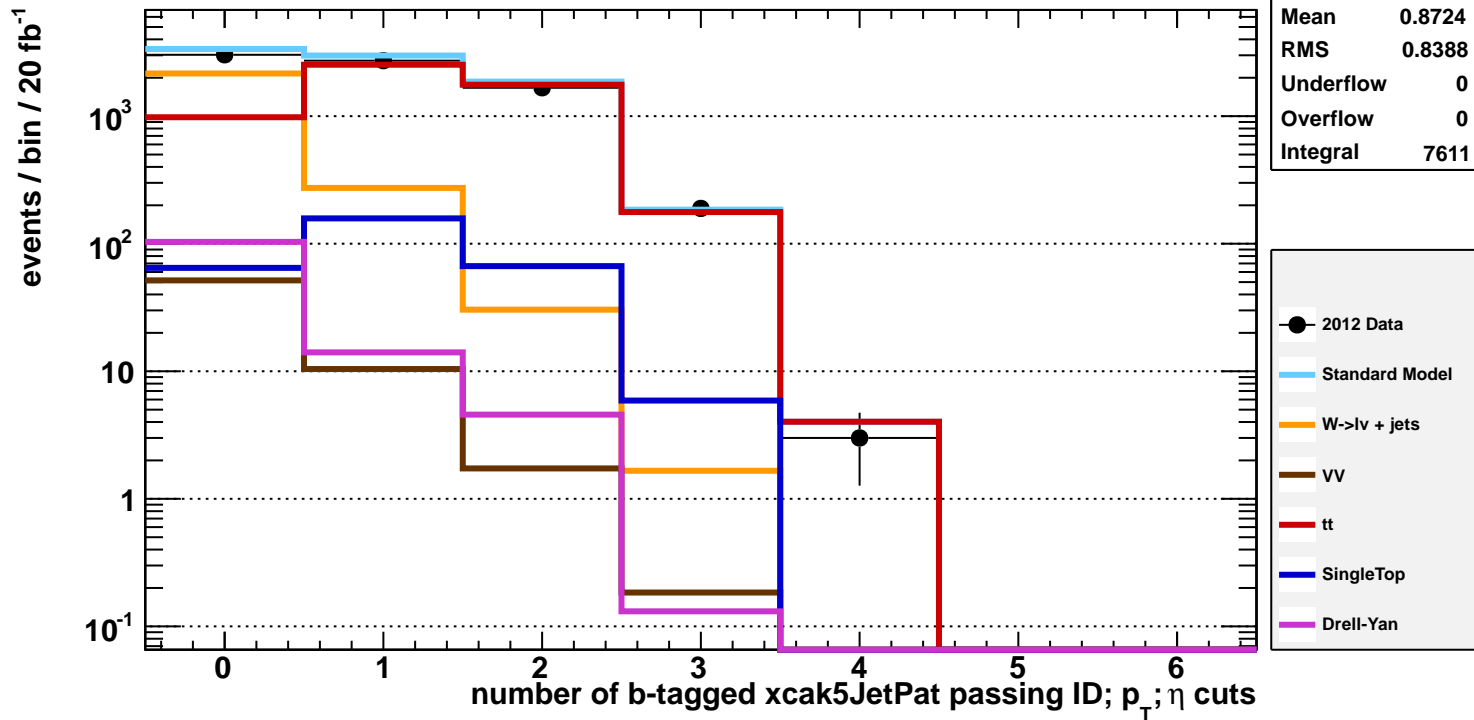


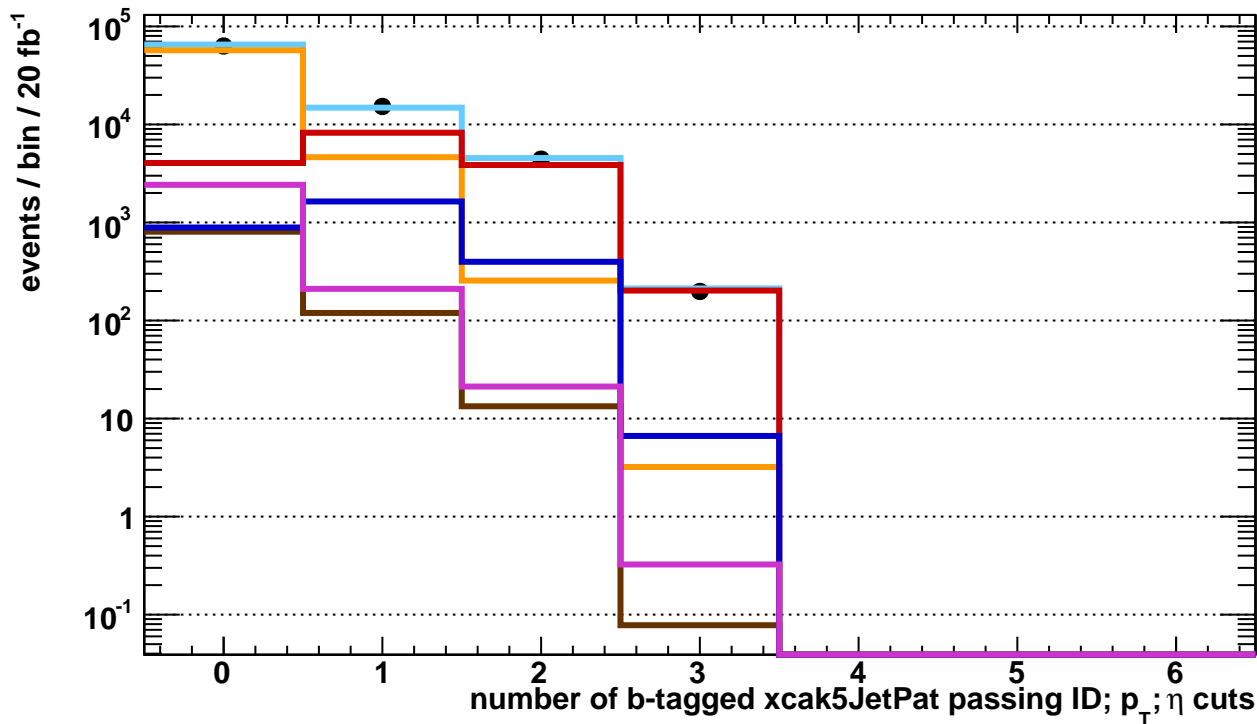
xcak5JetIndicesPat_le3_eq3b	
Entries	198
Mean	3
RMS	0
Underflow	0
Overflow	0
Integral	198



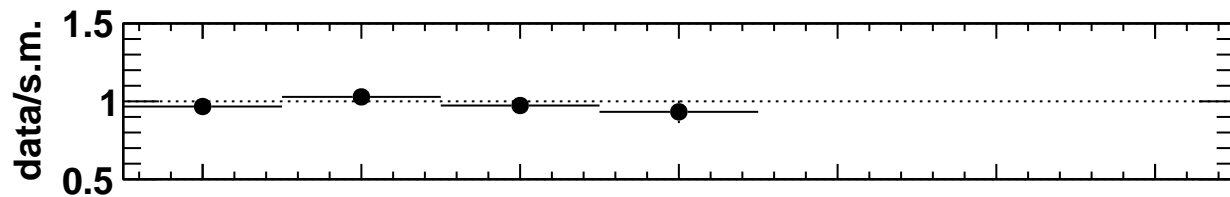
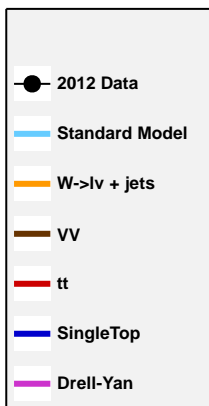


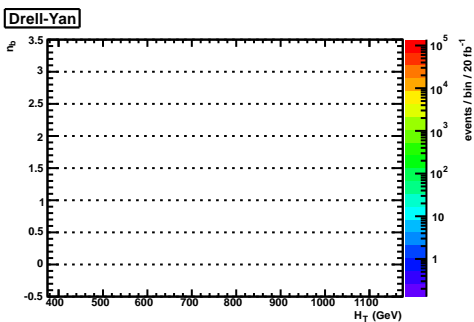
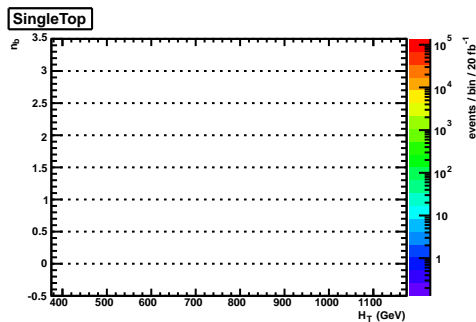
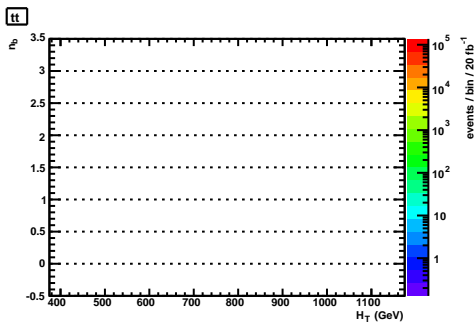
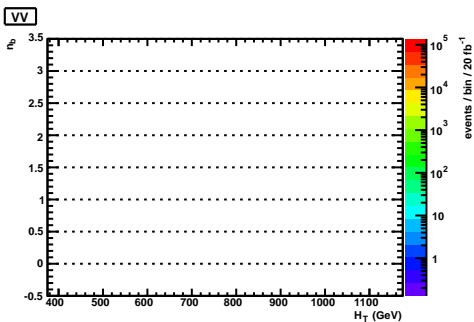
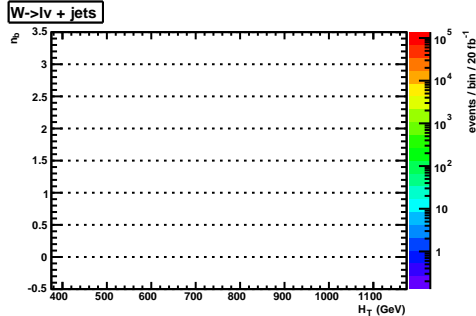
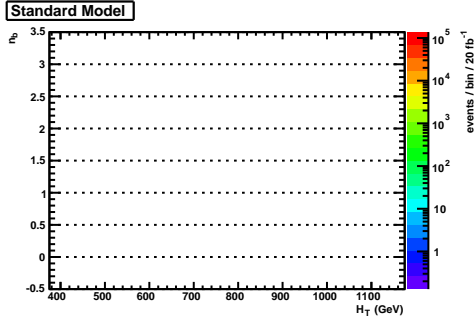
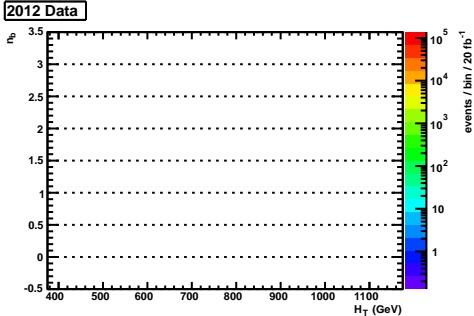


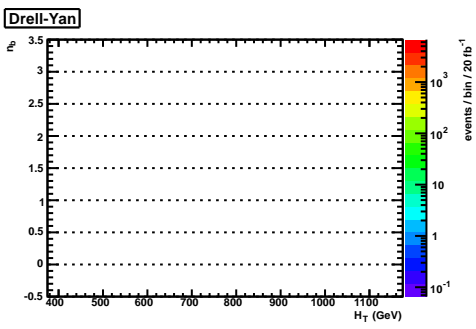
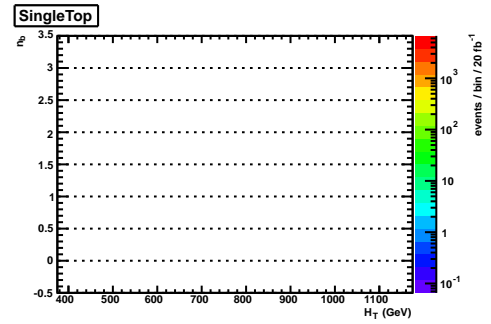
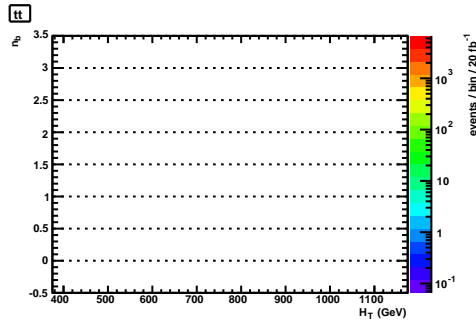
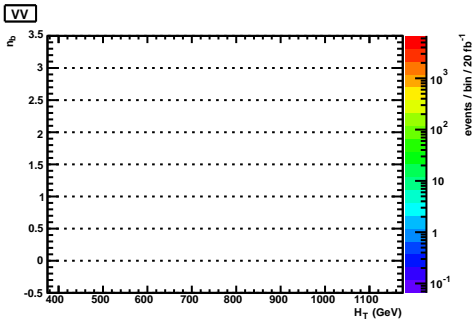
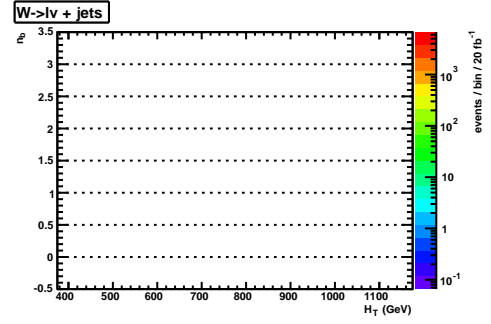
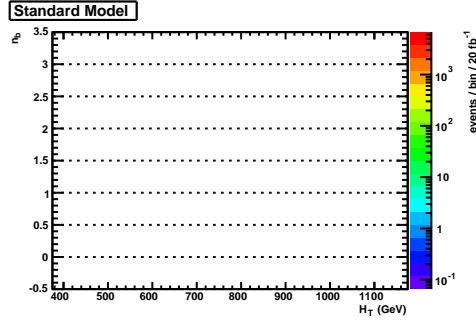
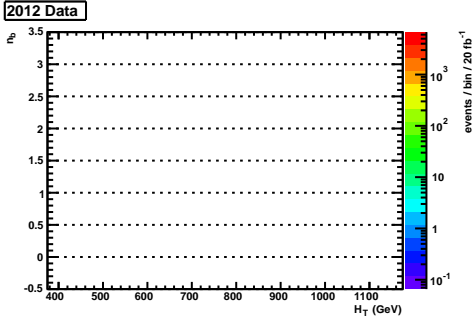




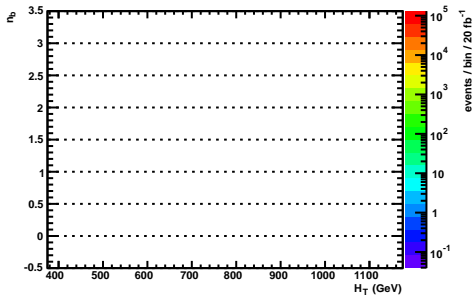
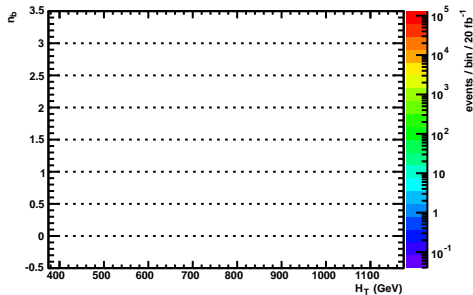
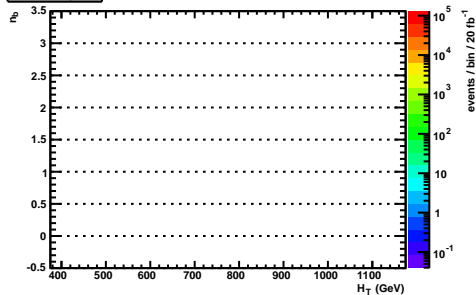
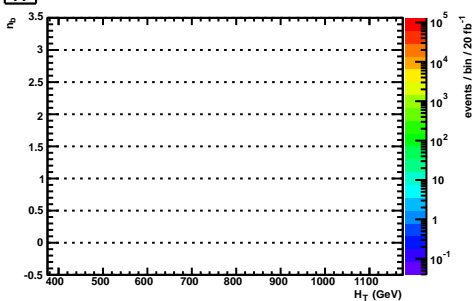
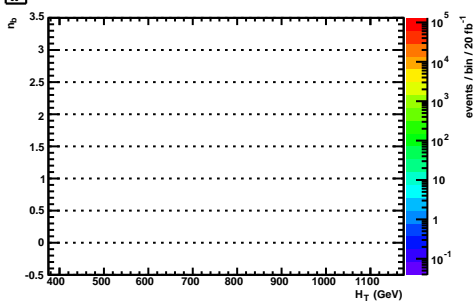
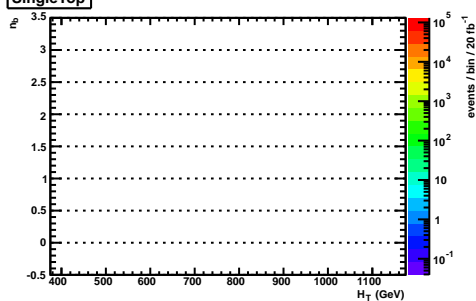
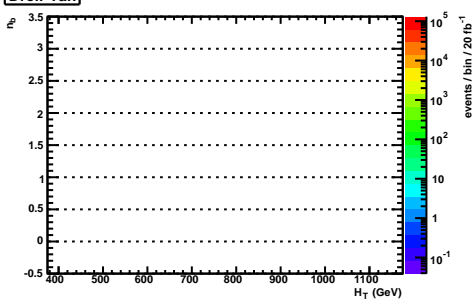
xcak5JetIndicesBtagged2Pat_le3j	
Entries	82994
Mean	0.2976
RMS	0.5744
Underflow	0
Overflow	0
Integral	8.299e+04

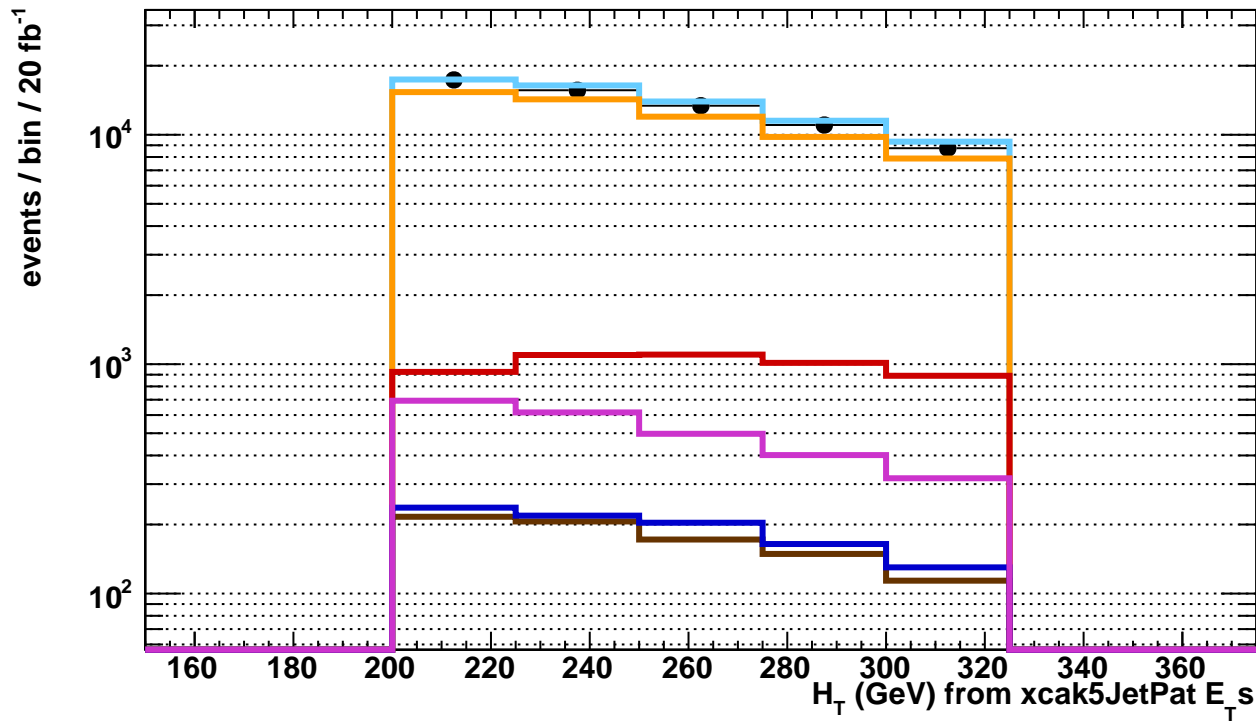




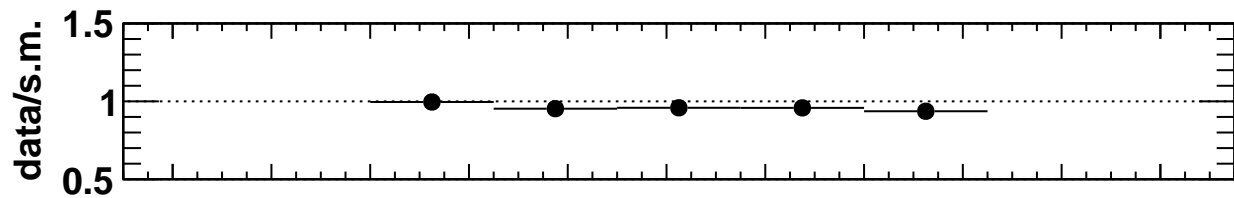
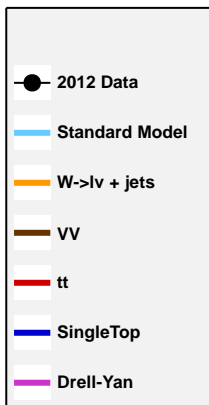


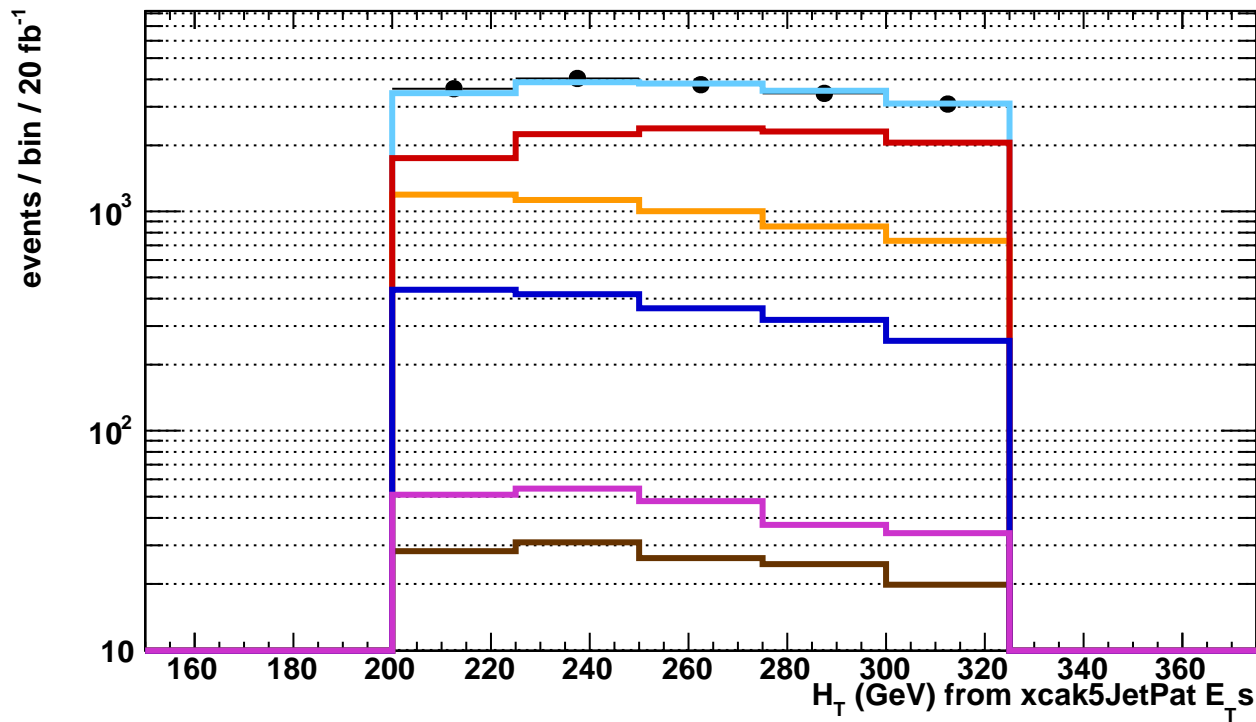


**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

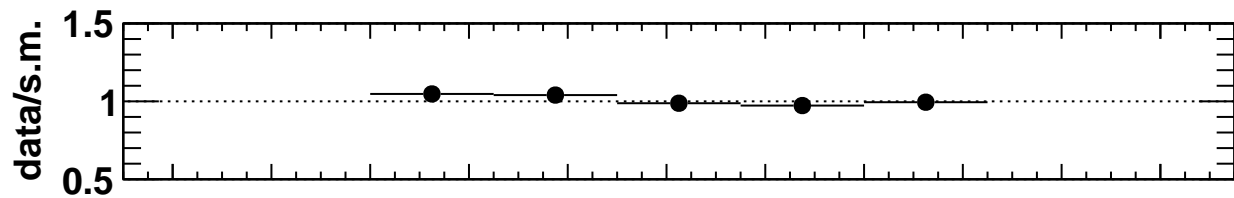
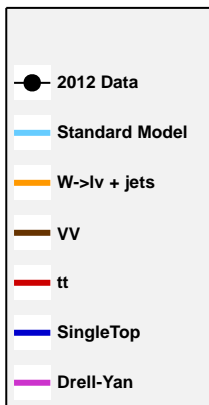


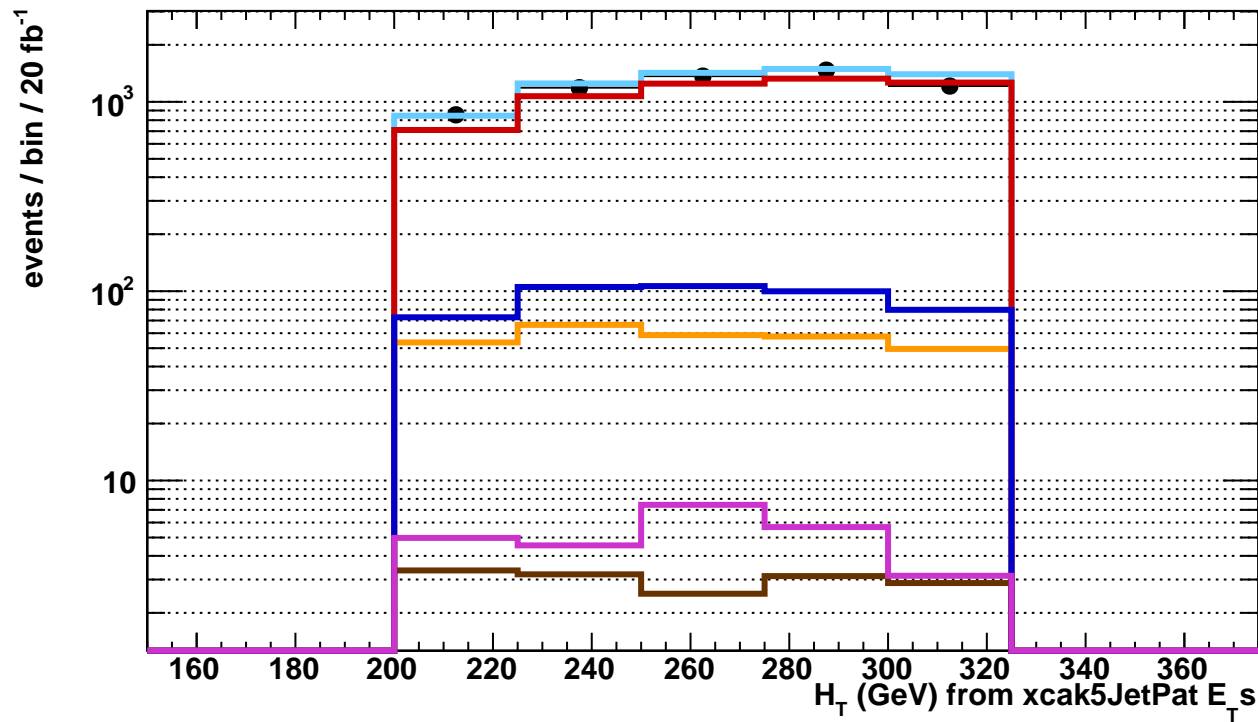
xcak5JetSumEtPat_eq0b	
Entries	66140
Mean	254
RMS	34.79
Underflow	0
Overflow	0
Integral	6.614e+04



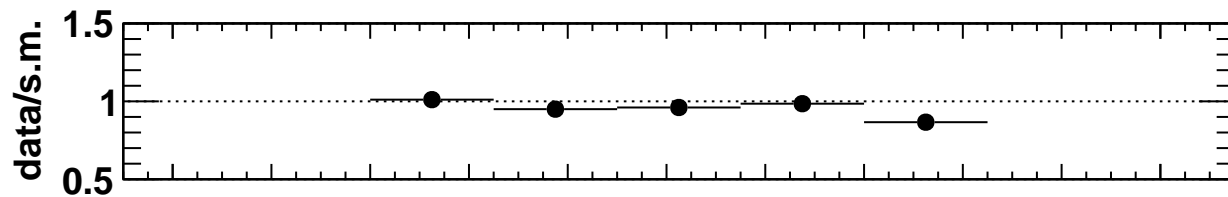
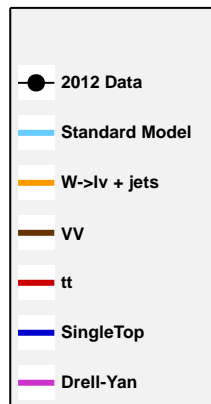


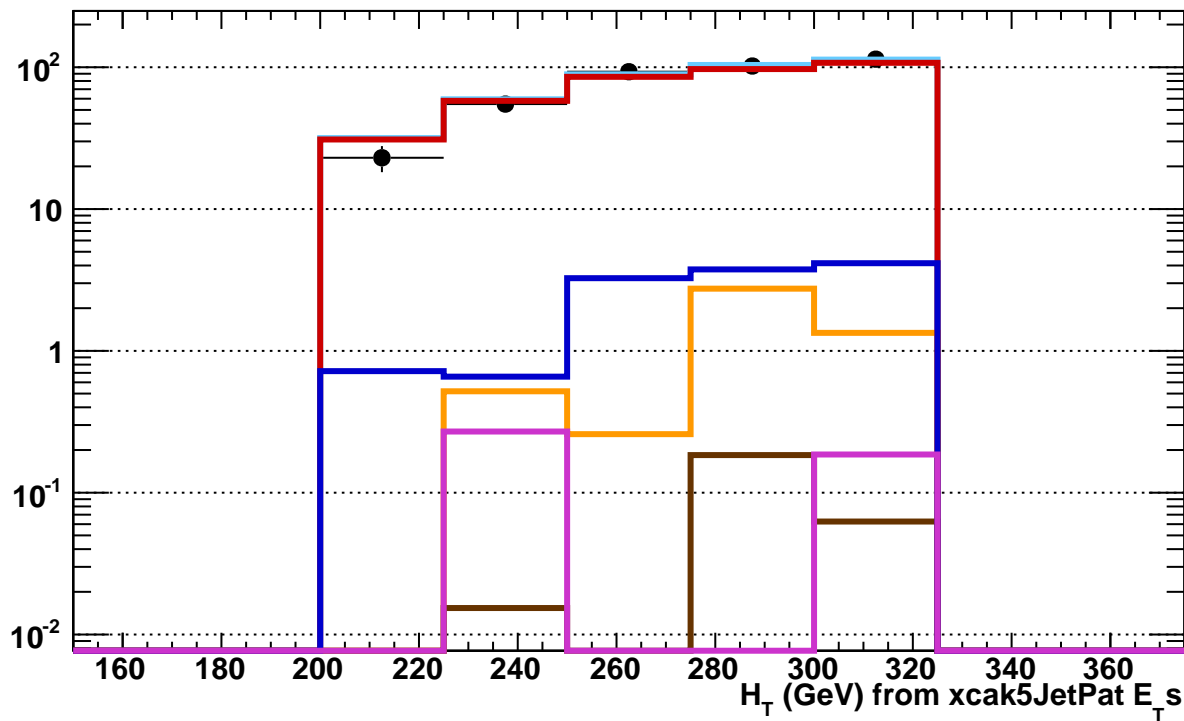
xcak5JetSumEtPat_eq1b	
Entries	17984
Mean	260.2
RMS	34.88
Underflow	0
Overflow	0
Integral	1.798e+04



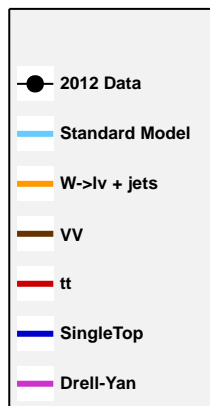


xcak5JetSumEtPat_eq2b	
Entries	6091
Mean	266.8
RMS	33.74
Underflow	0
Overflow	0
Integral	6091

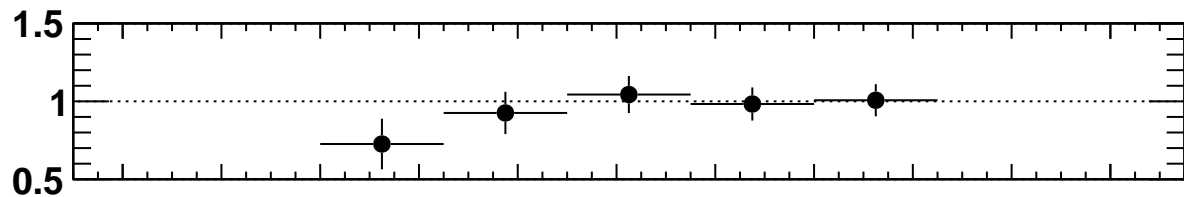


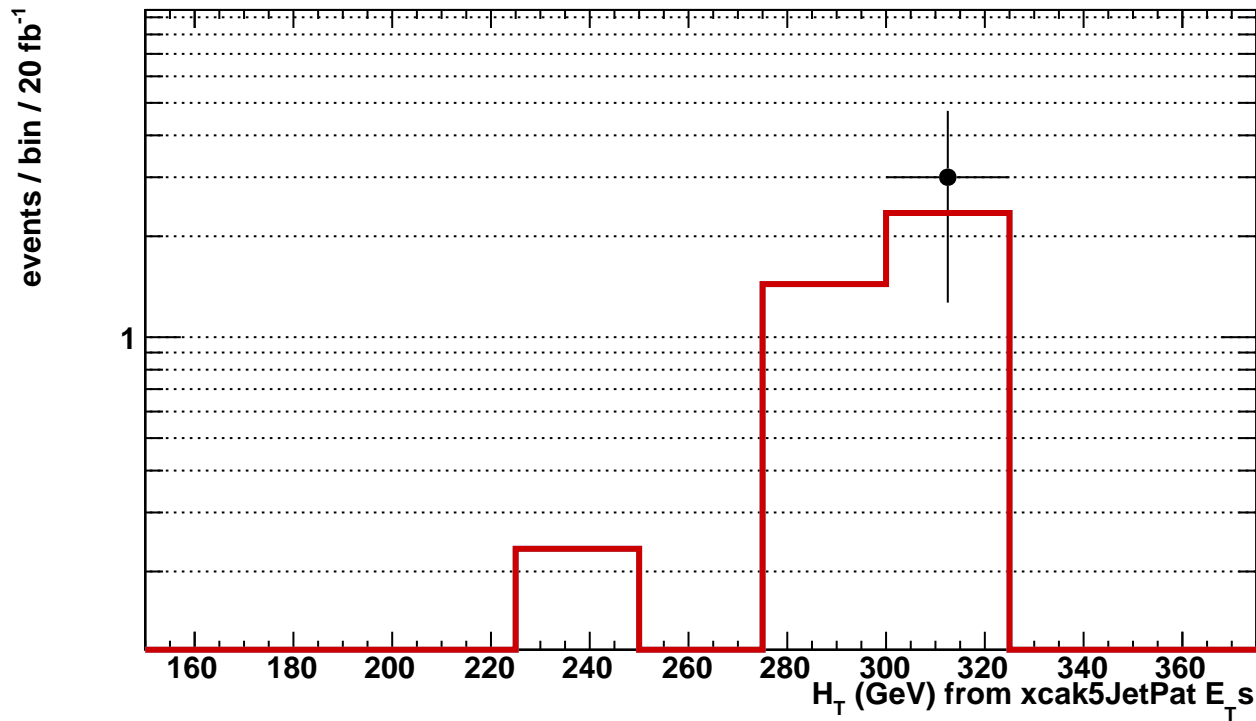
events / bin / 20 fb<sup>-1</sup>

xcak5JetSumEtPat_eq3b	
Entries	387
Mean	278
RMS	31.1
Underflow	0
Overflow	0
Integral	387

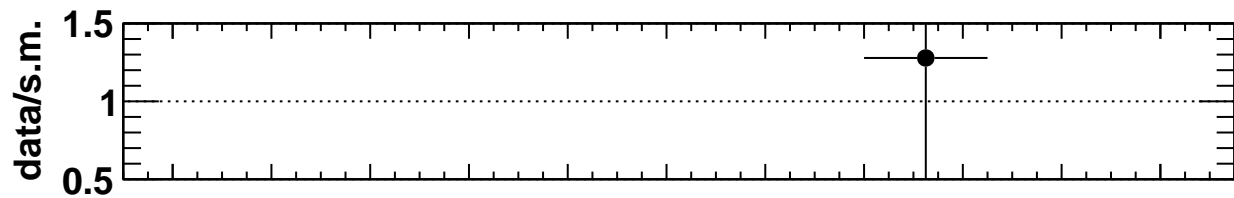
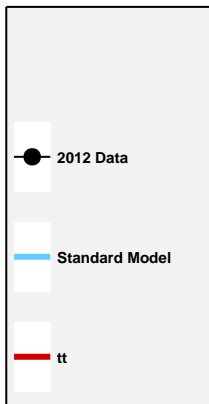


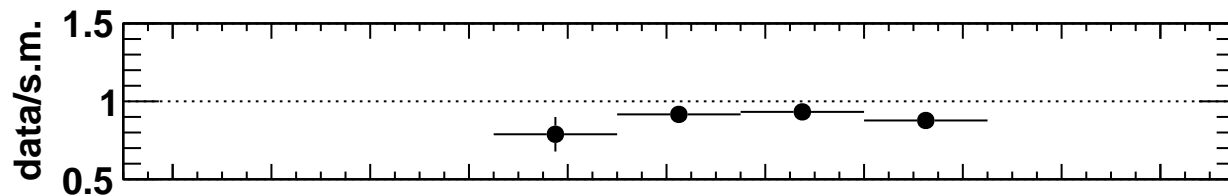
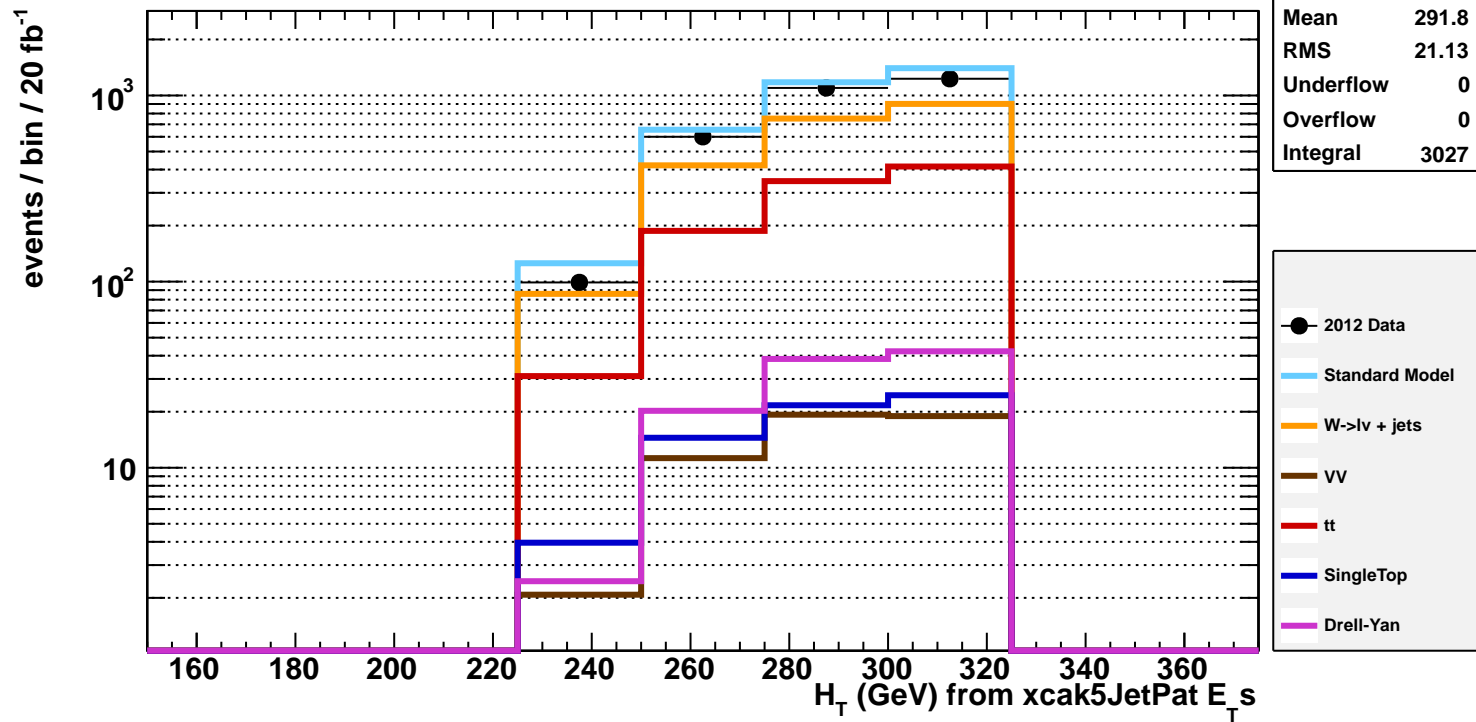
data/s.m.

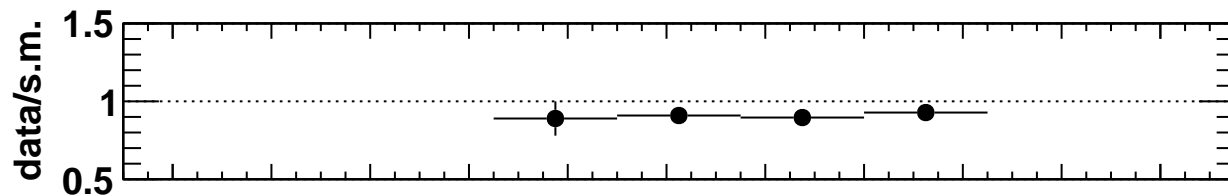
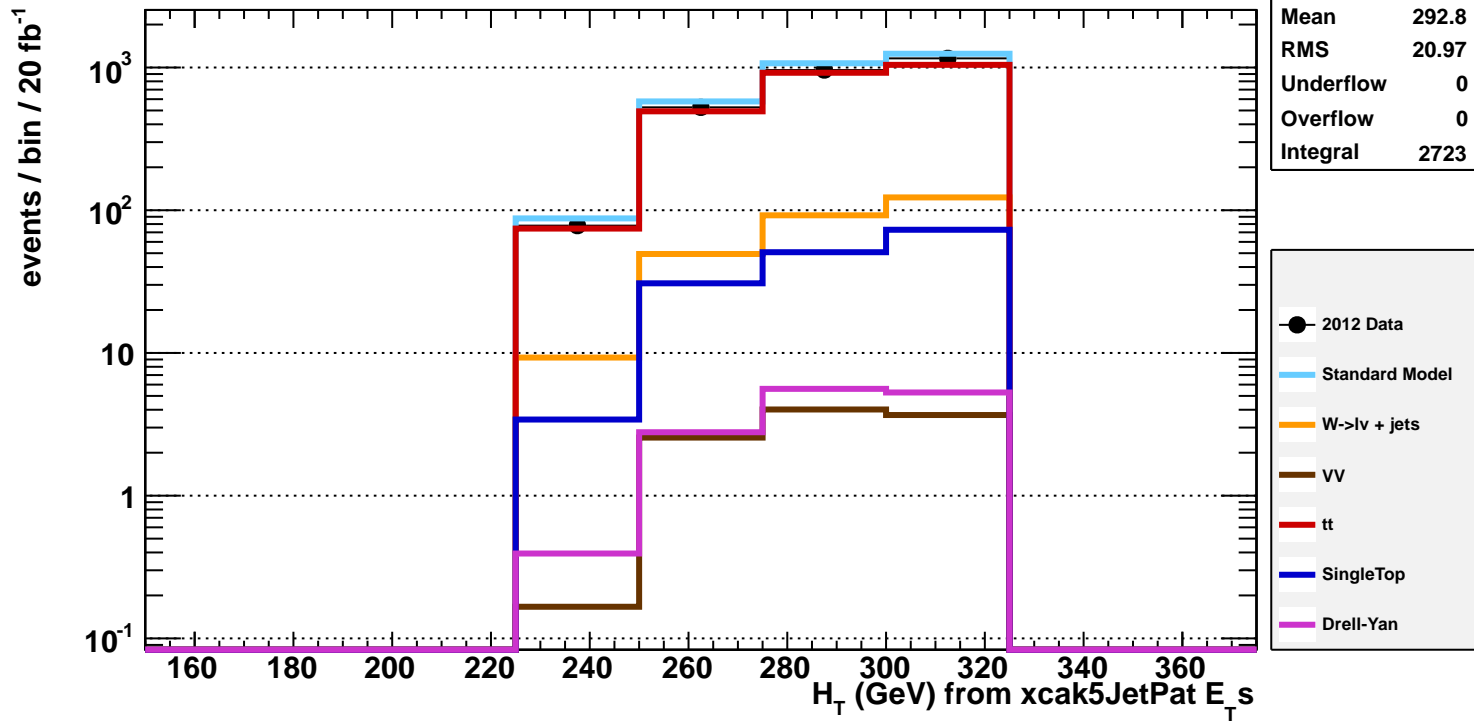




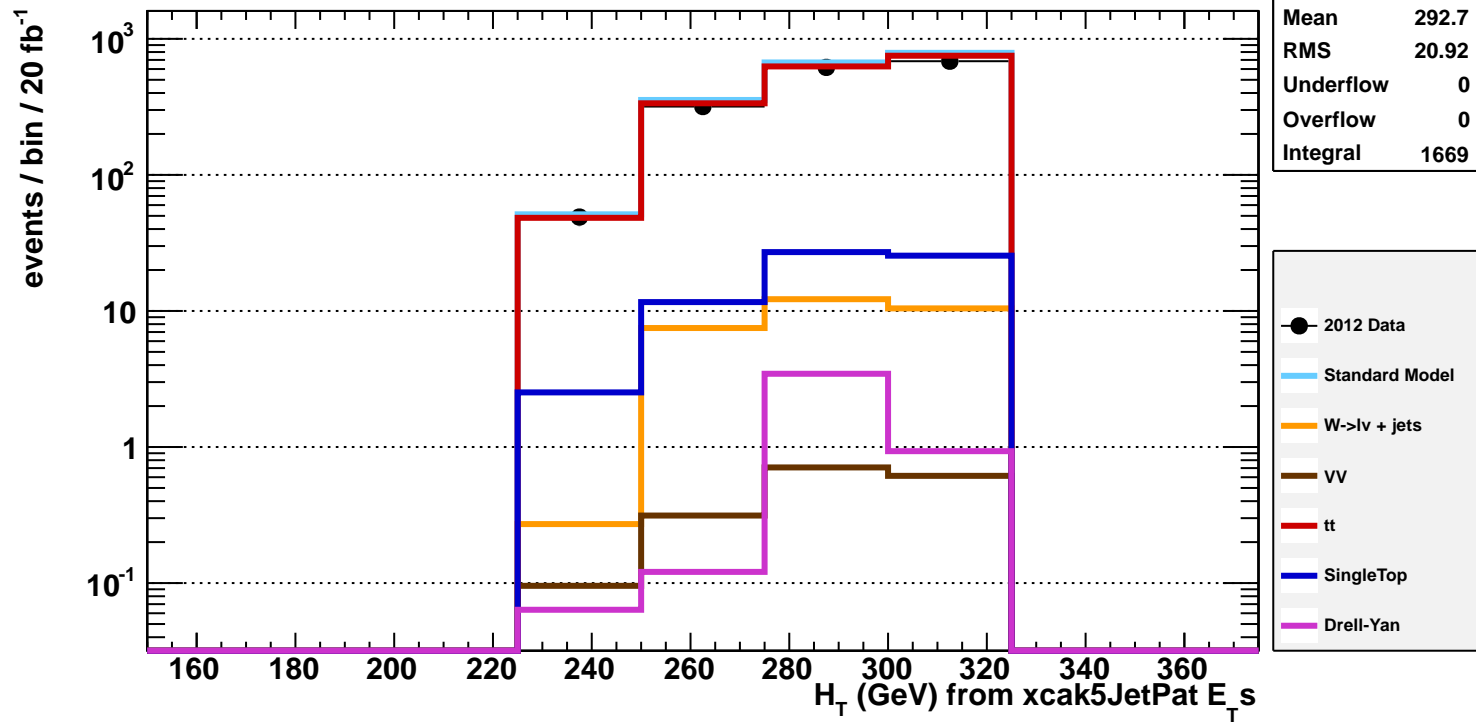
xcak5JetSumEtPat_ge4b	
Entries	3
Mean	306.9
RMS	3.939
Underflow	0
Overflow	0
Integral	3

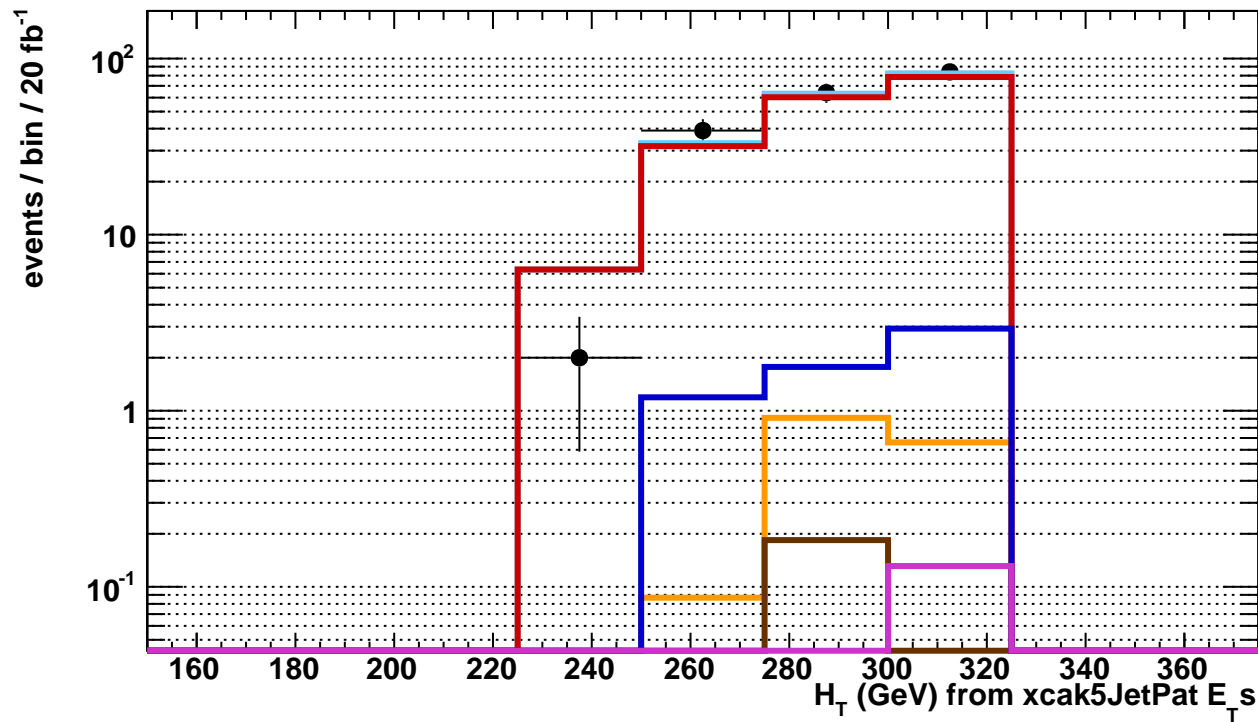




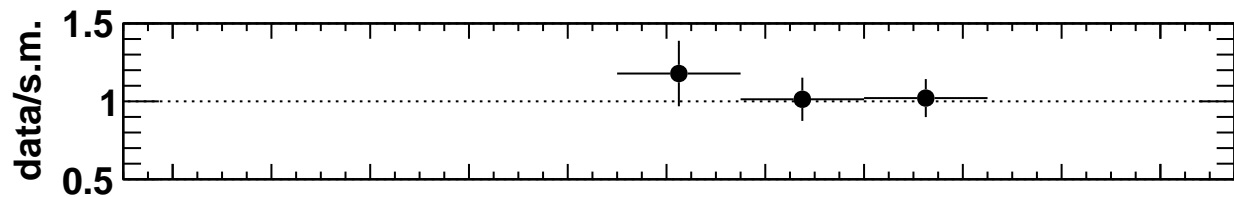
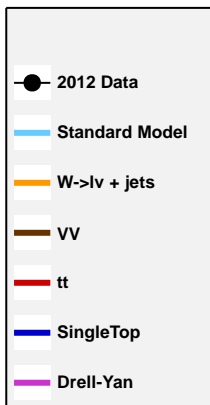




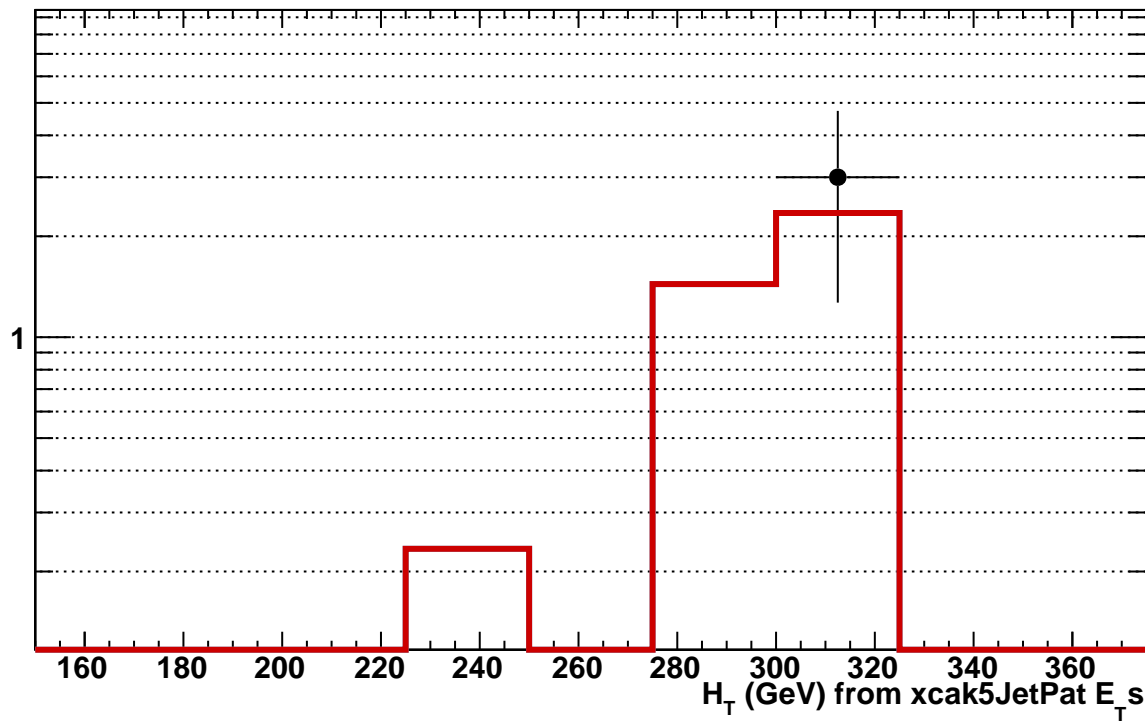




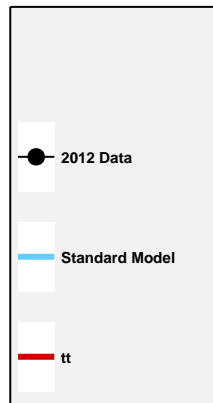
xcak5JetSumEtPat_ge4j_eq3b	
Entries	189
Mean	294
RMS	20.44
Underflow	0
Overflow	0
Integral	189



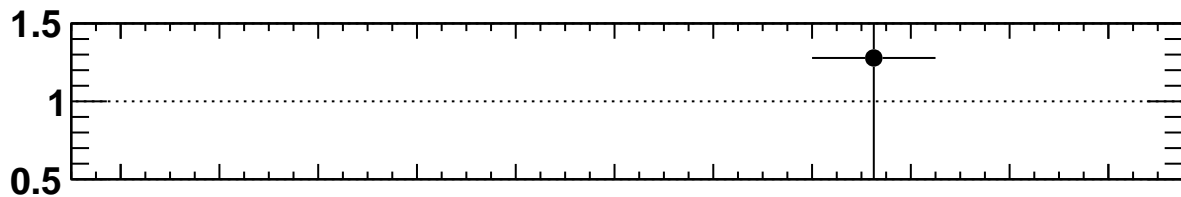
events / bin / 20 fb<sup>-1</sup>

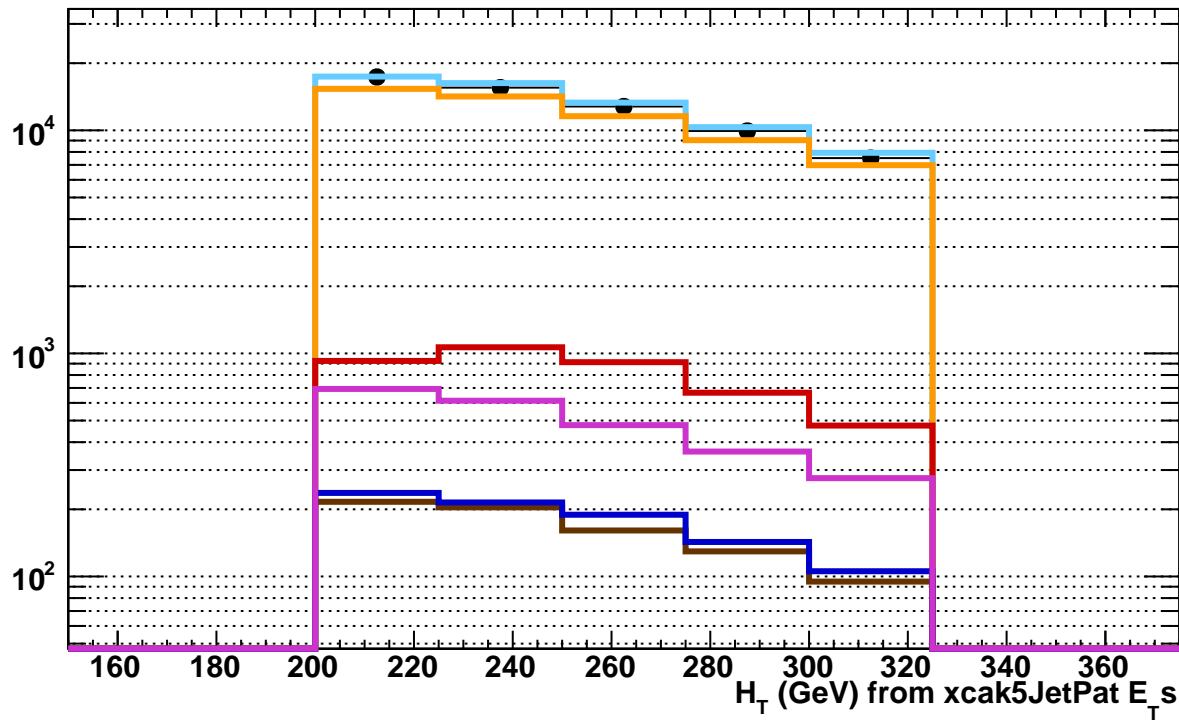


xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	306.9
RMS	3.939
Underflow	0
Overflow	0
Integral	3

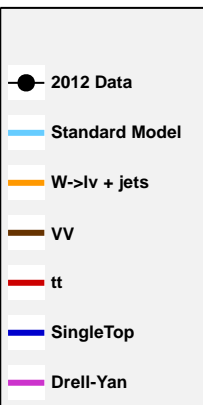


data/s.m.

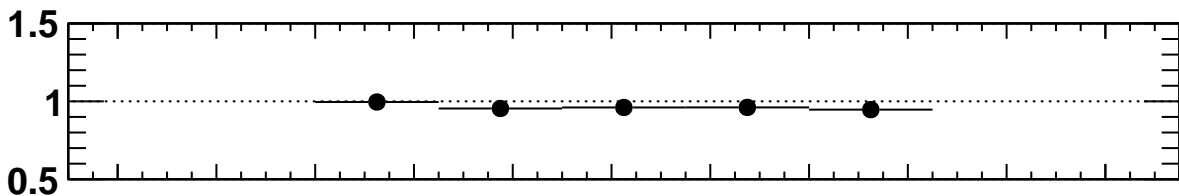


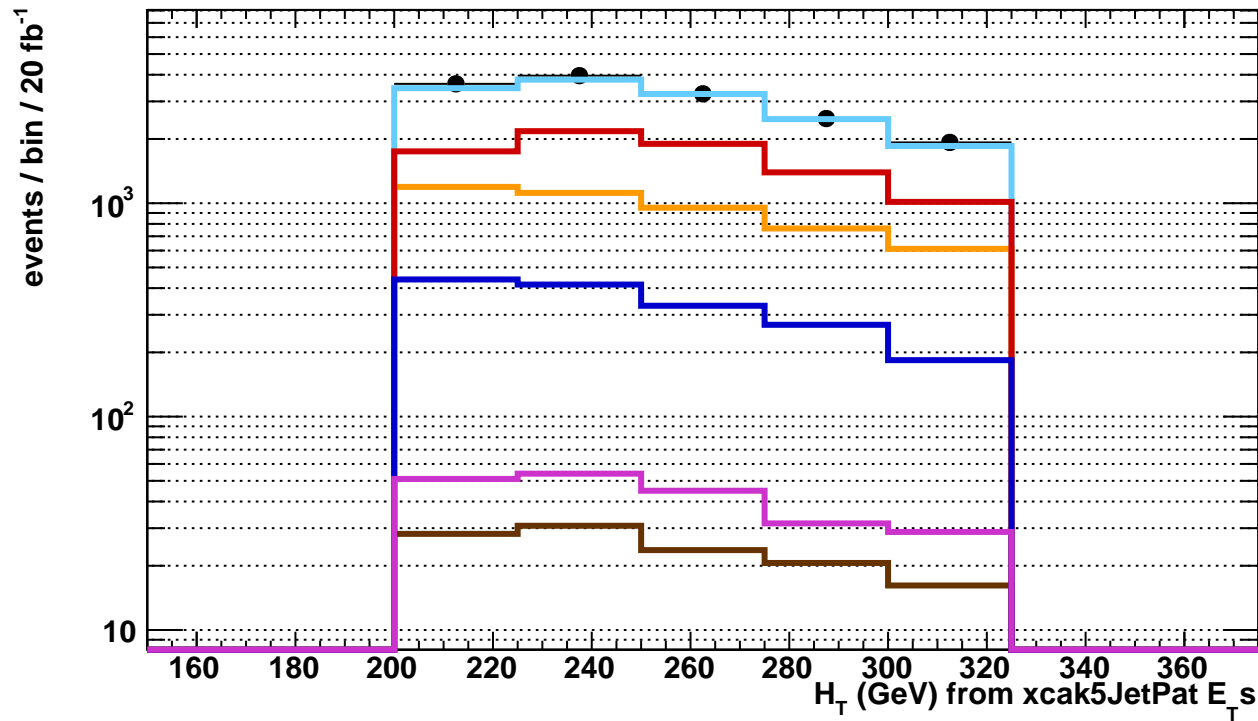
events / bin / 20 fb<sup>-1</sup>

xcak5JetSumEtPat_le3j_eq0b	
Entries	63113
Mean	252.2
RMS	34.28
Underflow	0
Overflow	0
Integral	6.311e+04

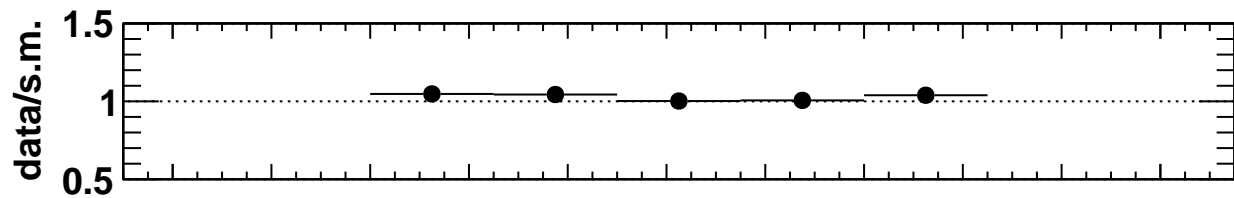


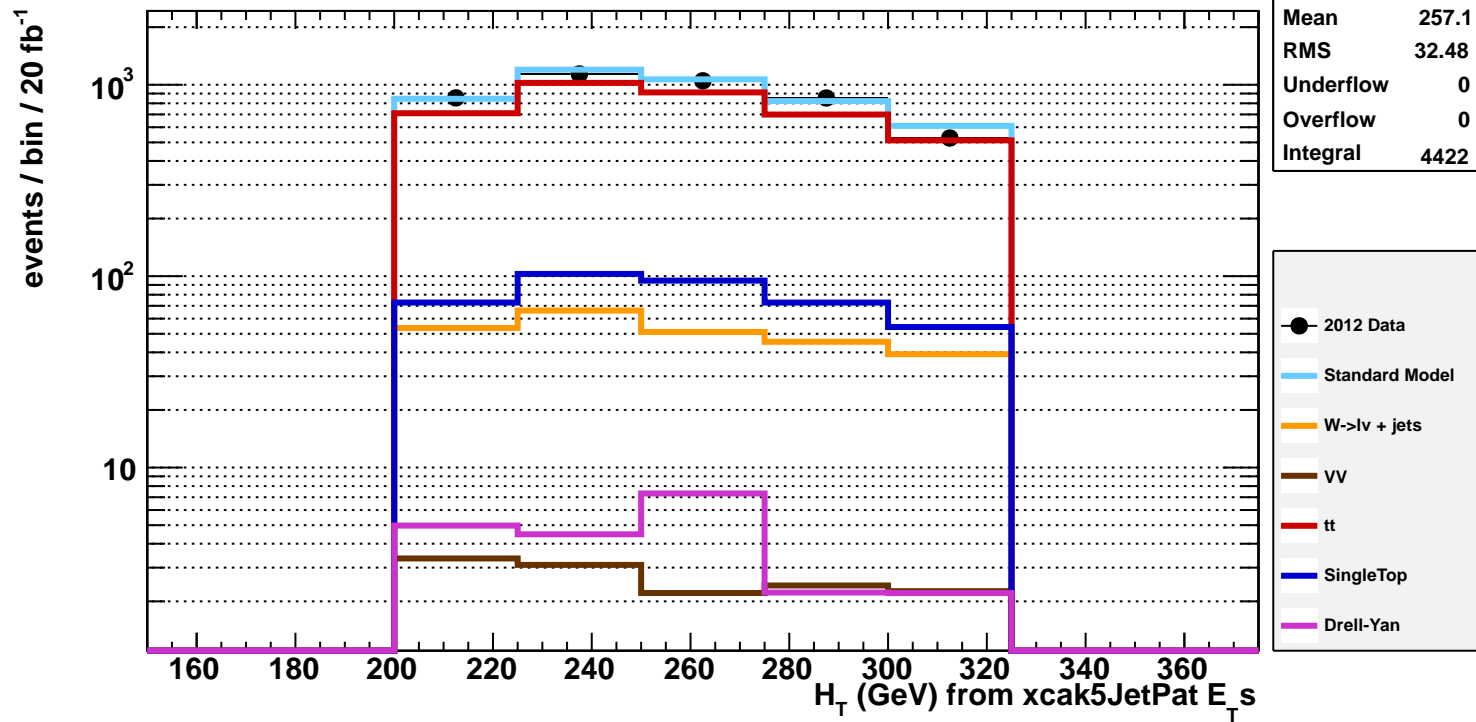
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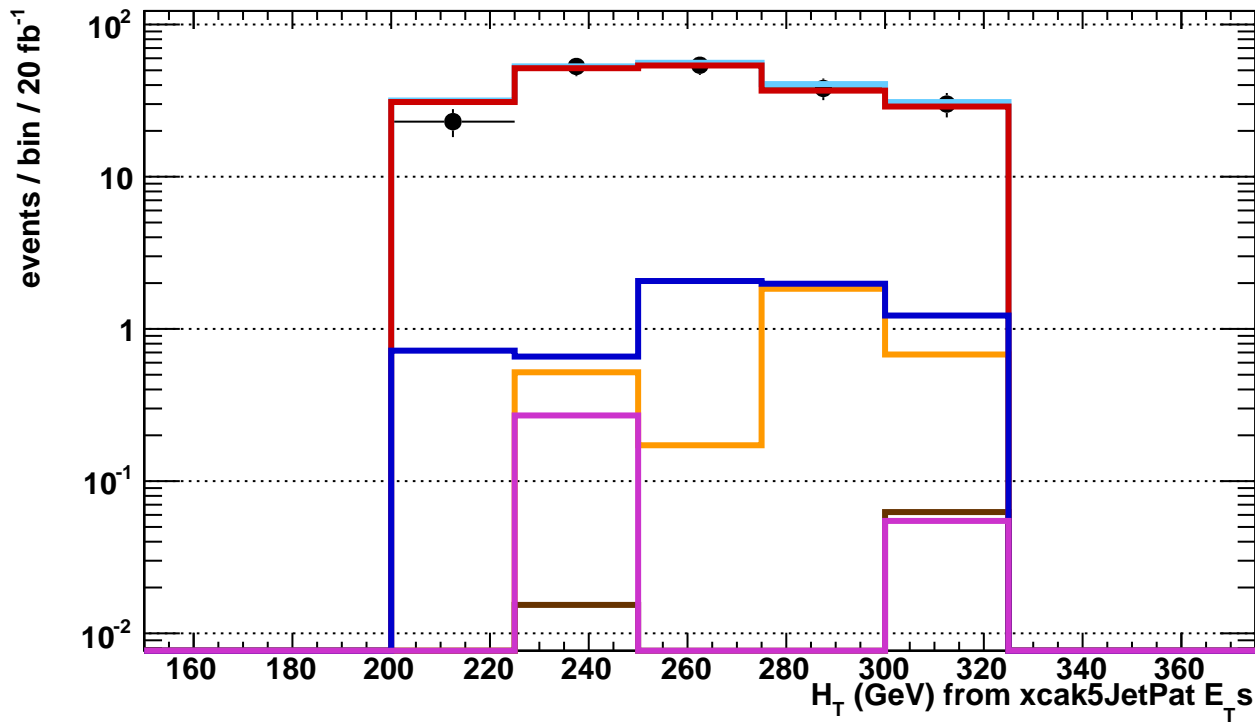




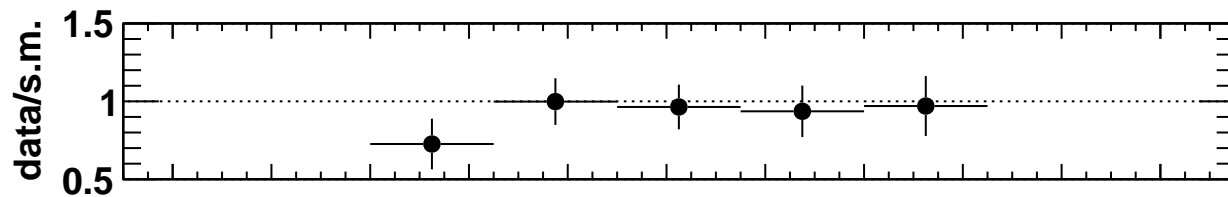
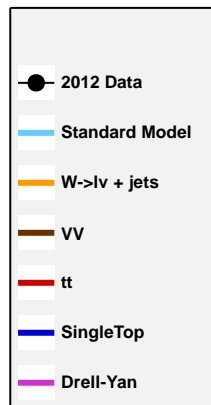
xcak5JetSumEtPat_le3j_eq1b	
Entries	15261
Mean	254.3
RMS	33.63
Underflow	0
Overflow	0
Integral	1.526e+04

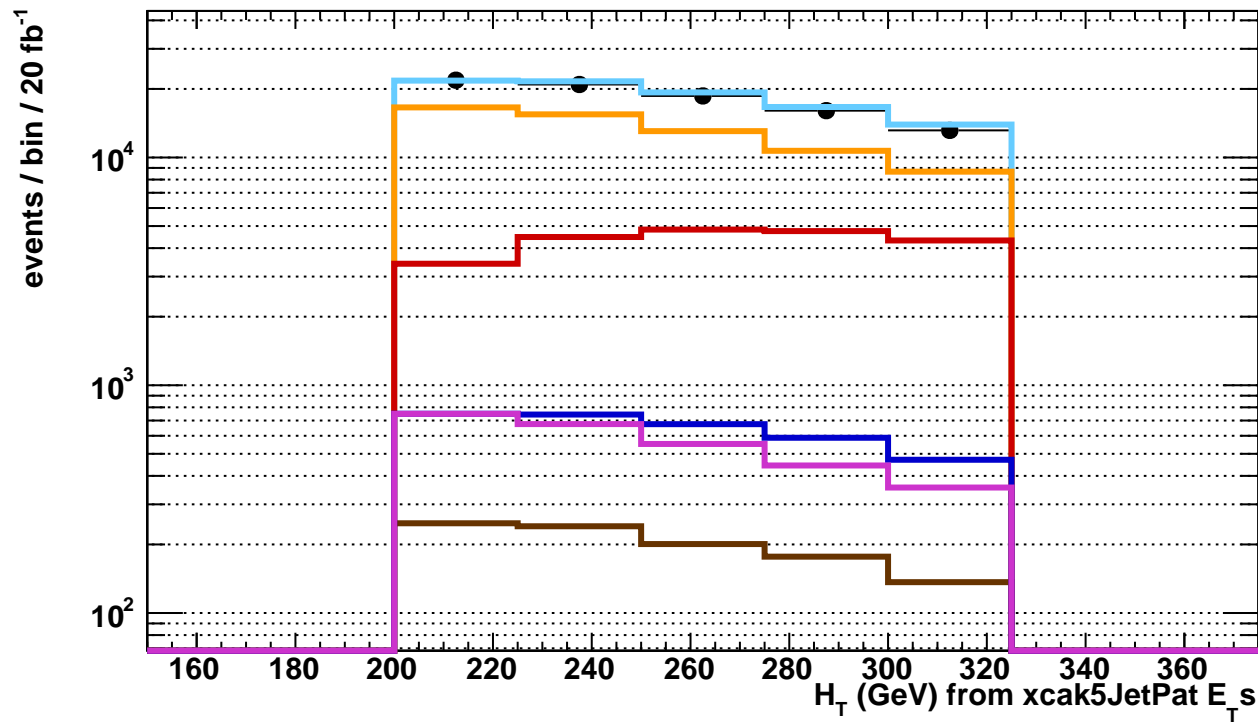




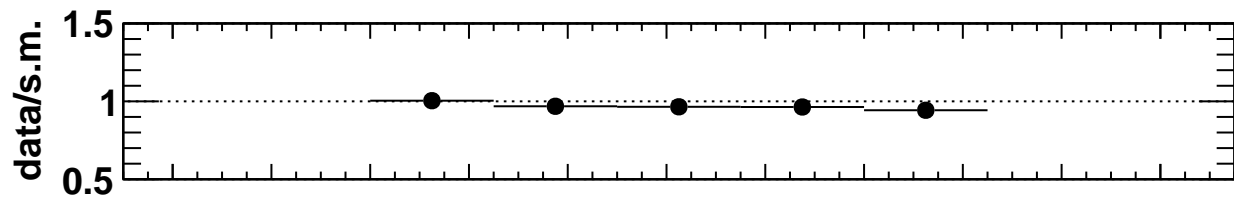
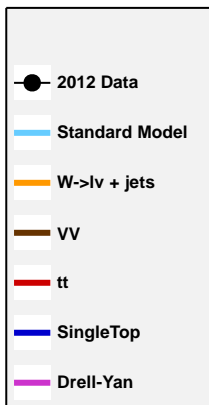


xcak5JetSumEtPat_le3j_eq3b	
Entries	198
Mean	262.6
RMS	31.8
Underflow	0
Overflow	0
Integral	198

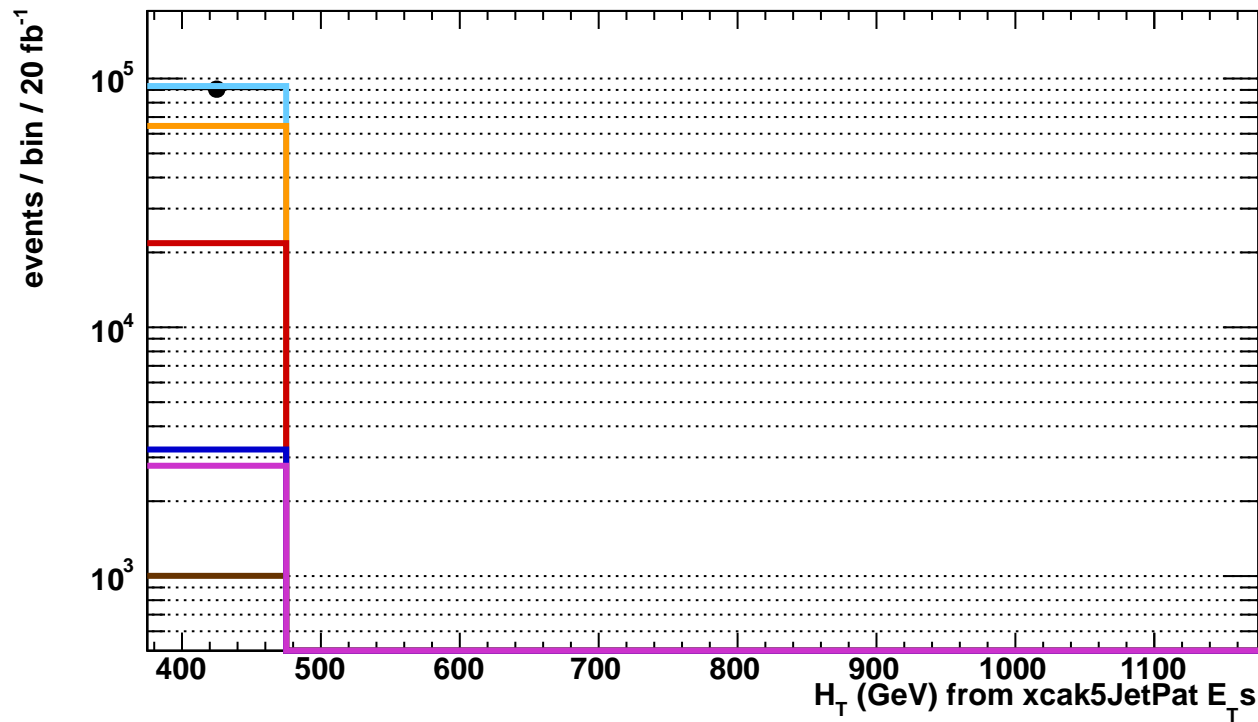




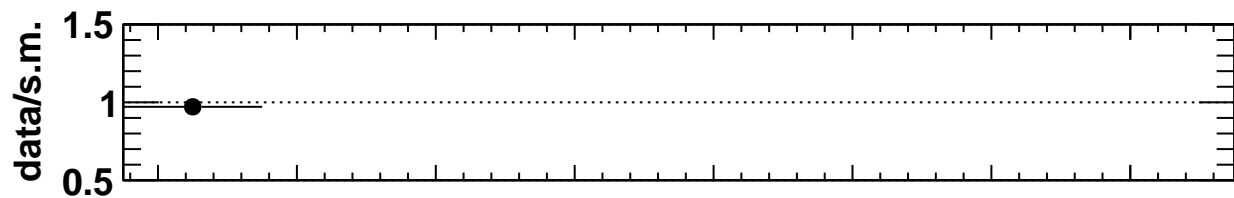
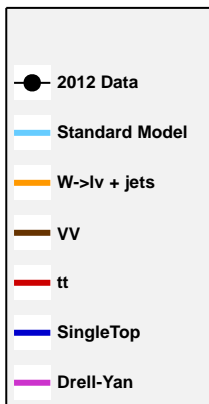
xcak5JetSumEtPat	
Entries	90605
Mean	256.2
RMS	34.96
Underflow	0
Overflow	0
Integral	9.06e+04



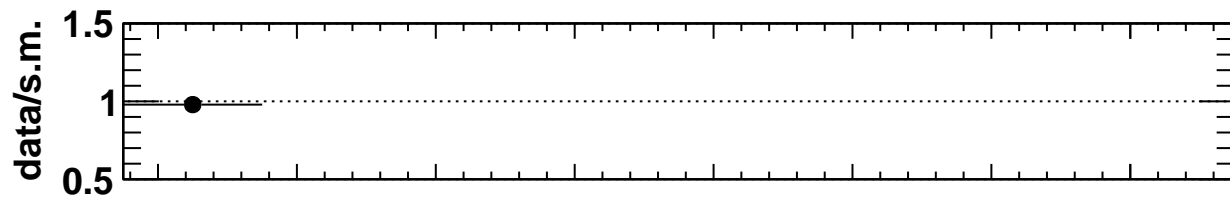
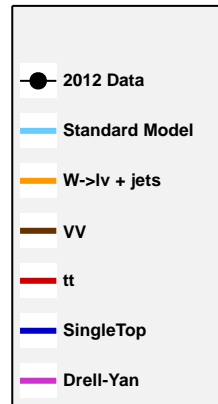
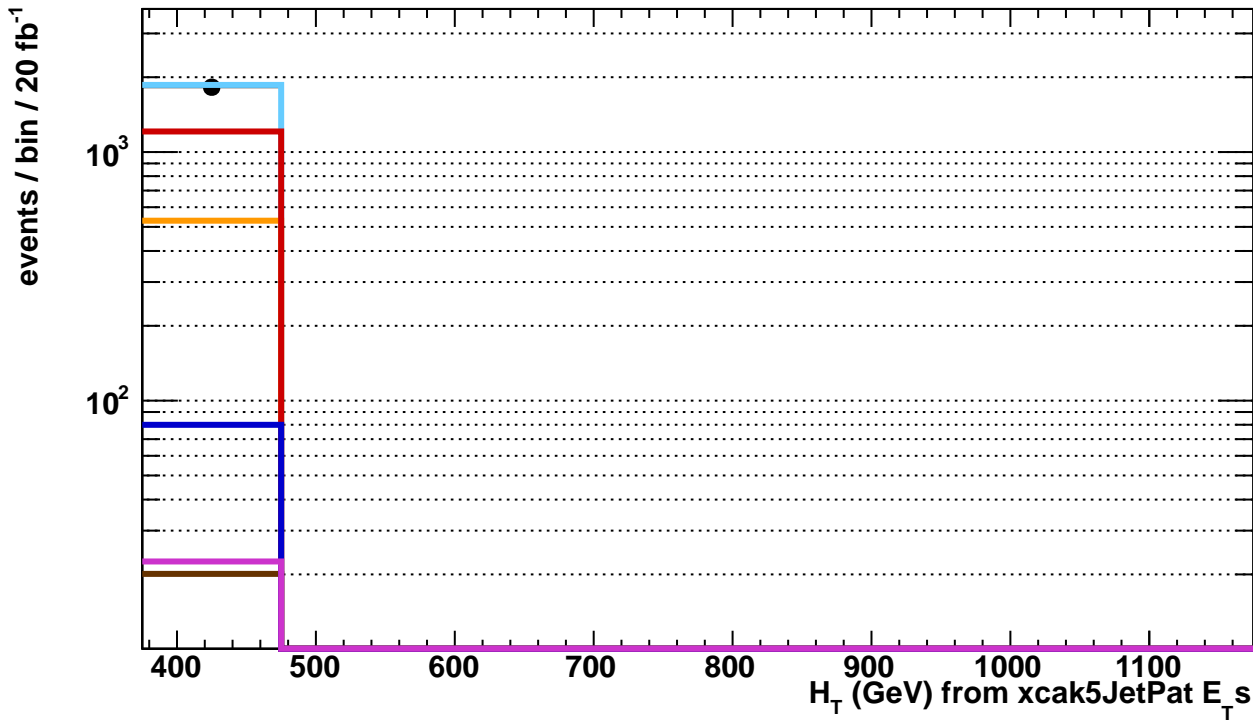


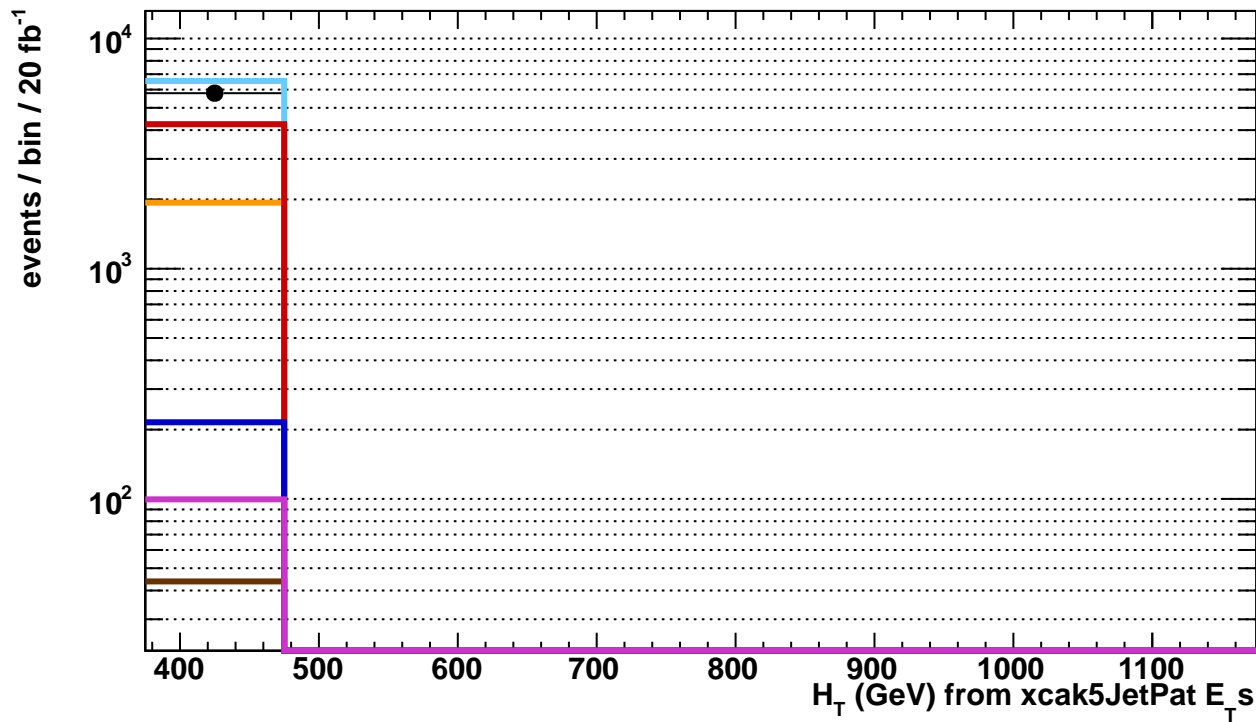


xcak5JetSumEtPat	
Entries	90605
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	9.06e+04

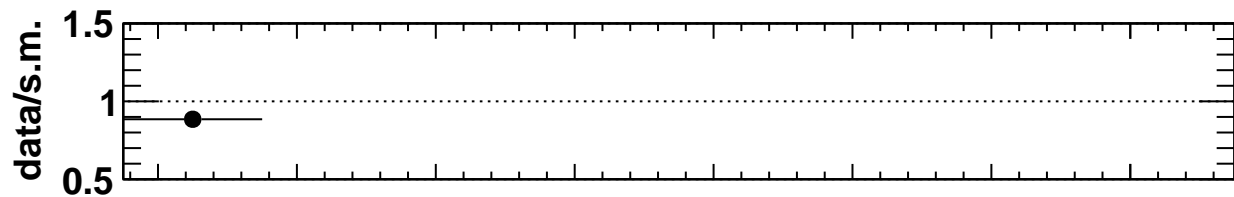
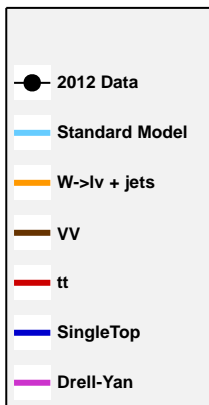


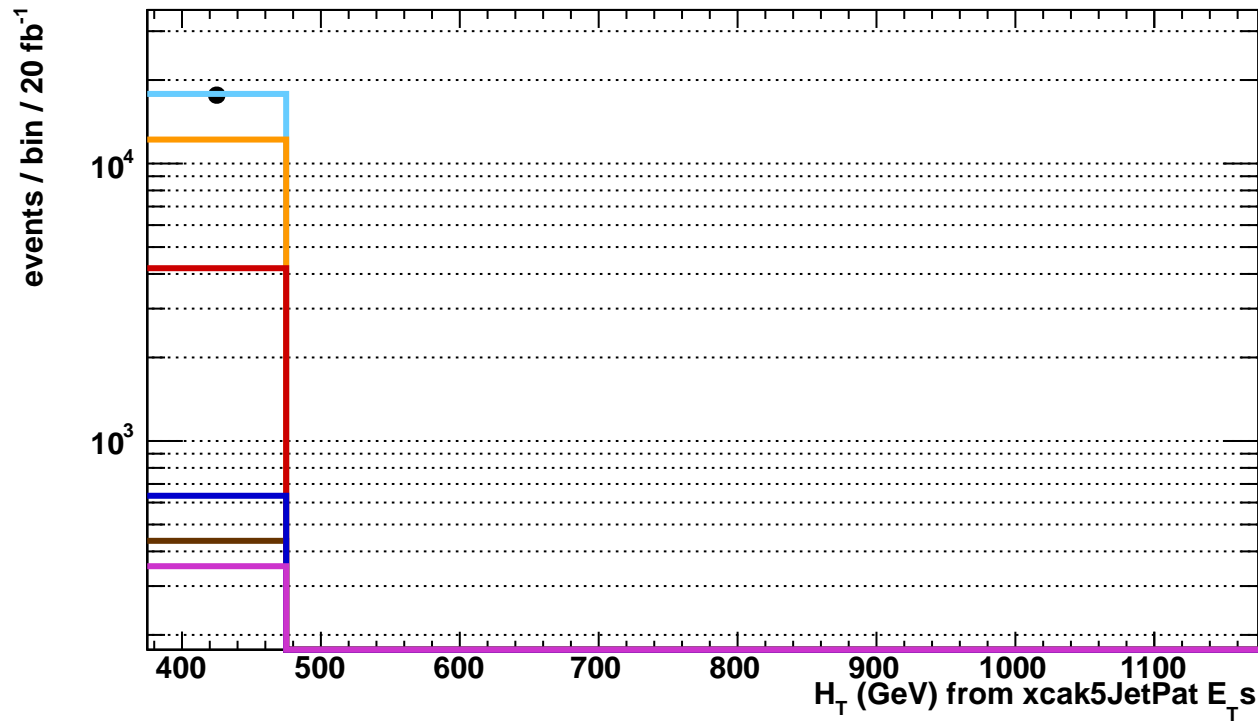
xcak5JetSumEtPat_ge4j_aTge55	
Entries	1823
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1823



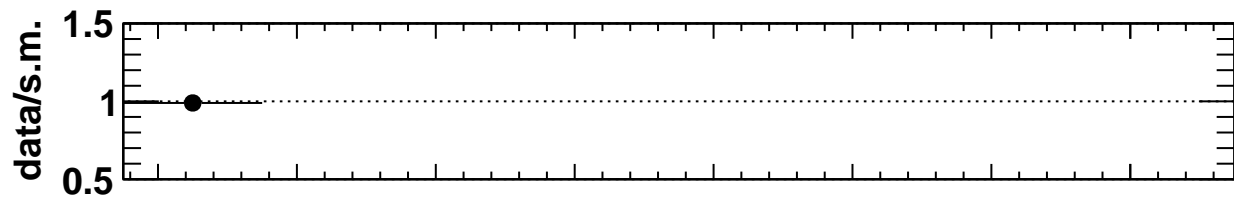
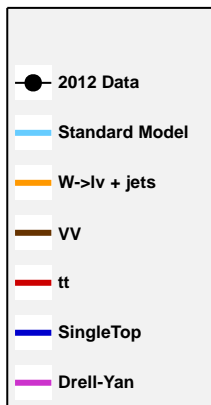


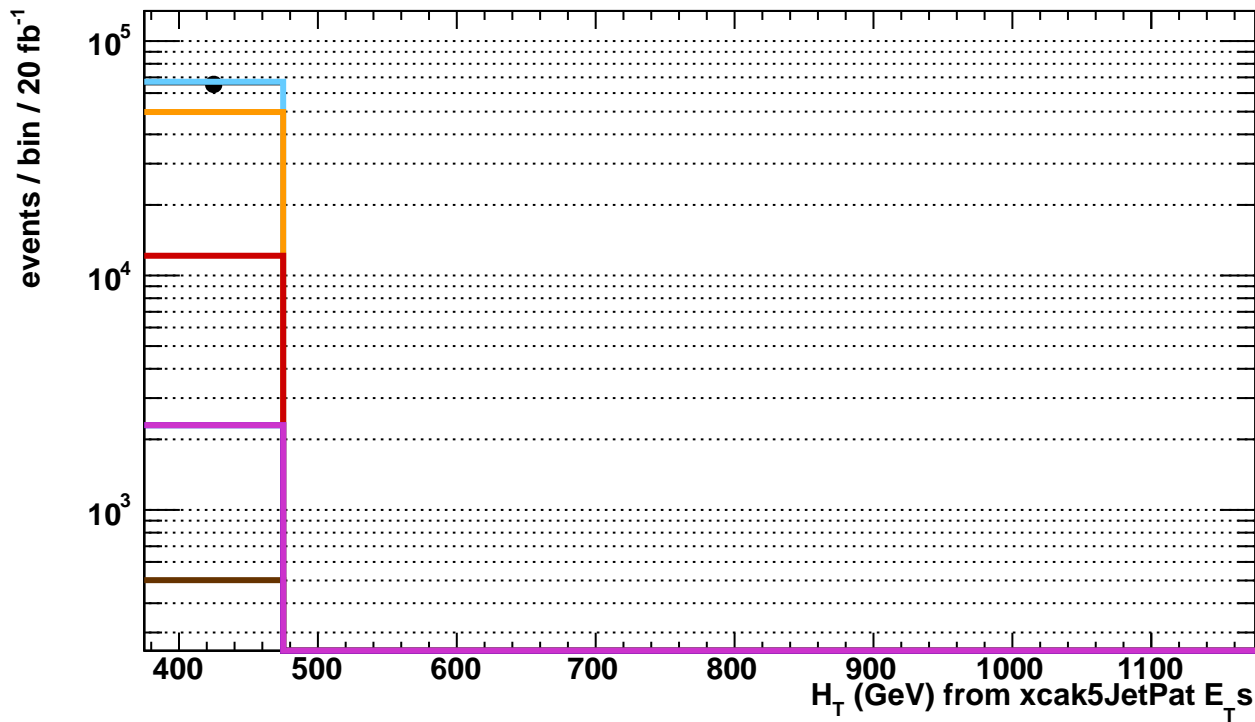
xcak5JetSumEtPat_ge4j_aTl55	
Entries	5788
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	5788



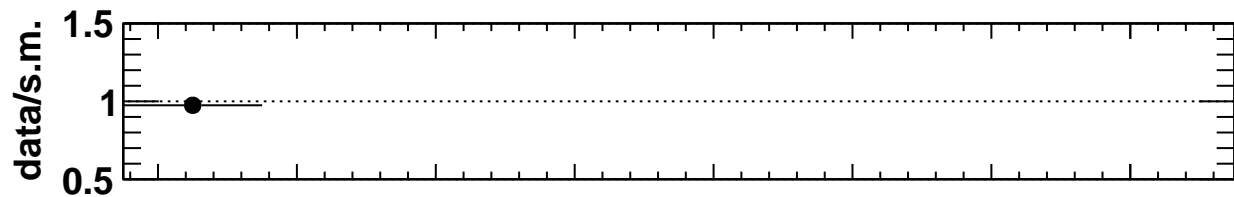


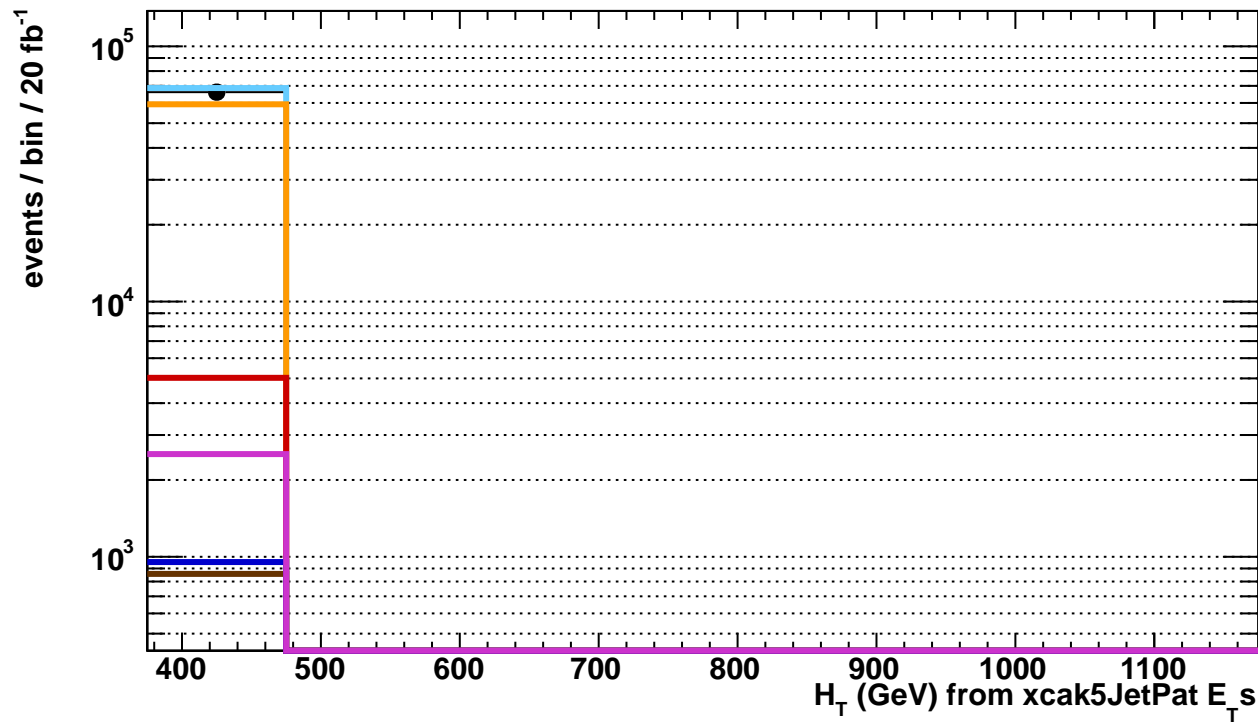
xcak5JetSumEtPat_le3j_aTge55	
Entries	17639
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.764e+04



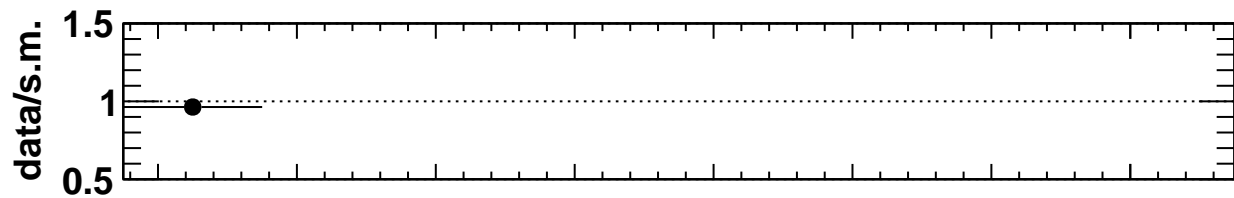
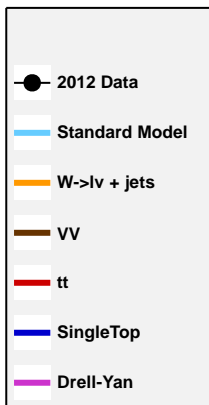


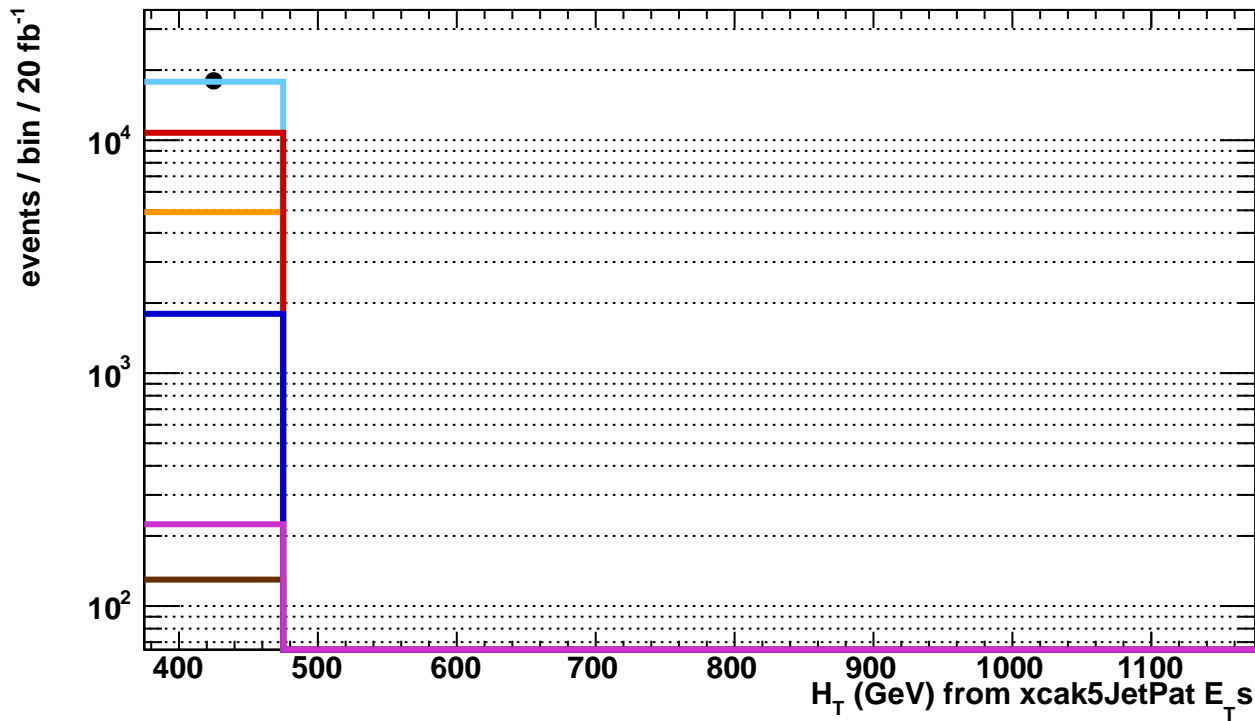
xcak5JetSumEtPat_le3j_atl55	
Entries	65355
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.536e+04





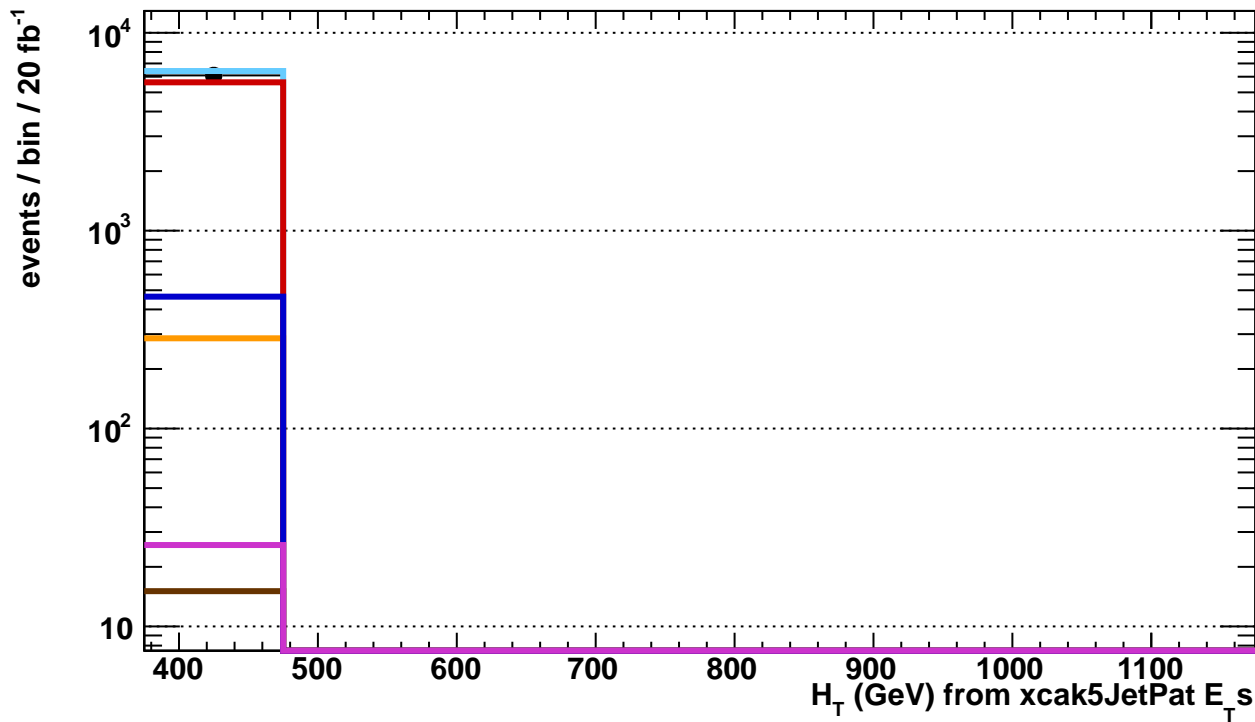
xcak5JetSumEtPat_eq0b	
Entries	66140
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.614e+04



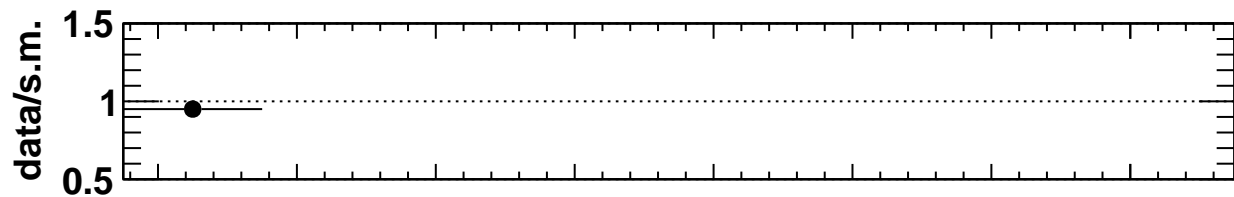
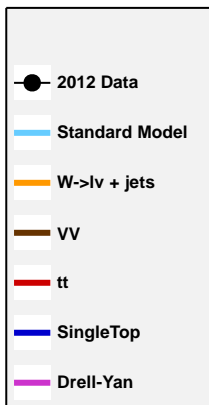


xcak5JetSumEtPat_eq1b	
Entries	17984
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.798e+04

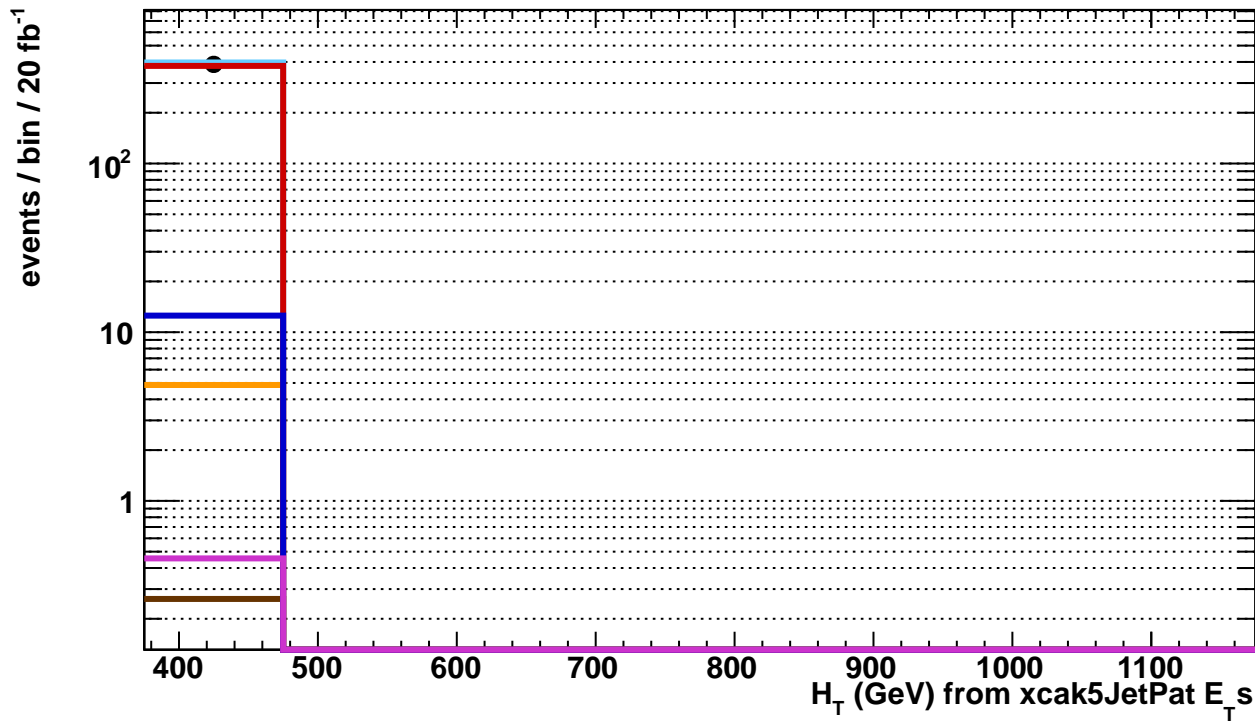




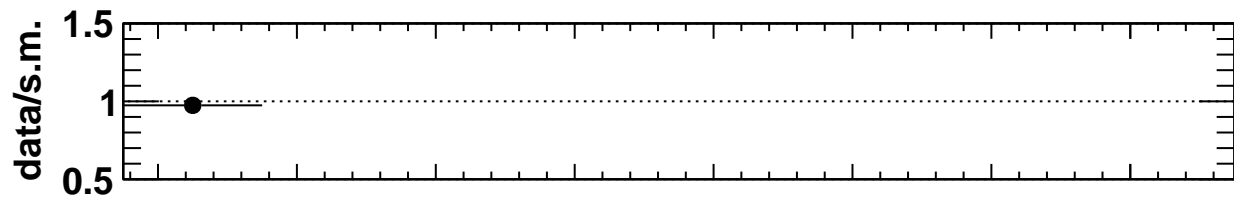
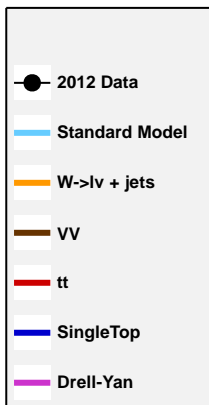
xcak5JetSumEtPat_eq2b	
Entries	6091
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6091



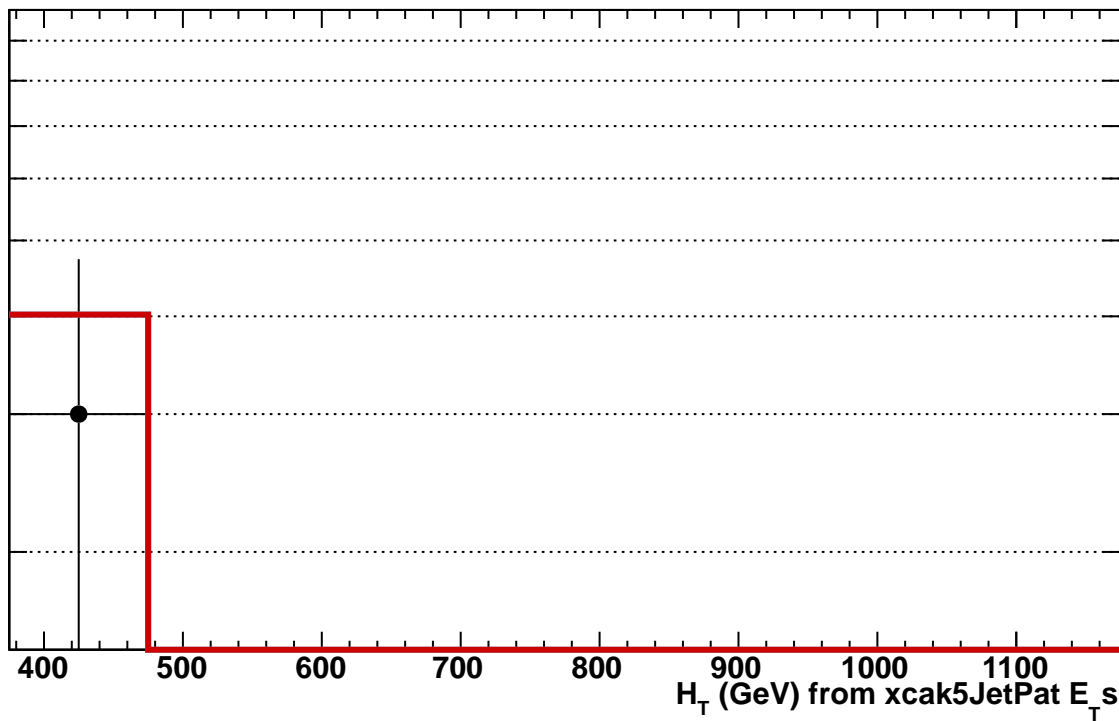




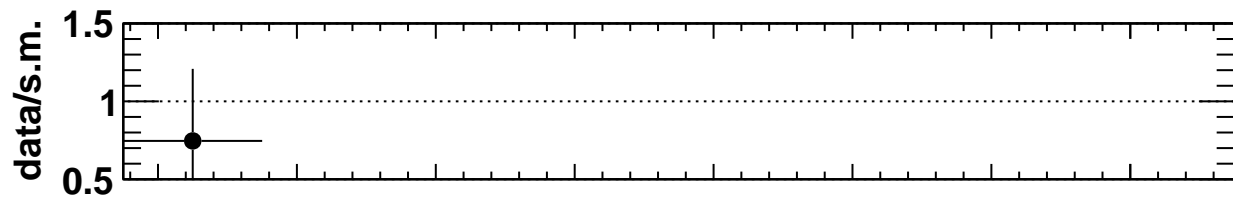
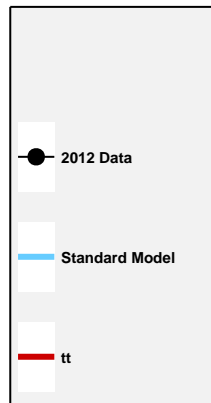
xcak5JetSumEtPat_eq3b	
Entries	387
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	387



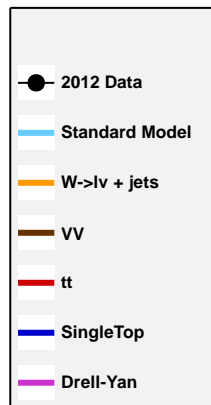
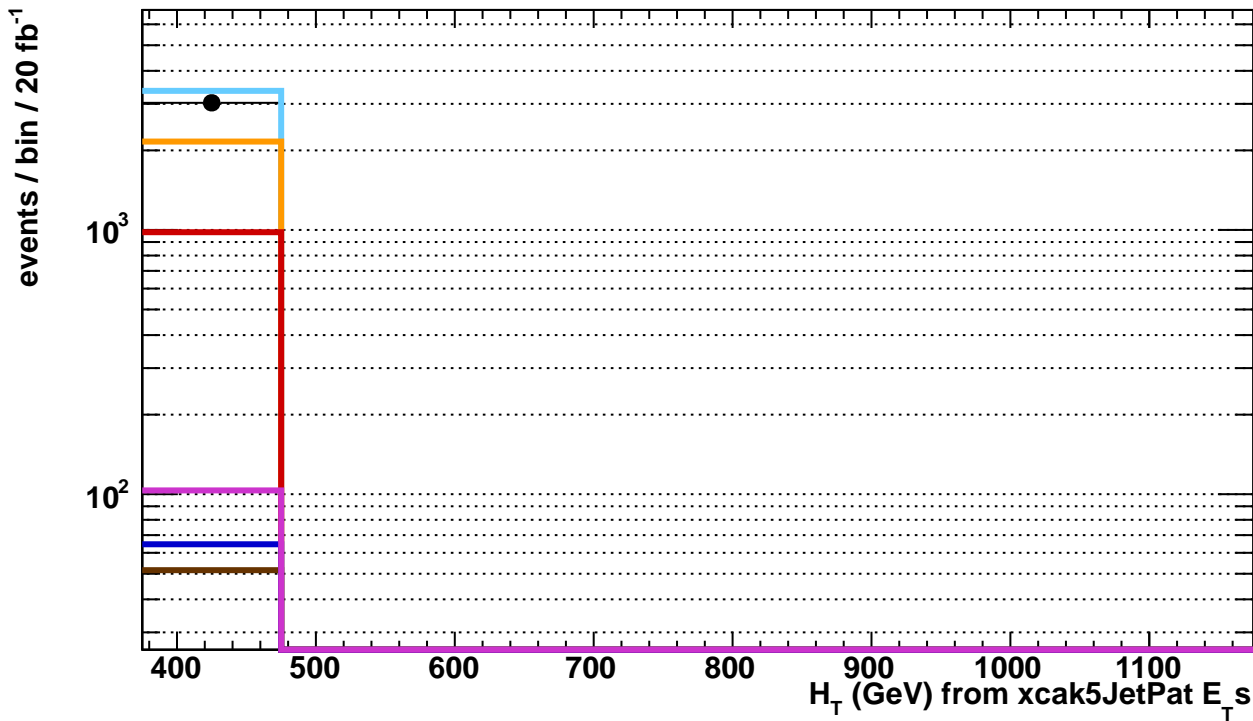
events / bin / 20 fb<sup>-1</sup>

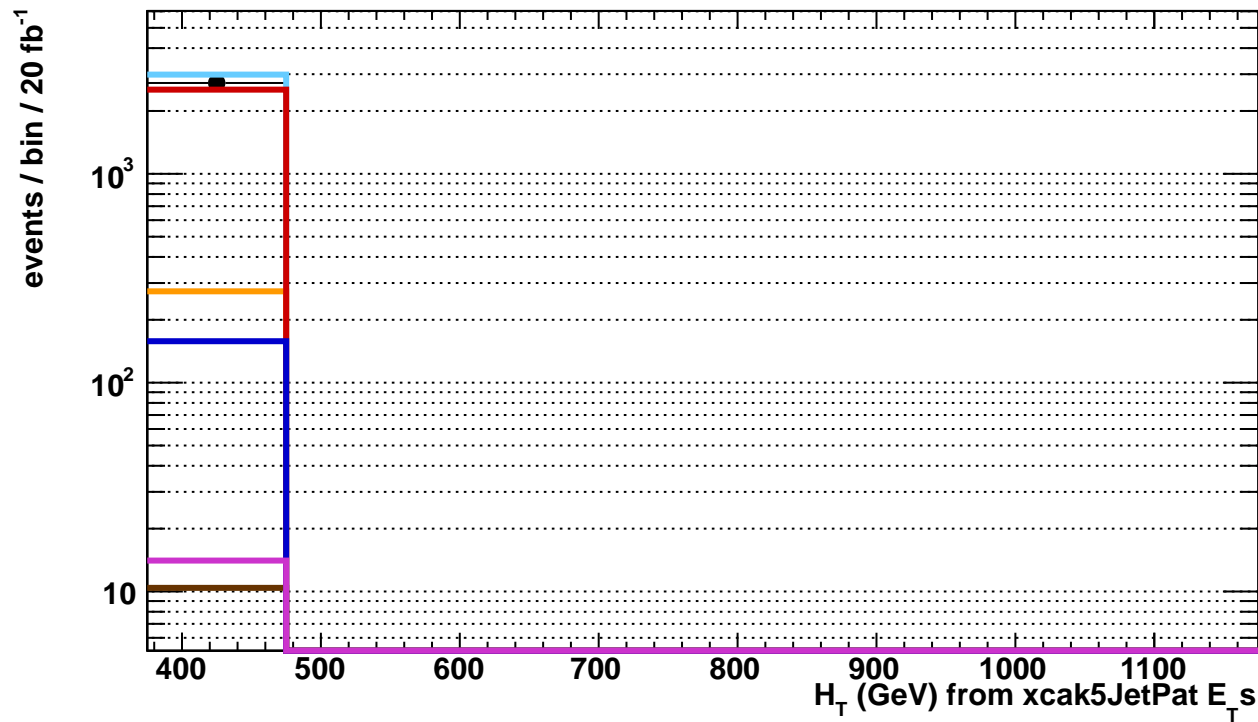


xcak5JetSumEtPat_ge4b	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3

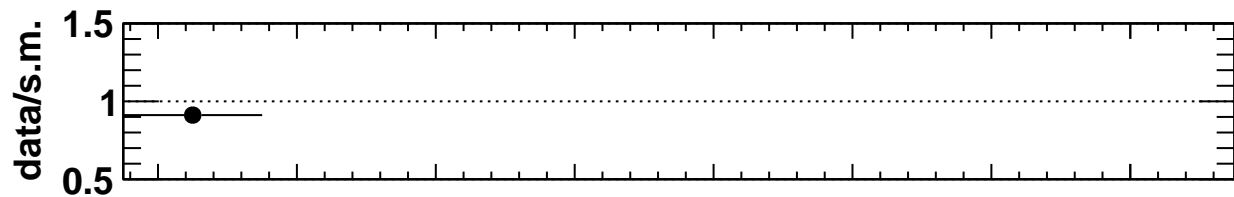
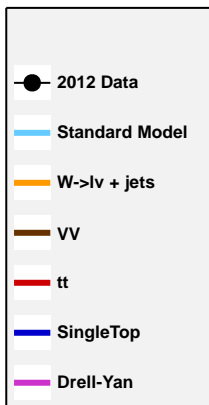


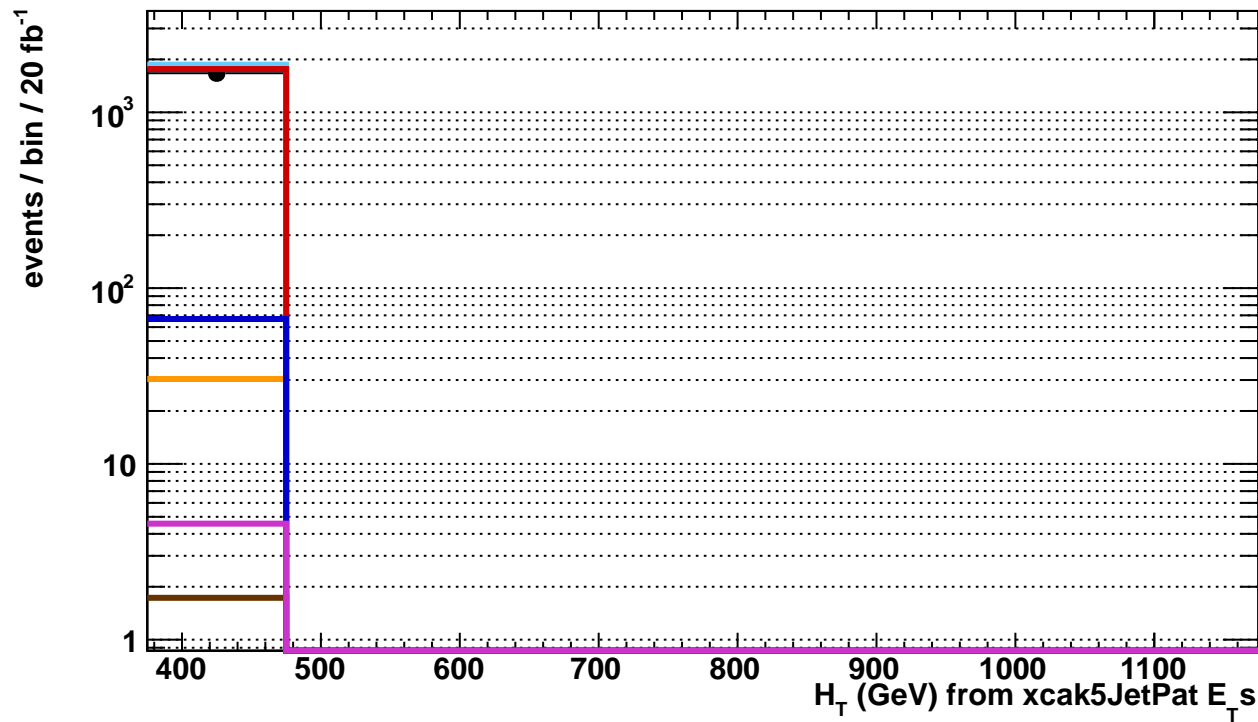
xcak5JetSumEtPat_ge4j_eq0b	
Entries	3027
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3027



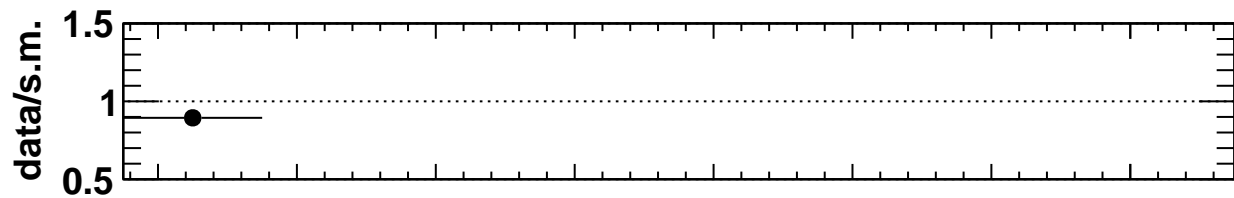


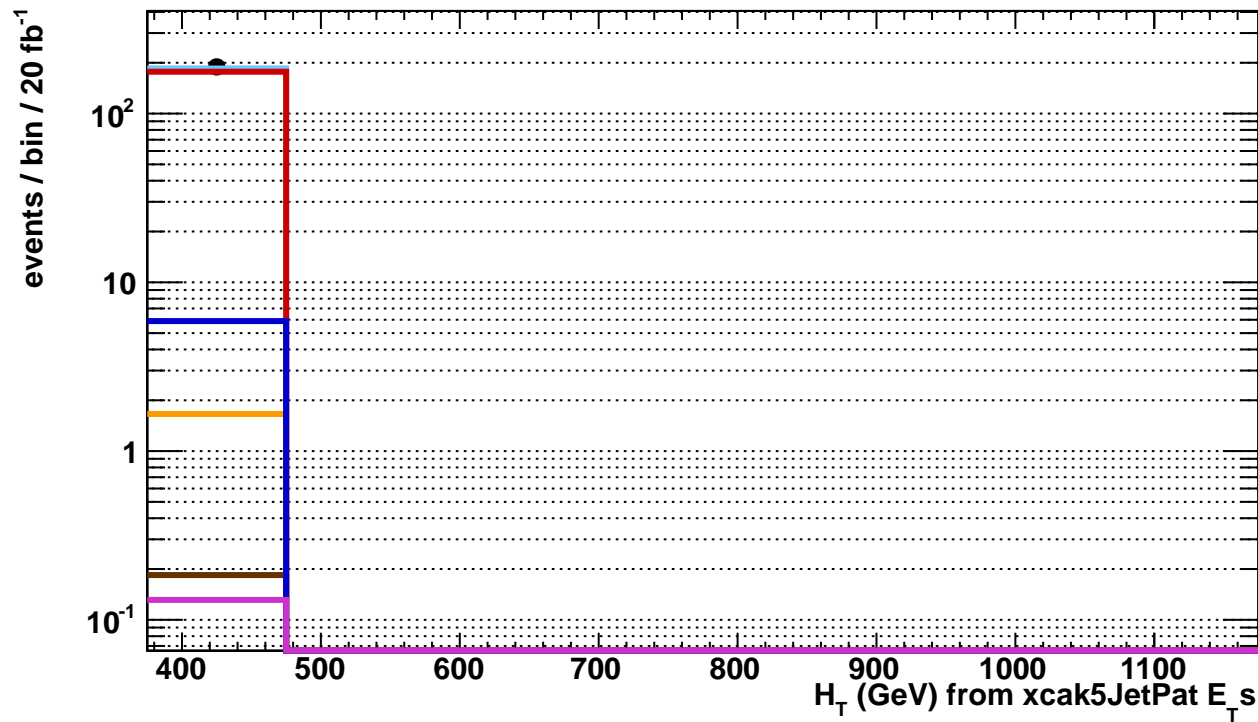
xcak5JetSumEtPat_ge4j_eq1b	
Entries	2723
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2723



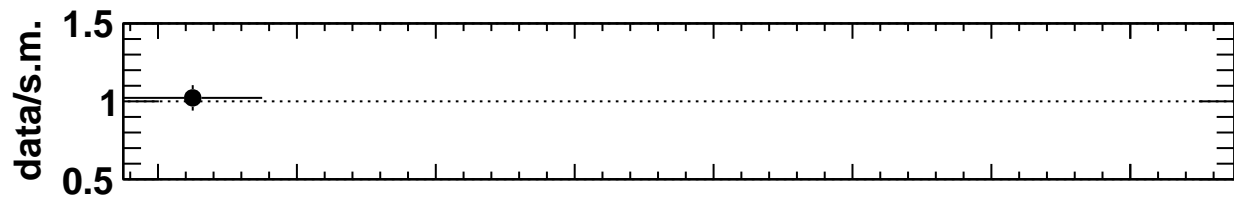
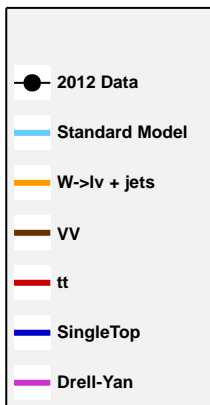


xcak5JetSumEtPat_ge4j_eq2b	
Entries	1669
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1669

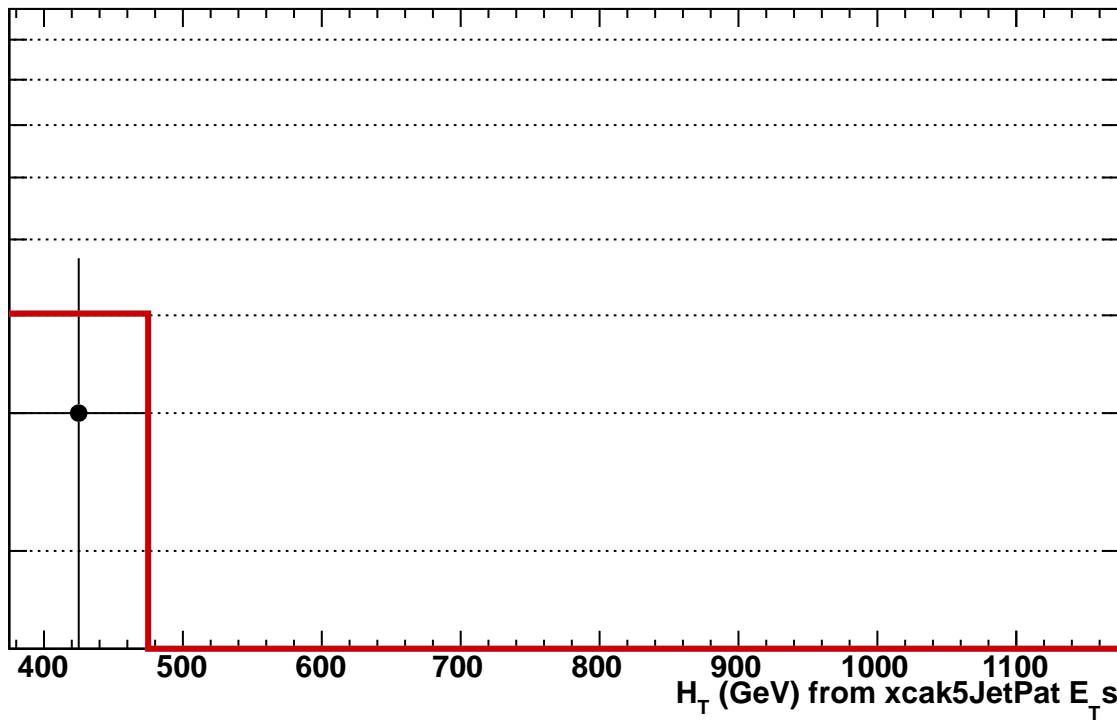




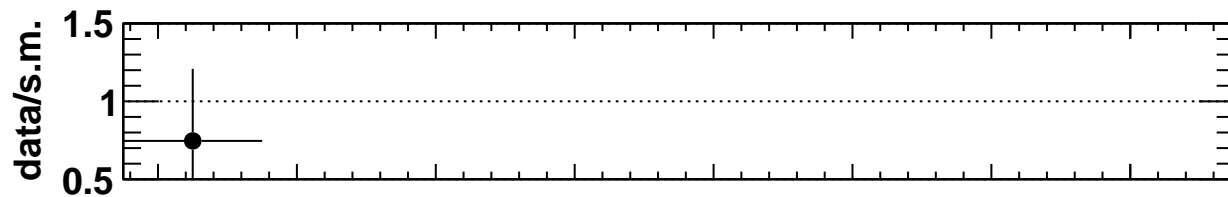
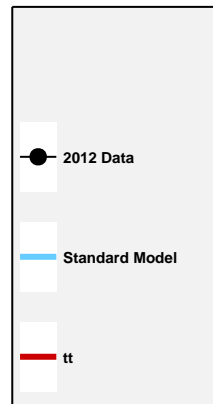
xcak5JetSumEtPat_ge4j_eq3b	
Entries	189
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	189

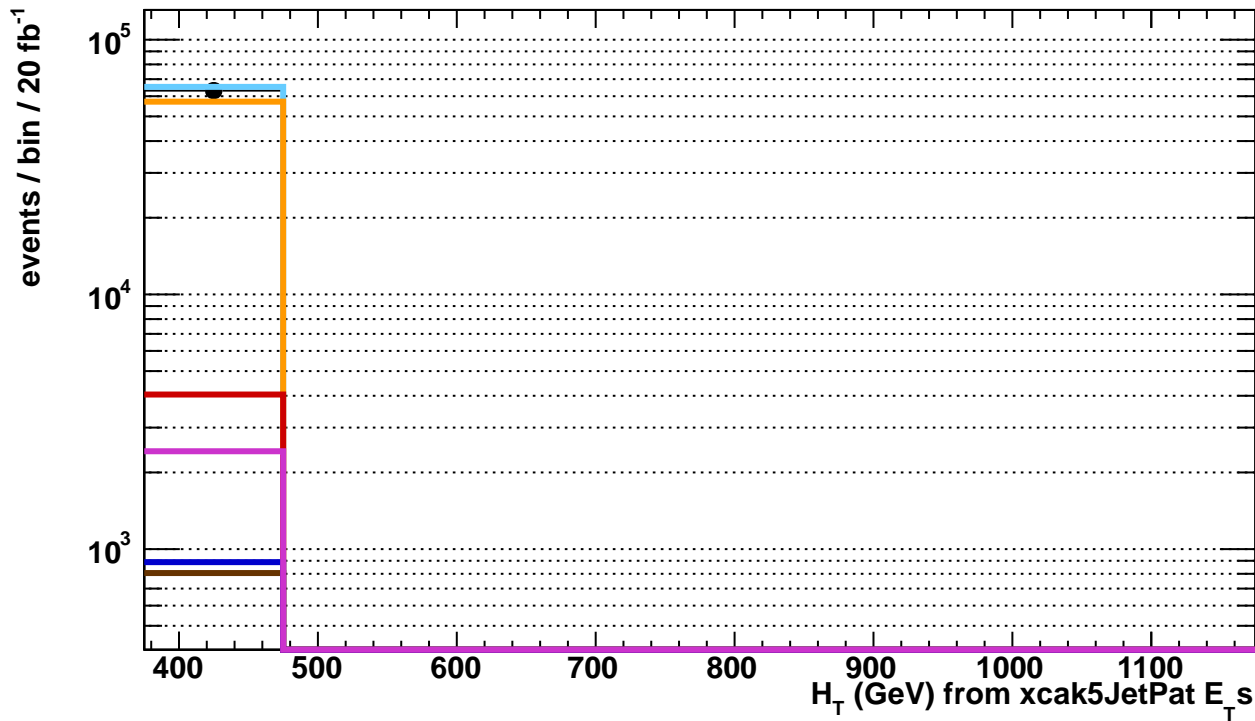


events / bin / 20 fb<sup>-1</sup>

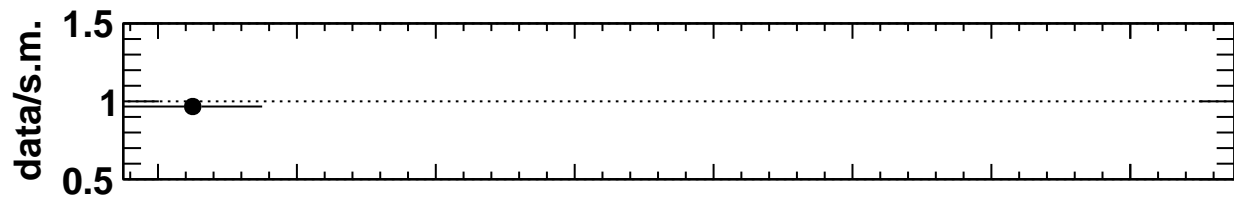
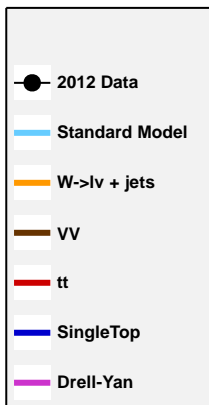


xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3

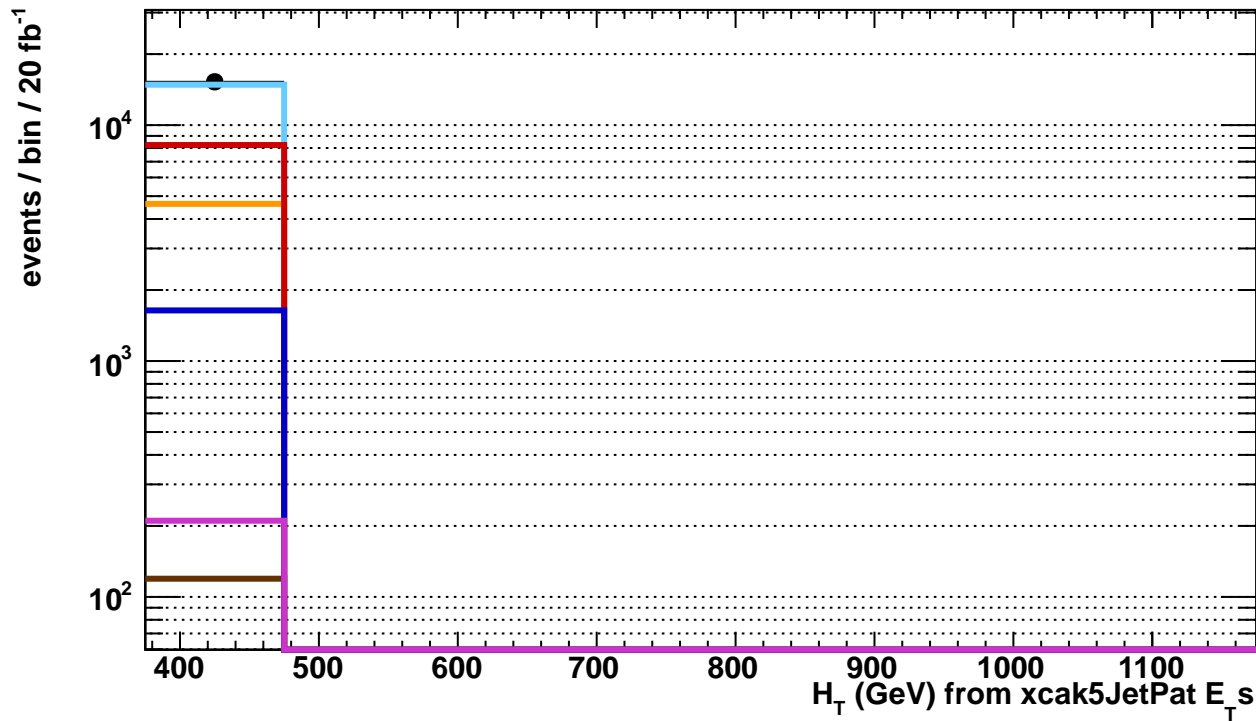




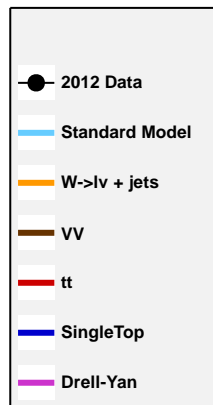
xcak5JetSumEtPat_le3j_eq0b	
Entries	63113
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.311e+04

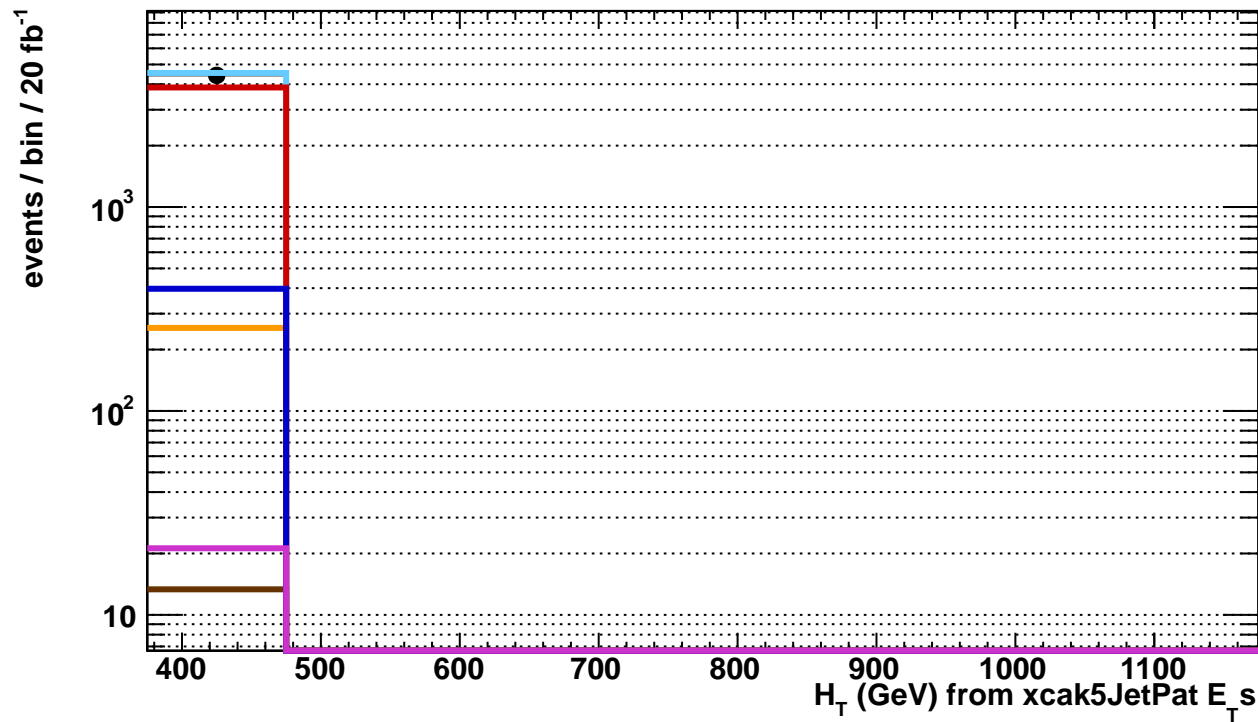




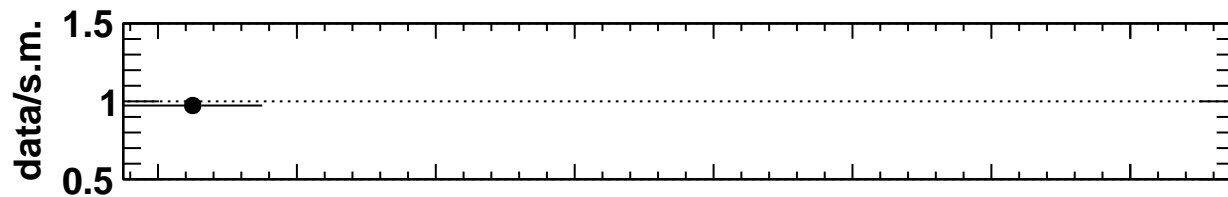
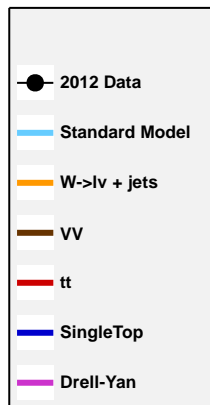


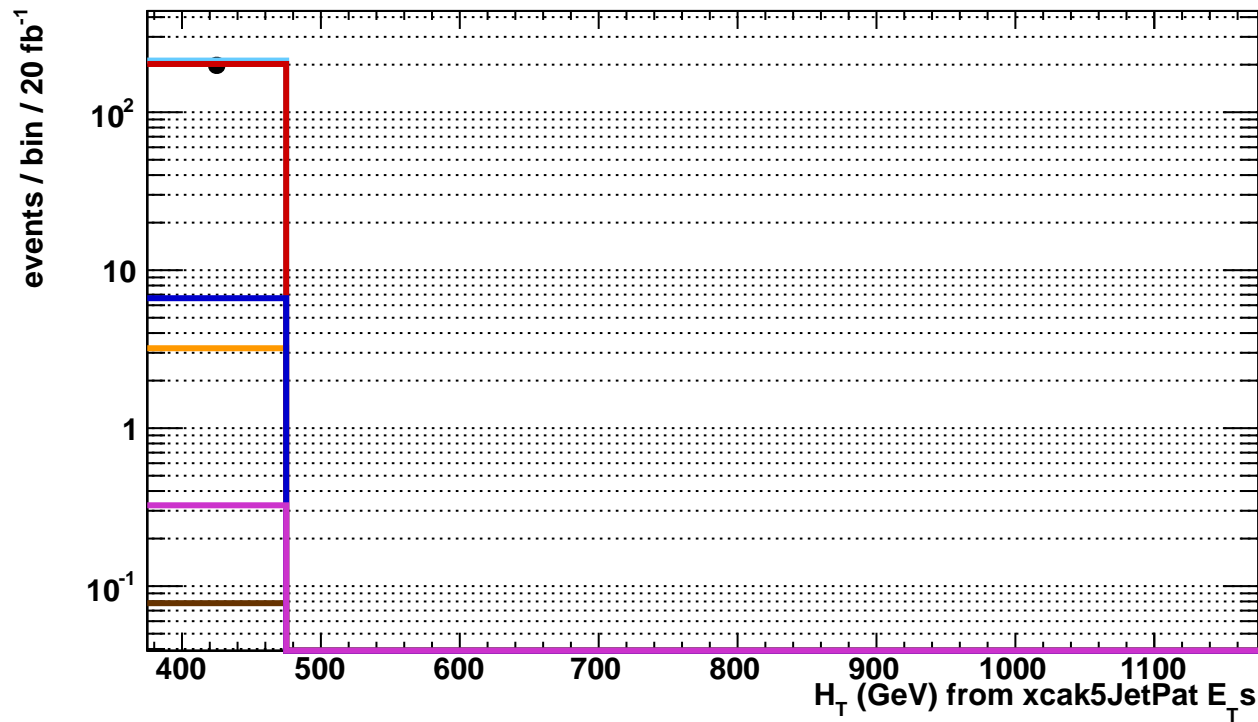
xcak5JetSumEtPat_le3j_eq1b	
Entries	15261
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.526e+04



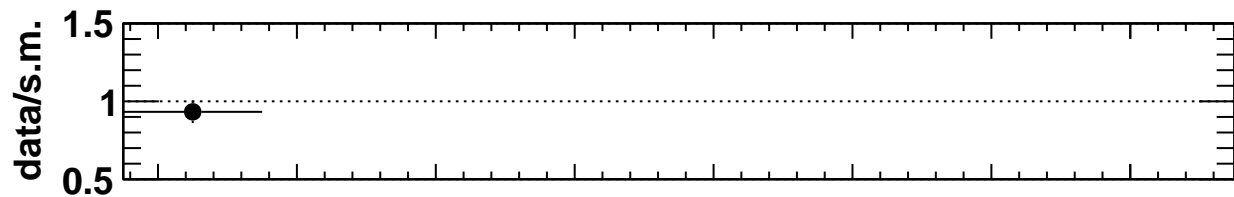
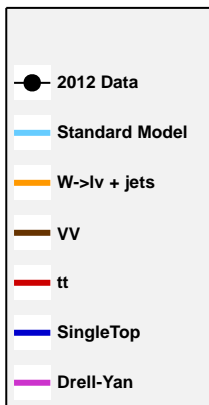


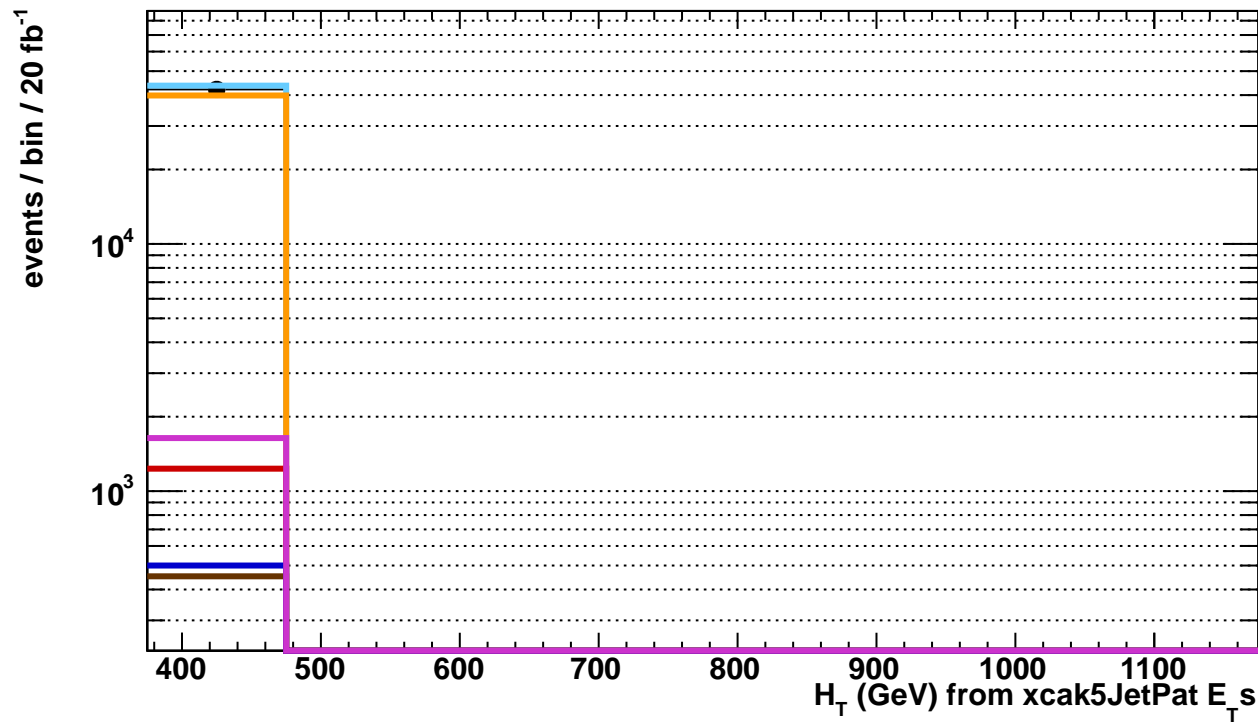
xcak5JetSumEtPat_le3j_eq2b	
Entries	4422
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4422



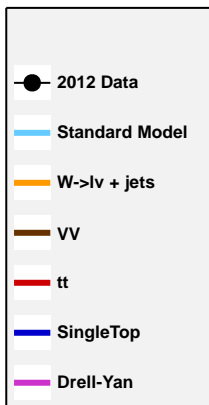


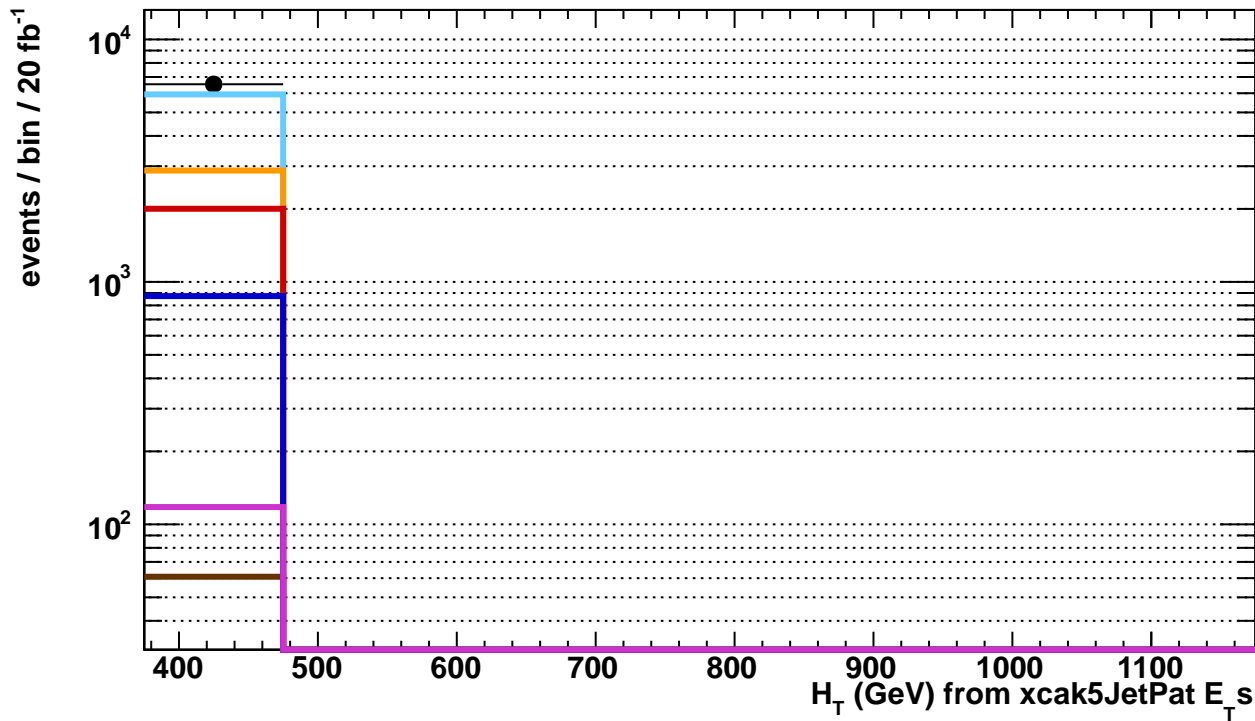
xcak5JetSumEtPat_le3j_eq3b	
Entries	198
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	198





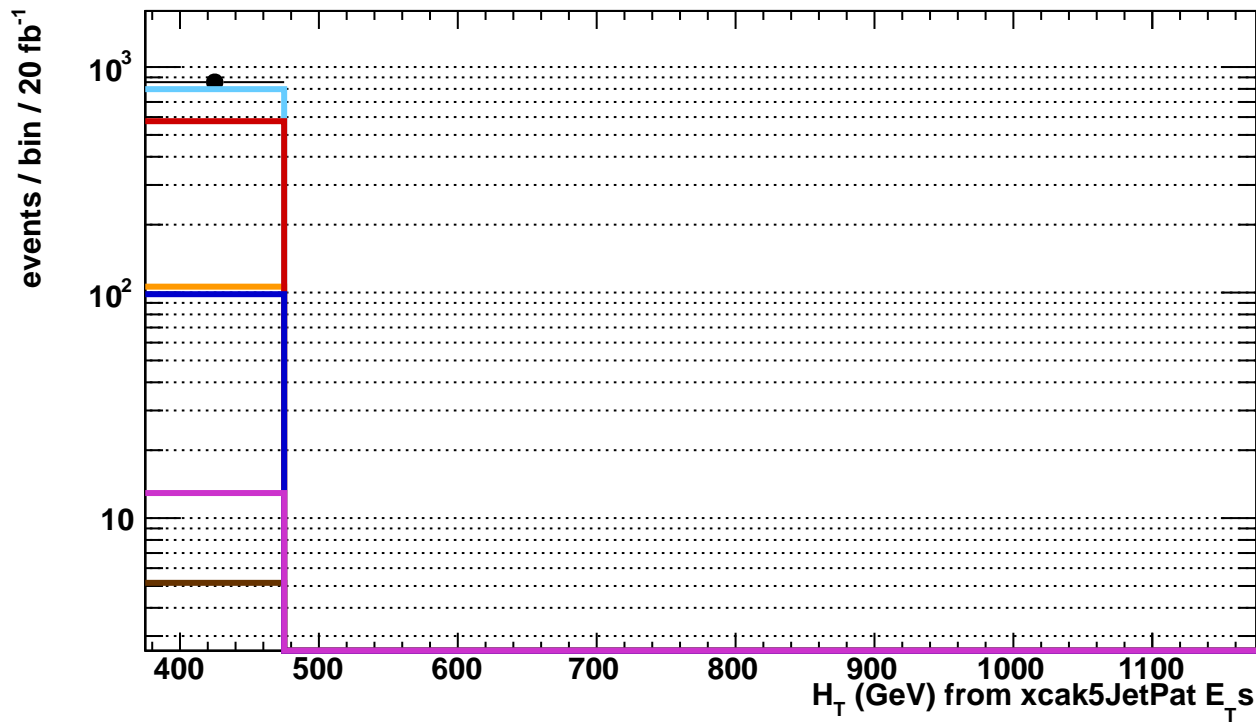
xcak5JetSumEtPat_eq2j_eq0b	
Entries	42174
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4.217e+04



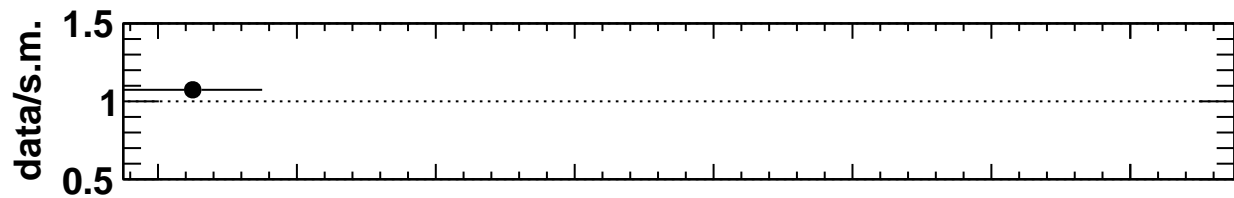
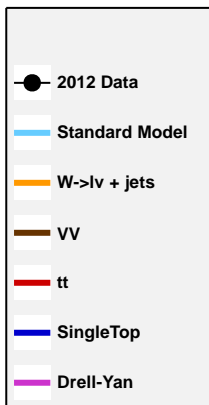


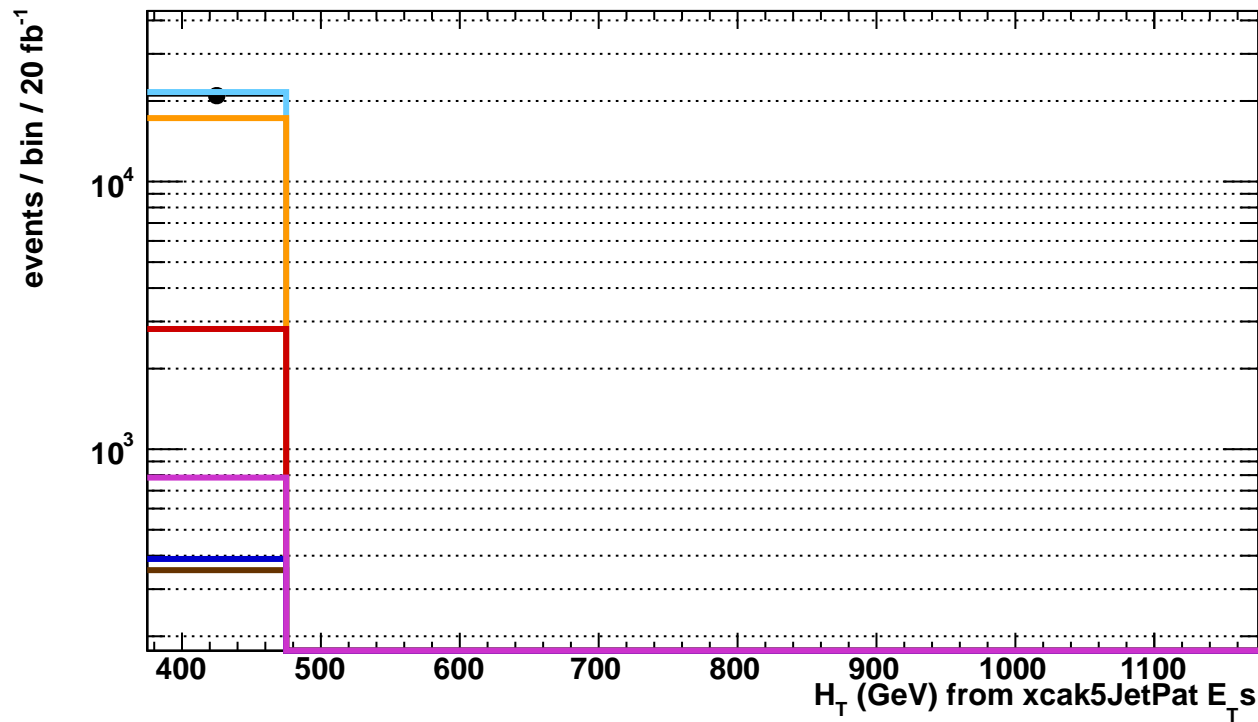
xcak5JetSumEtPat_eq2j_eq1b	
Entries	6534
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6534



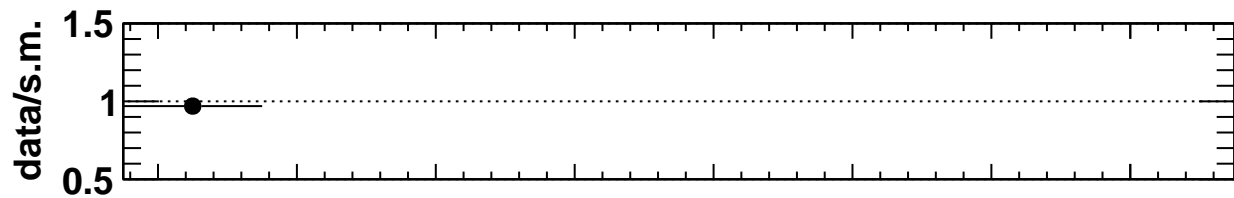


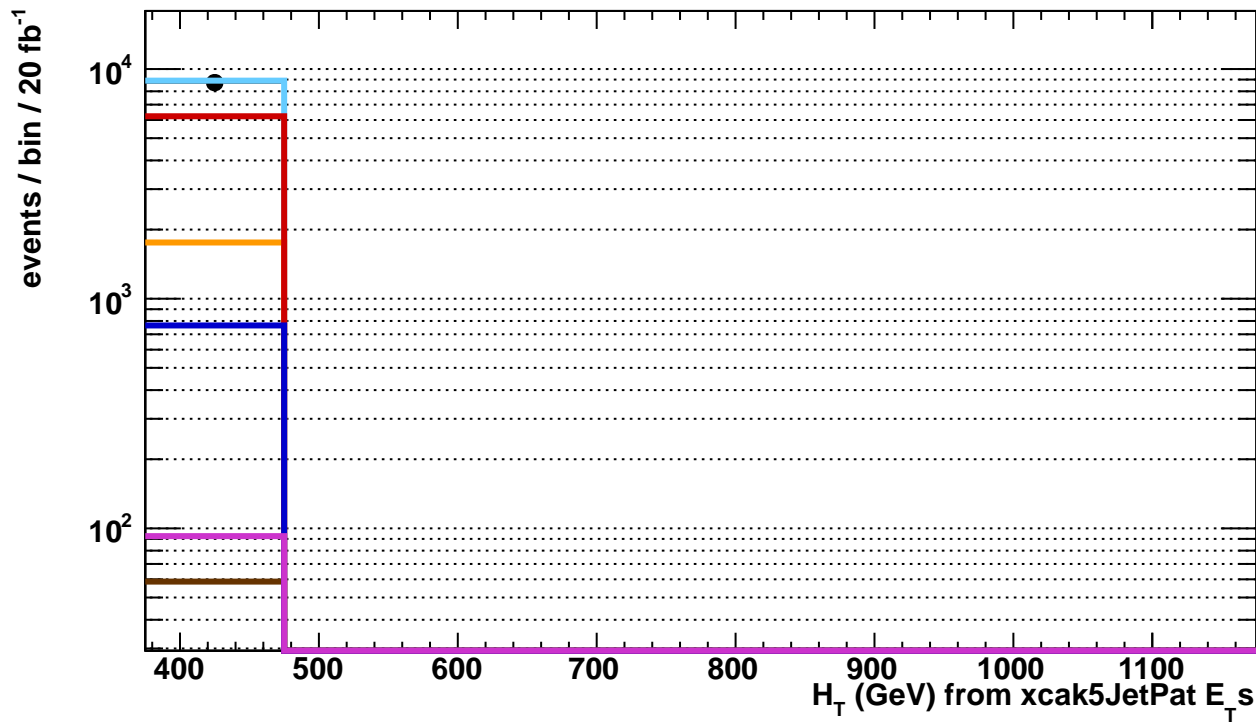
xcak5JetSumEtPat_eq2j_eq2b	
Entries	857
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	857



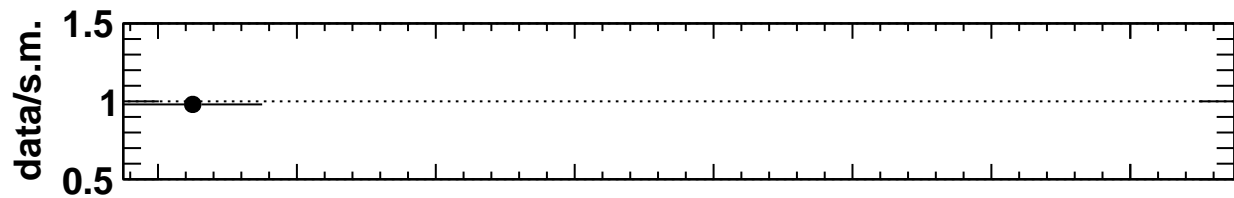
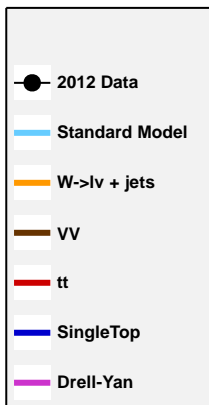


xcak5JetSumEtPat_eq3_eq0b	
Entries	20939
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2.094e+04

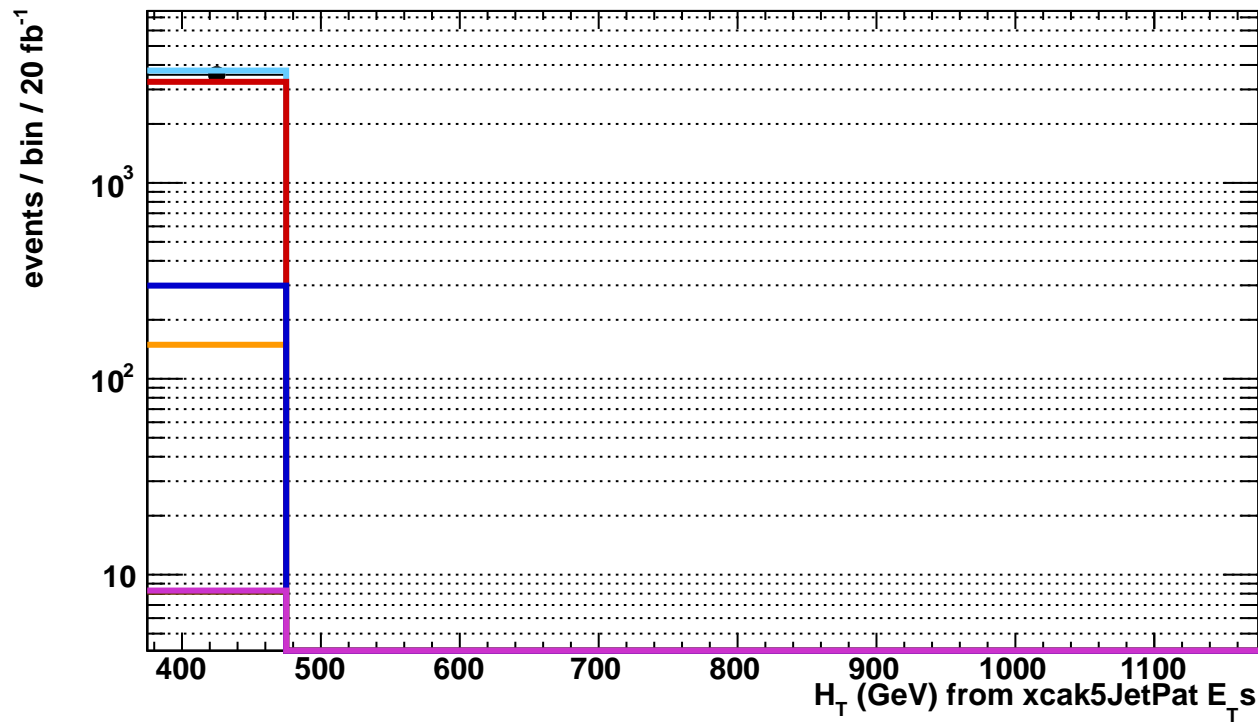




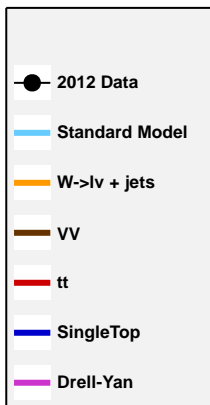
xcak5JetSumEtPat_eq3j_eq1b	
Entries	8727
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	8727

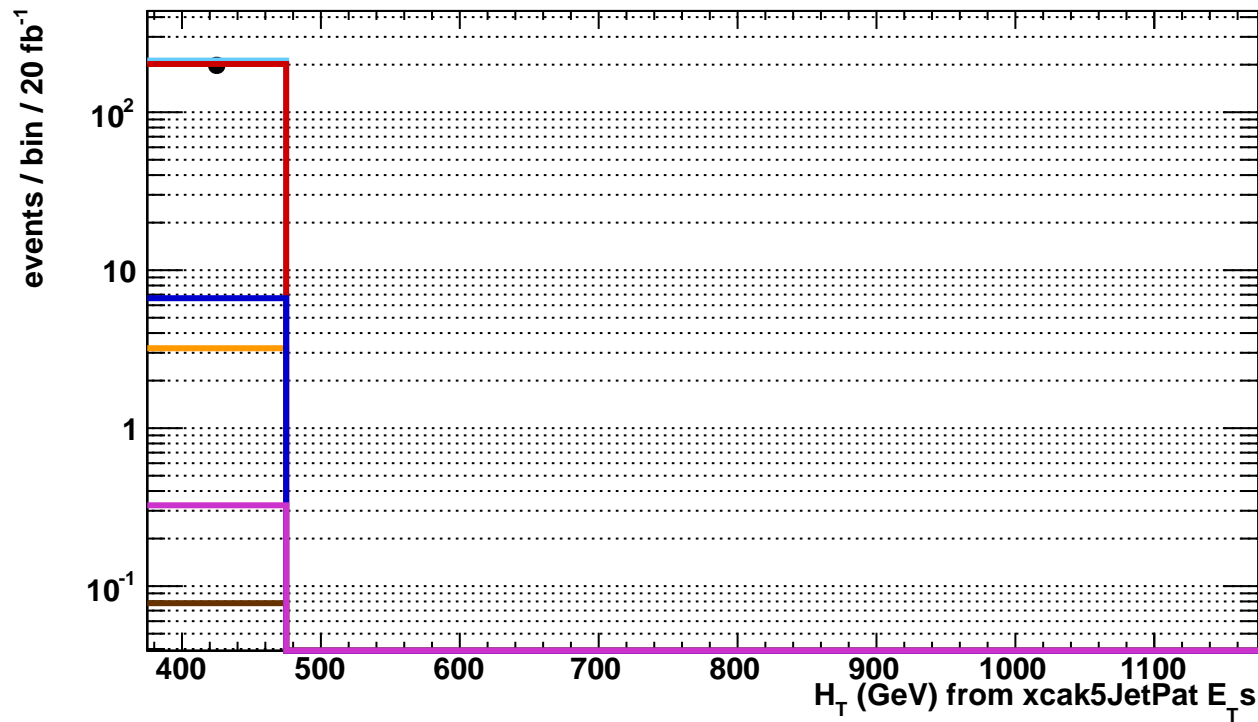




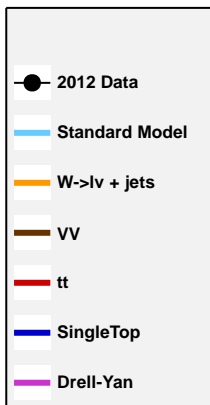


xcak5JetSumEtPat_eq3j_eq2b	
Entries	3565
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3565

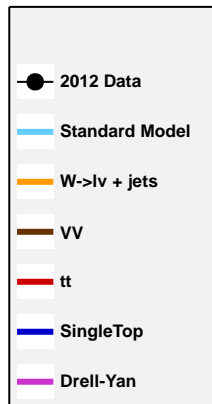
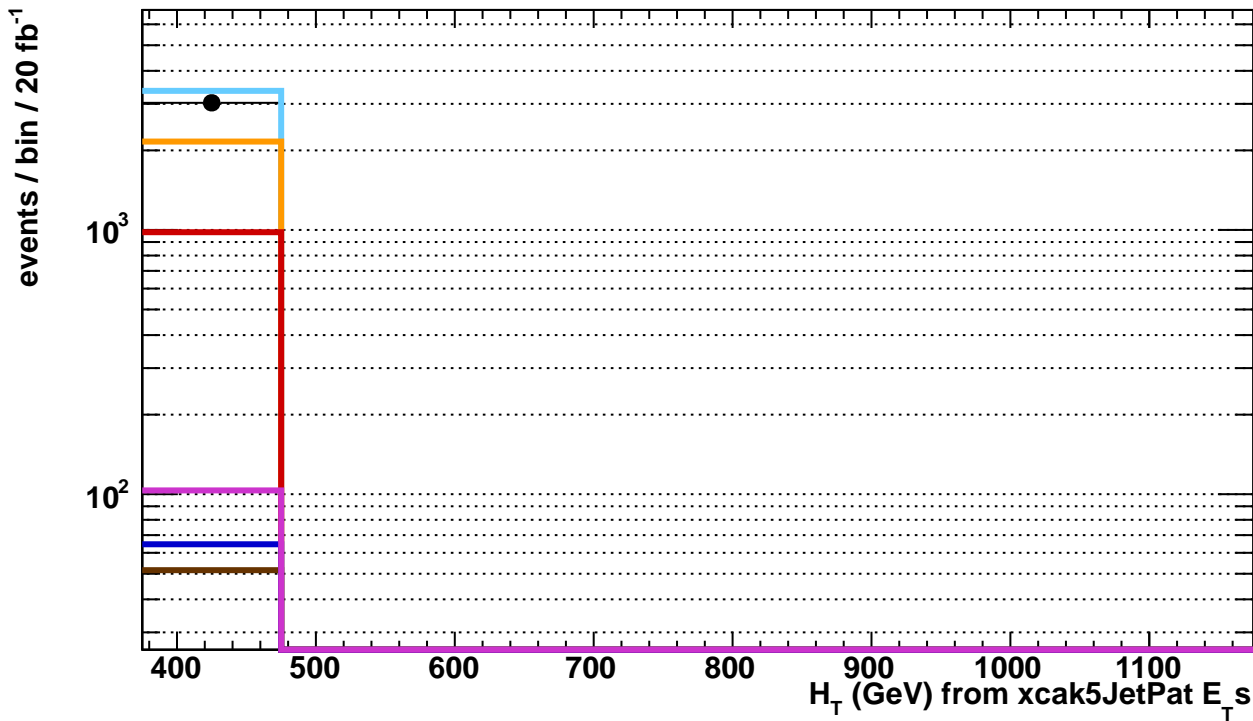


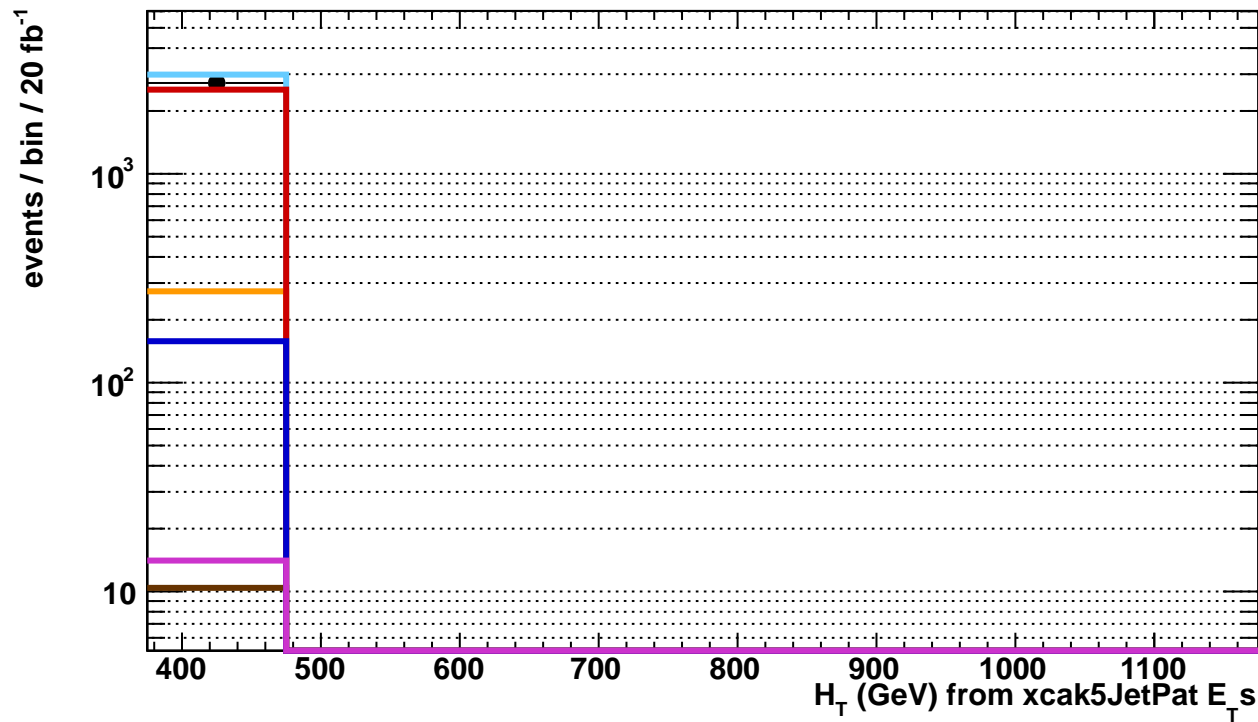


xcak5JetSumEtPat_eq3j_eq3b	
Entries	198
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	198

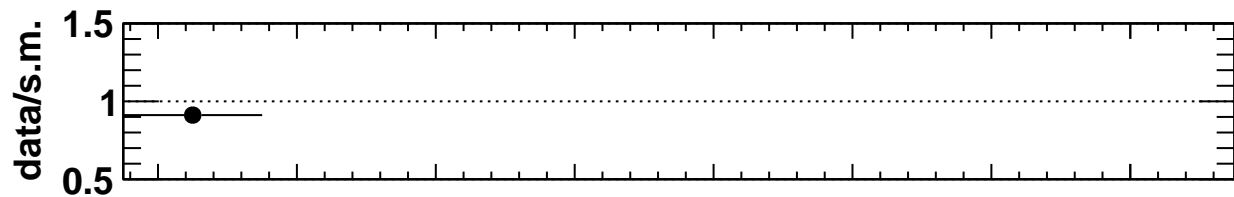
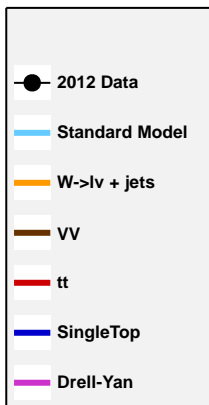


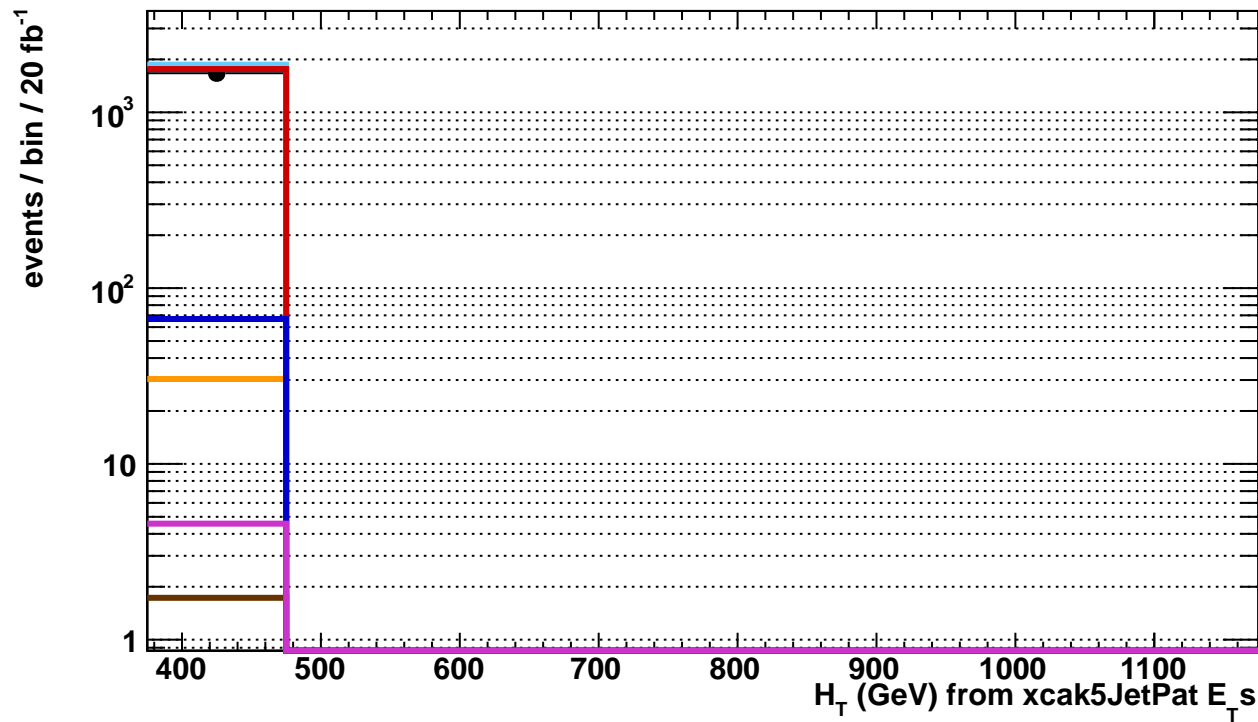
xcak5JetSumEtPat_ge4j_eq0b	
Entries	3027
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3027





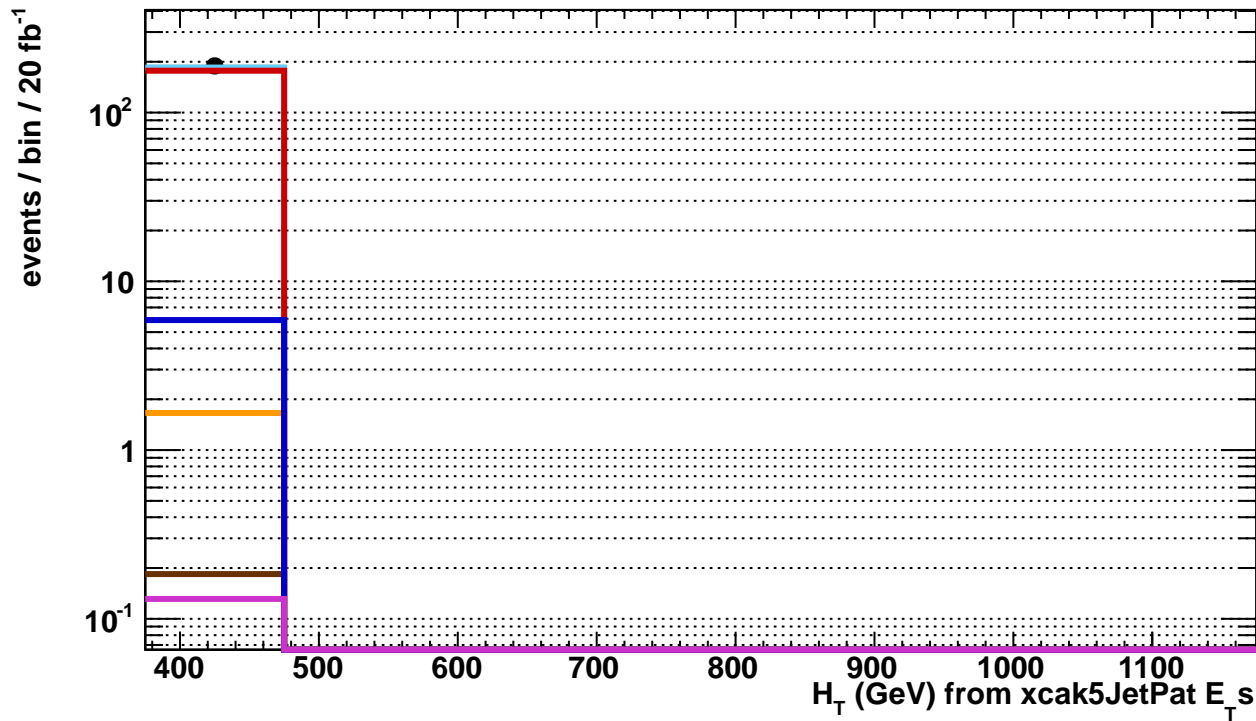
xcak5JetSumEtPat_ge4j_eq1b	
Entries	2723
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2723



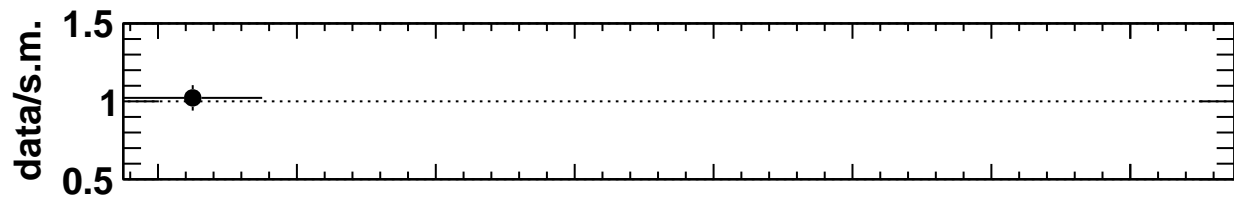
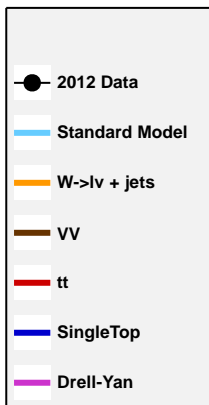


xcak5JetSumEtPat_ge4j_eq2b	
Entries	1669
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1669

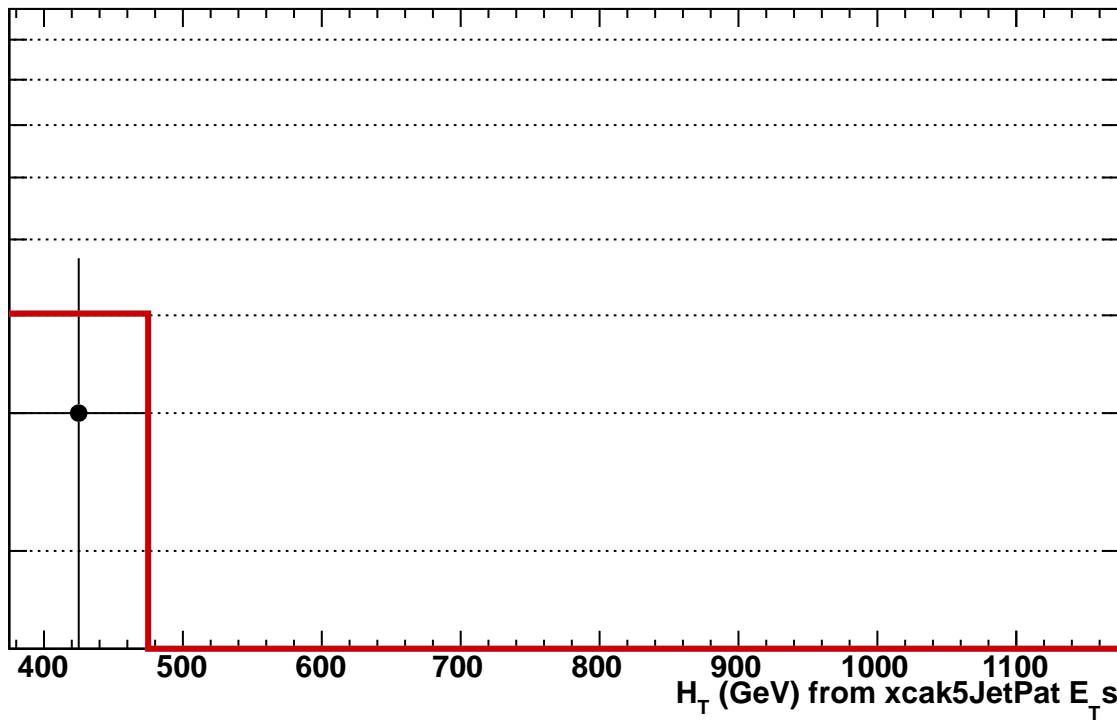




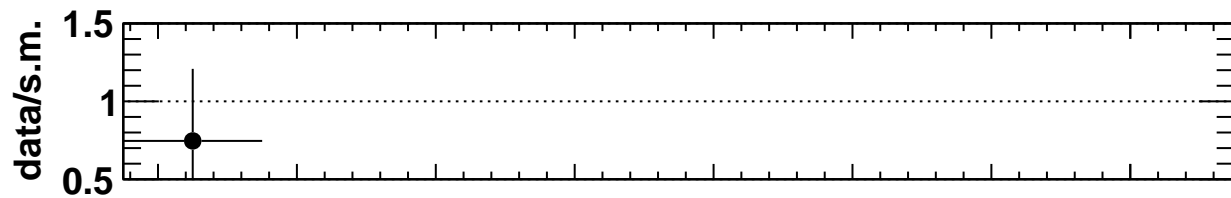
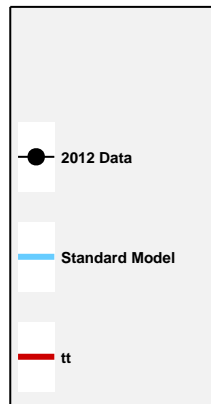
xcak5JetSumEtPat_ge4j_eq3b	
Entries	189
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	189



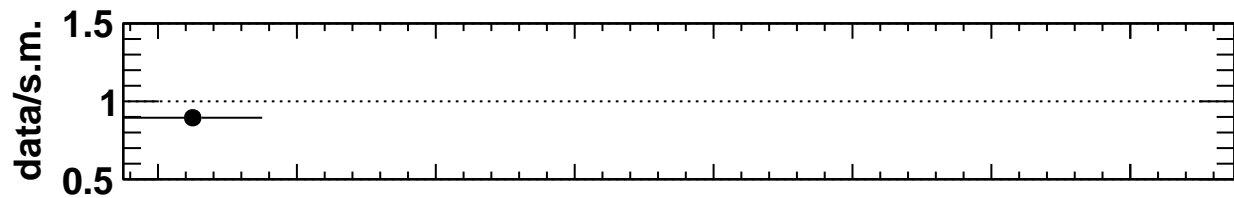
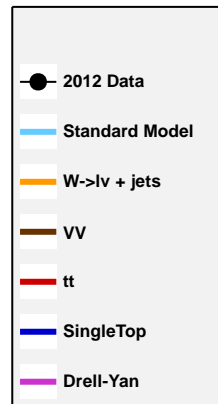
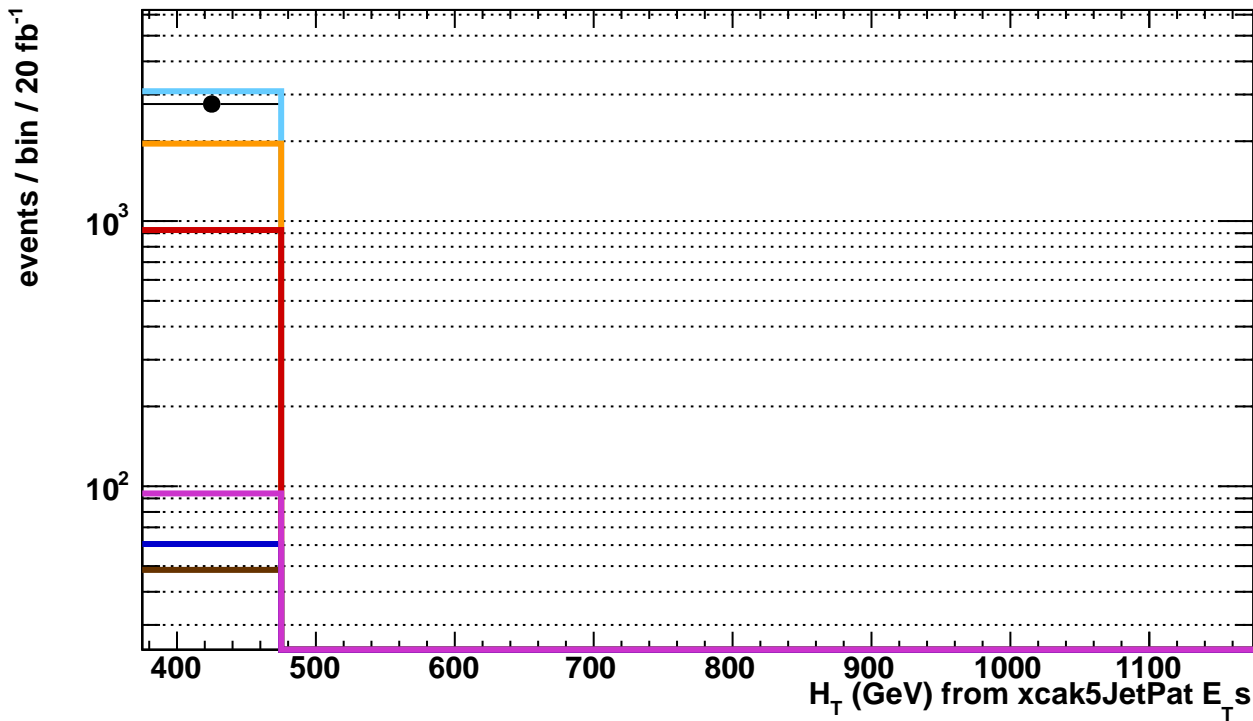
events / bin / 20 fb<sup>-1</sup>



xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3

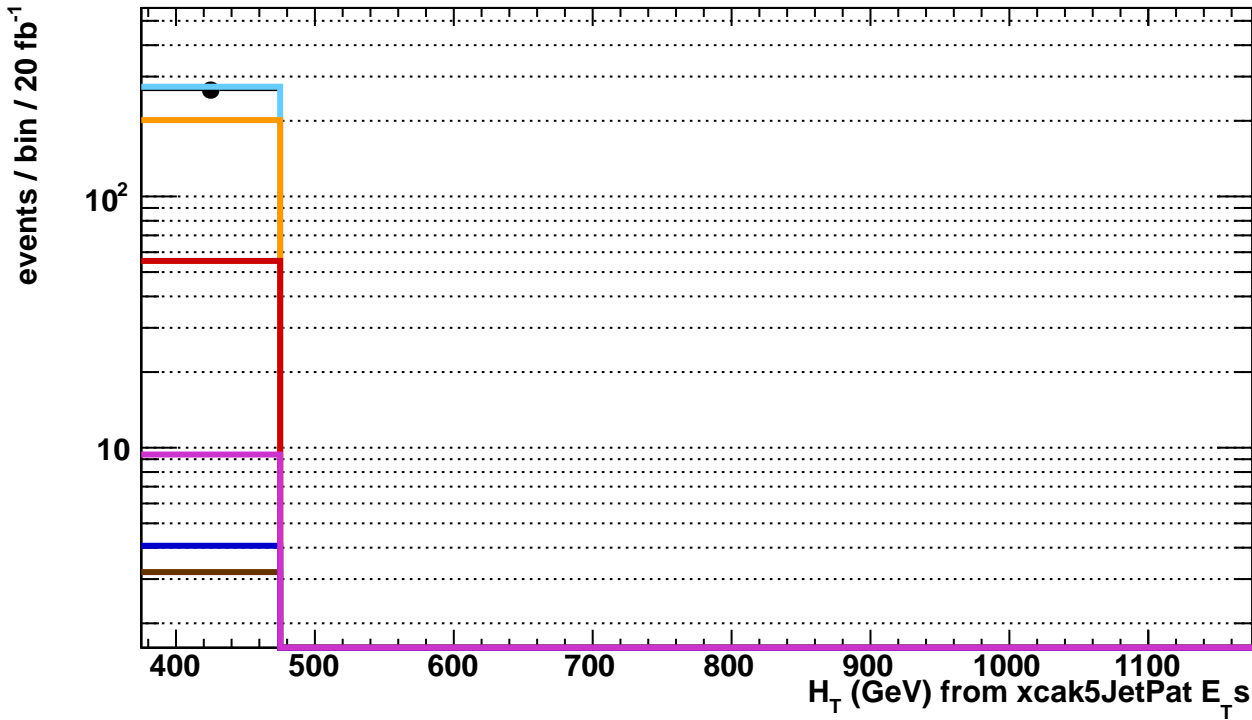


xcak5JetSumEtPat_ge4j_eq0b_dRge65	
Entries	2762
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2762

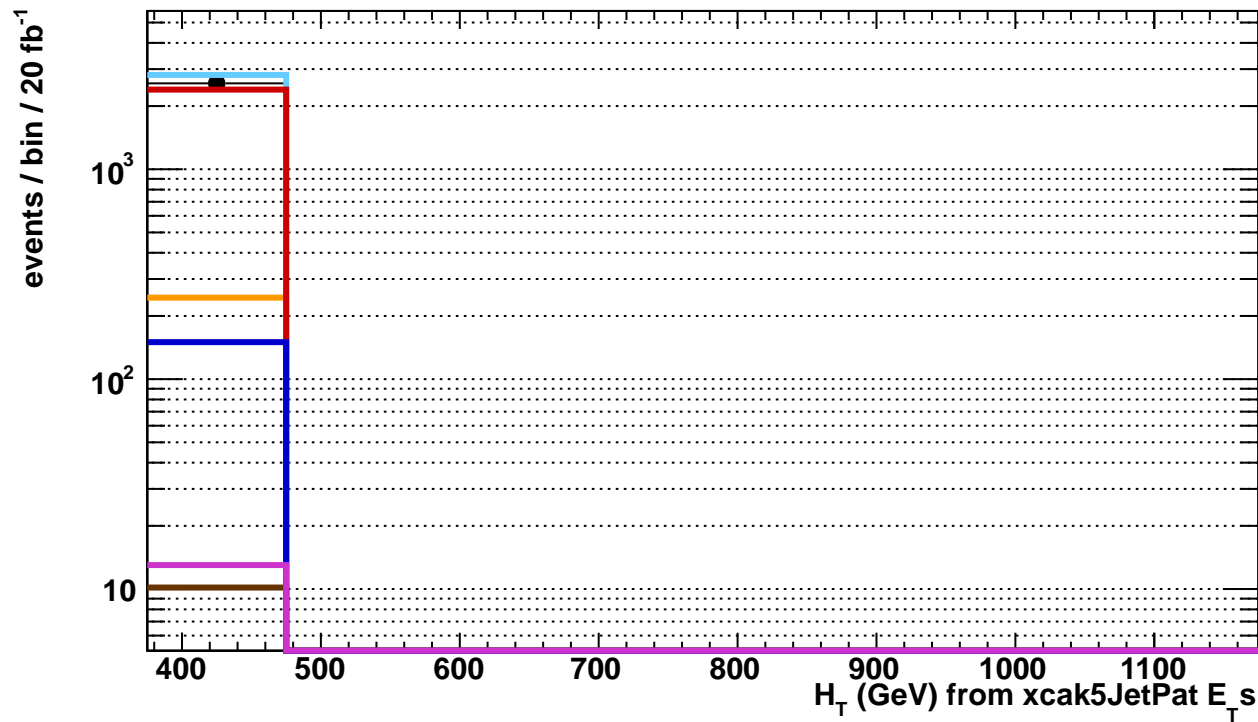




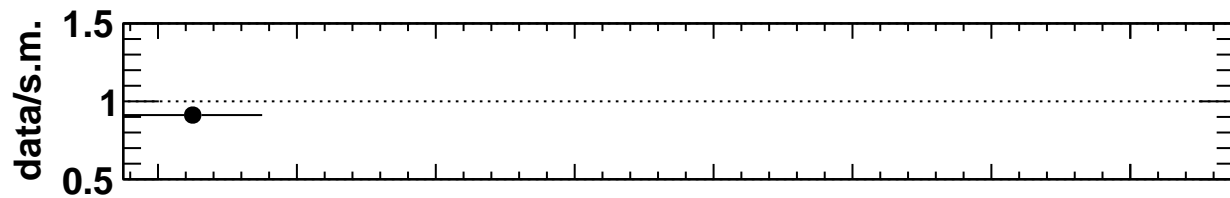
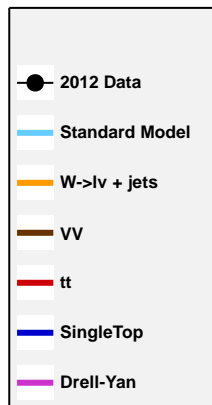
xcak5JetSumEtPat_ge4j_eq0b_dR165	
Entries	265
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	265



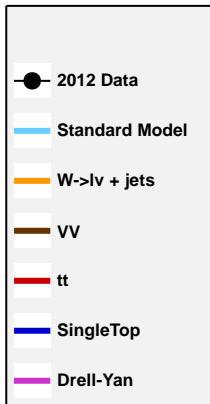
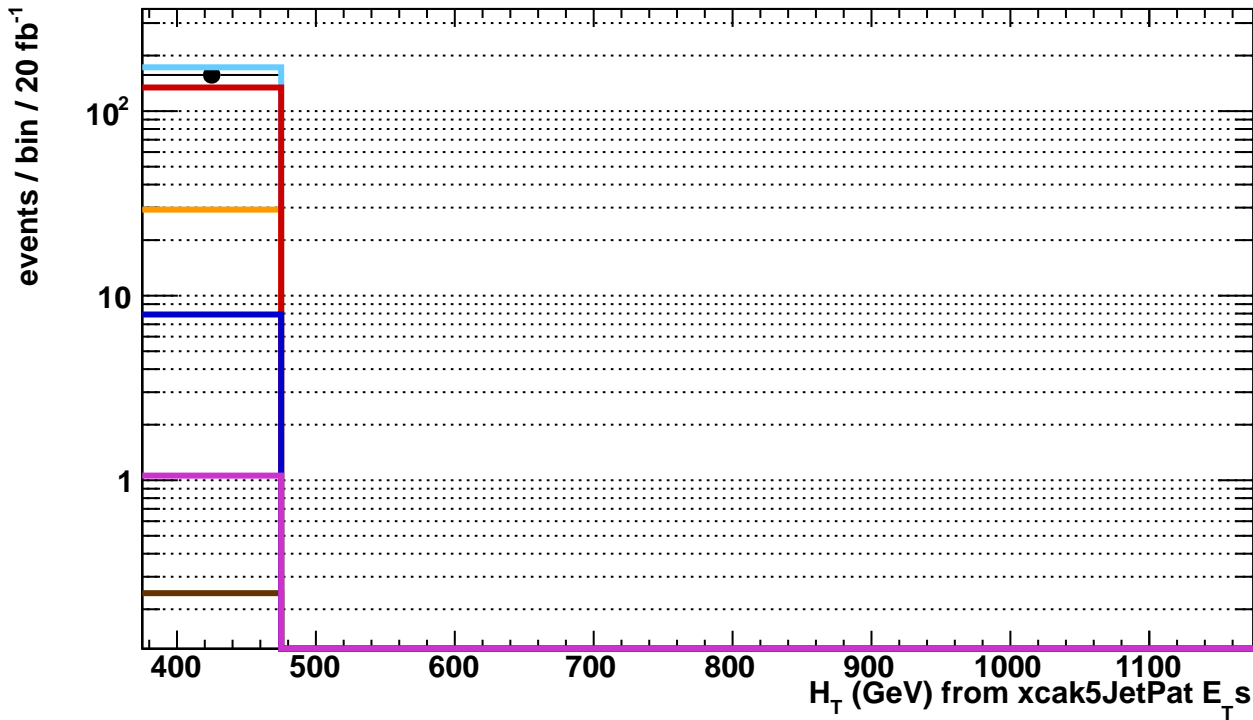
●	2012 Data
■	Standard Model
■	W->lv + jets
■	VV
■	tt
■	SingleTop
■	Drell-Yan



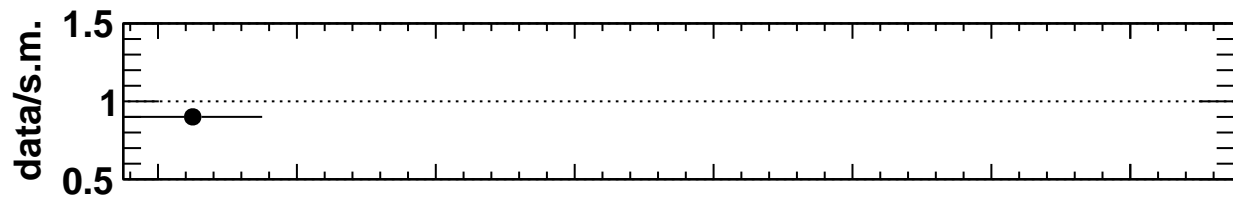
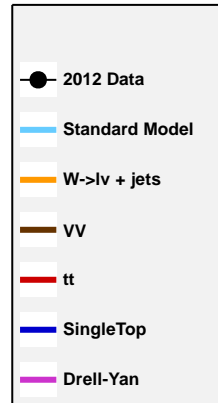
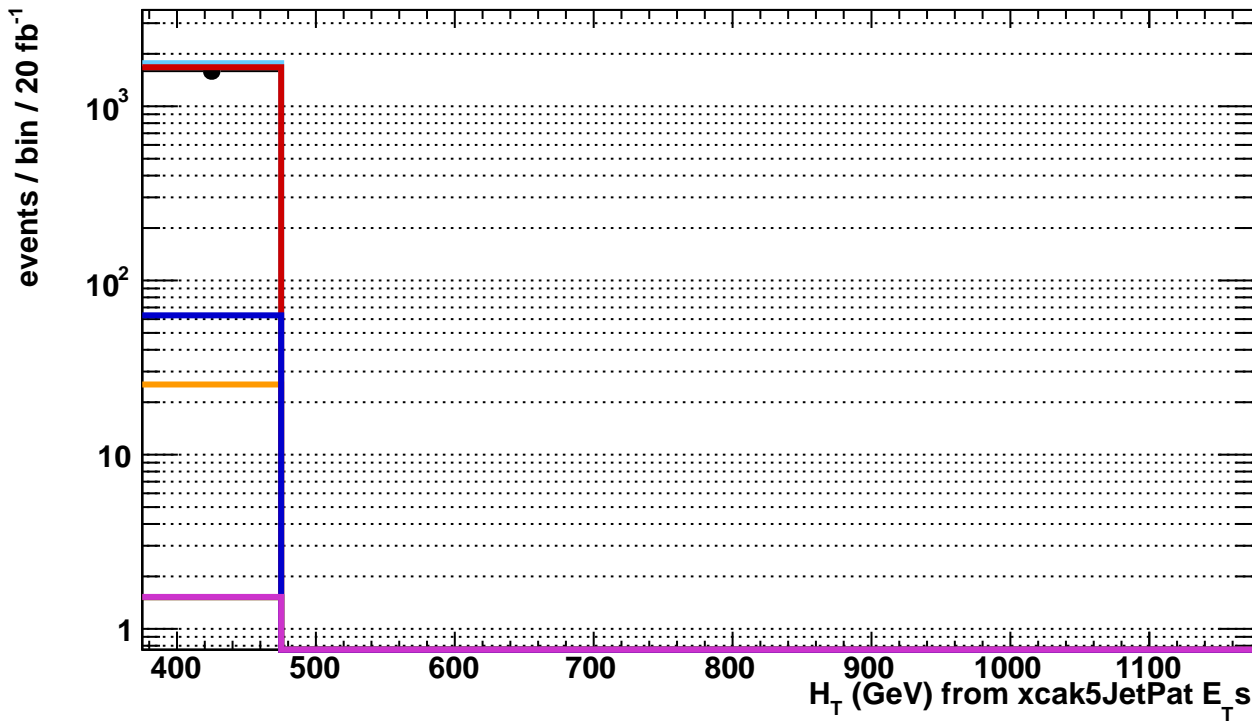
xcak5JetSumEtPat_ge4j_eq1b_dRge65	
Entries	2566
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	2566



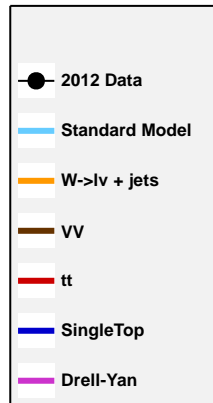
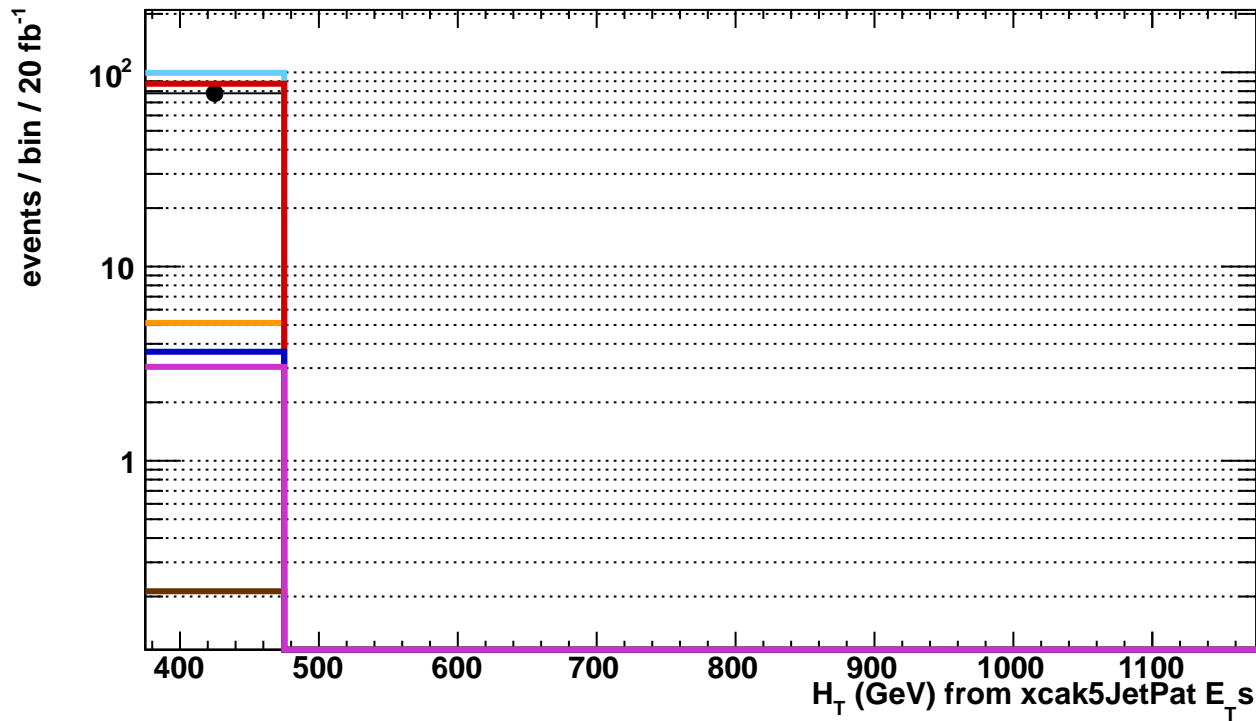
xcak5JetSumEtPat_ge4j_eq1b_dR165	
Entries	157
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	157



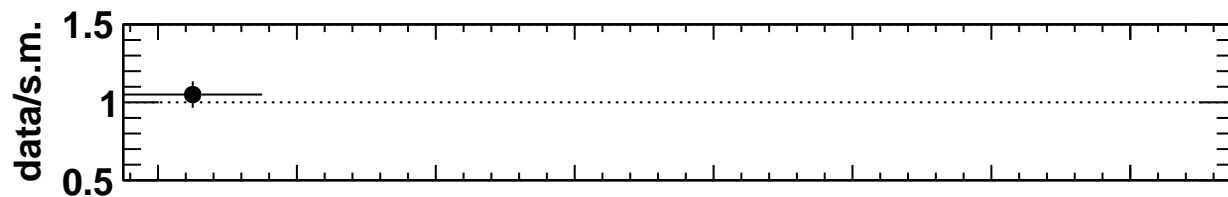
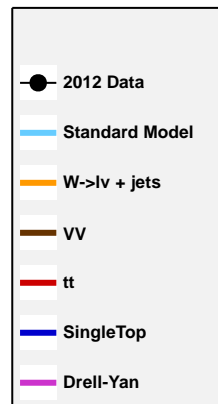
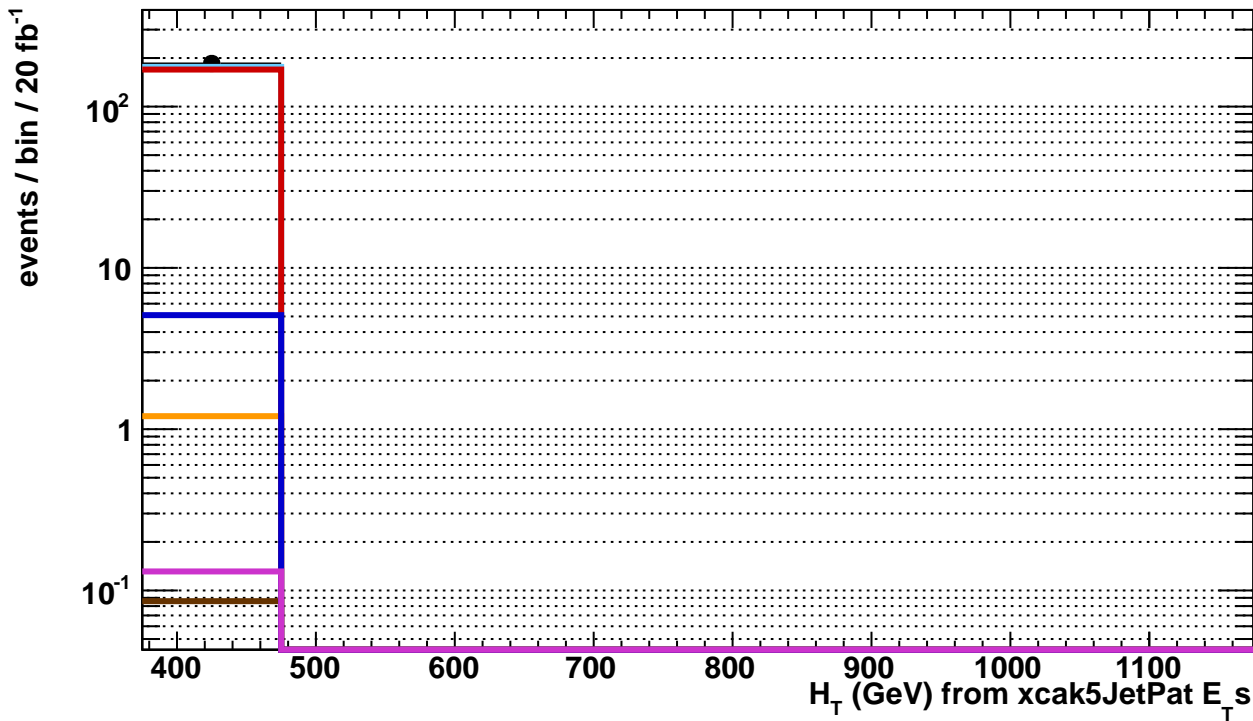
xcak5JetSumEtPat_ge4j_eq2b_dRge65	
Entries	1591
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1591



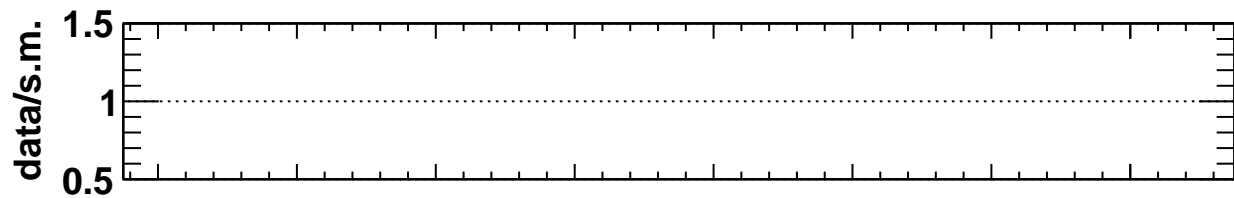
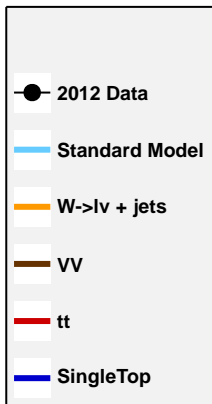
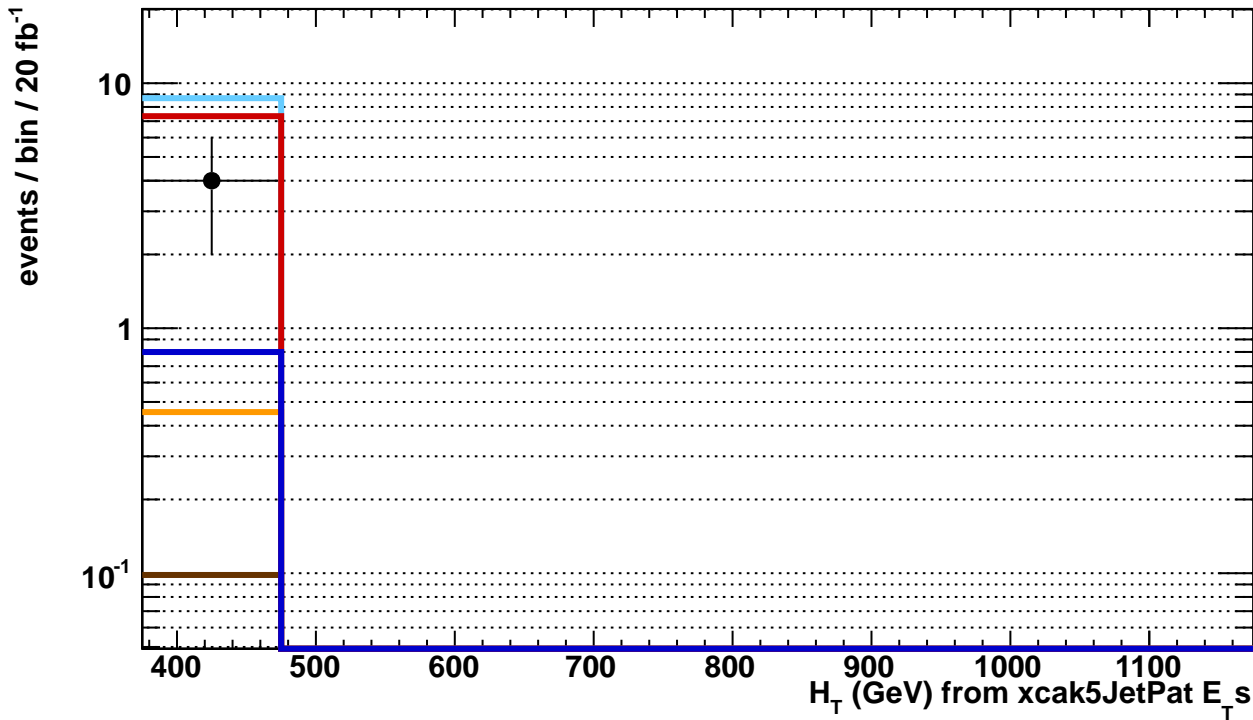
xcak5JetSumEtPat_ge4j_eq2b_dR165	
Entries	78
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	78



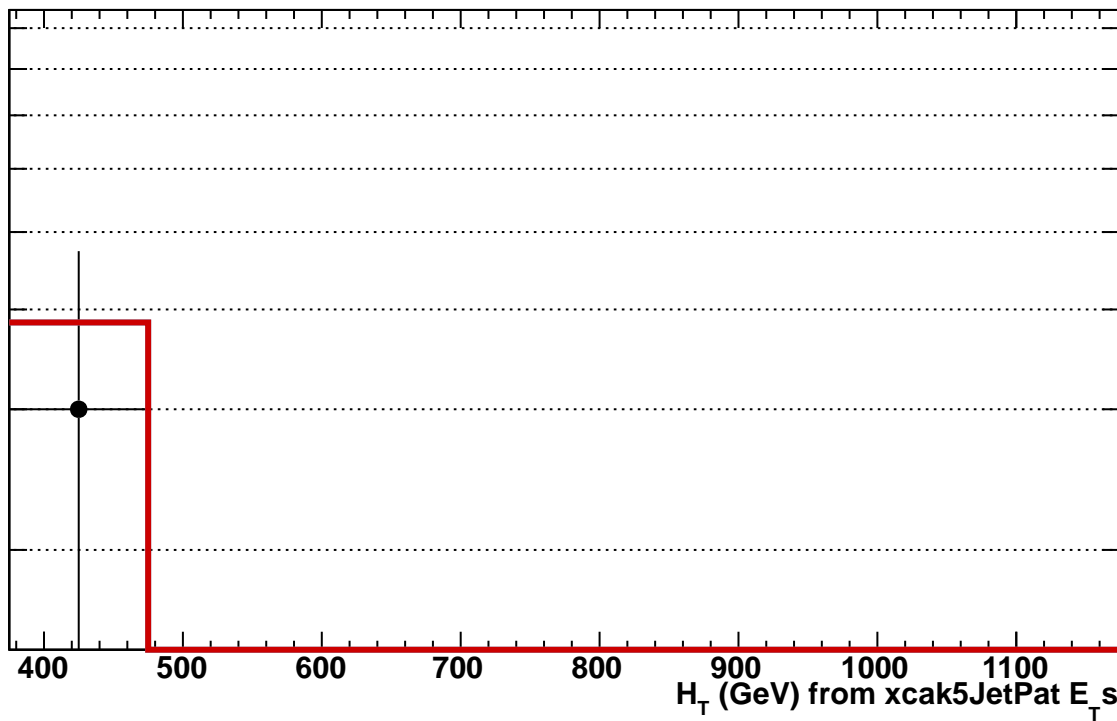
xcak5JetSumEtPat_ge4j_eq3b_dRge65	
Entries	185
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	185



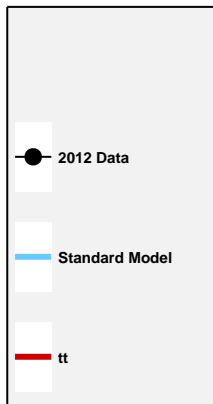
xcak5JetSumEtPat_ge4j_eq3b_dR165	
Entries	4
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4



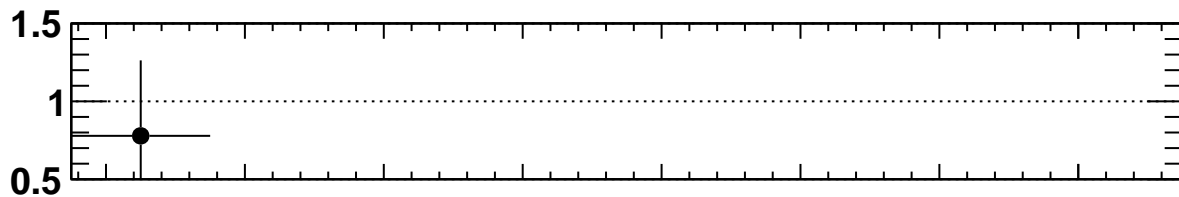
events / bin / 20 fb<sup>-1</sup>



xcak5JetSumEtPat_ge4j_ge4b_dRge65	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3



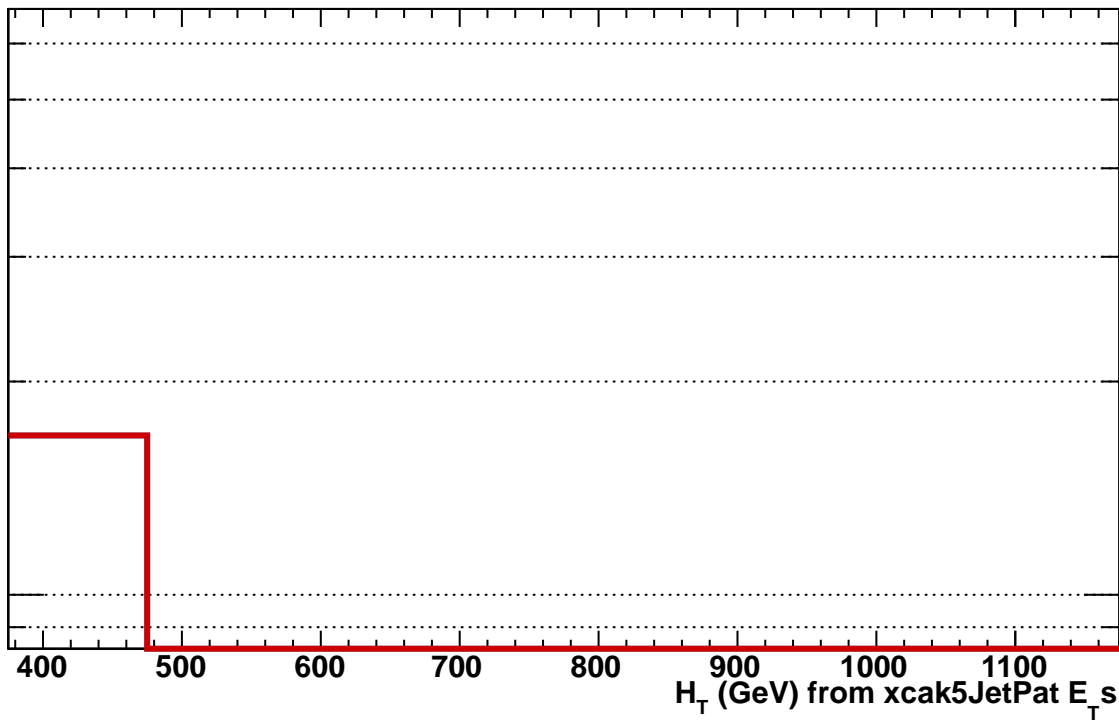
data/s.m.



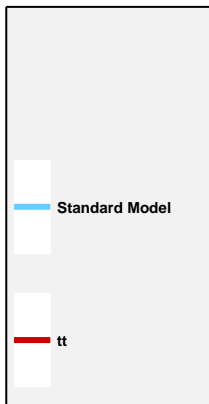


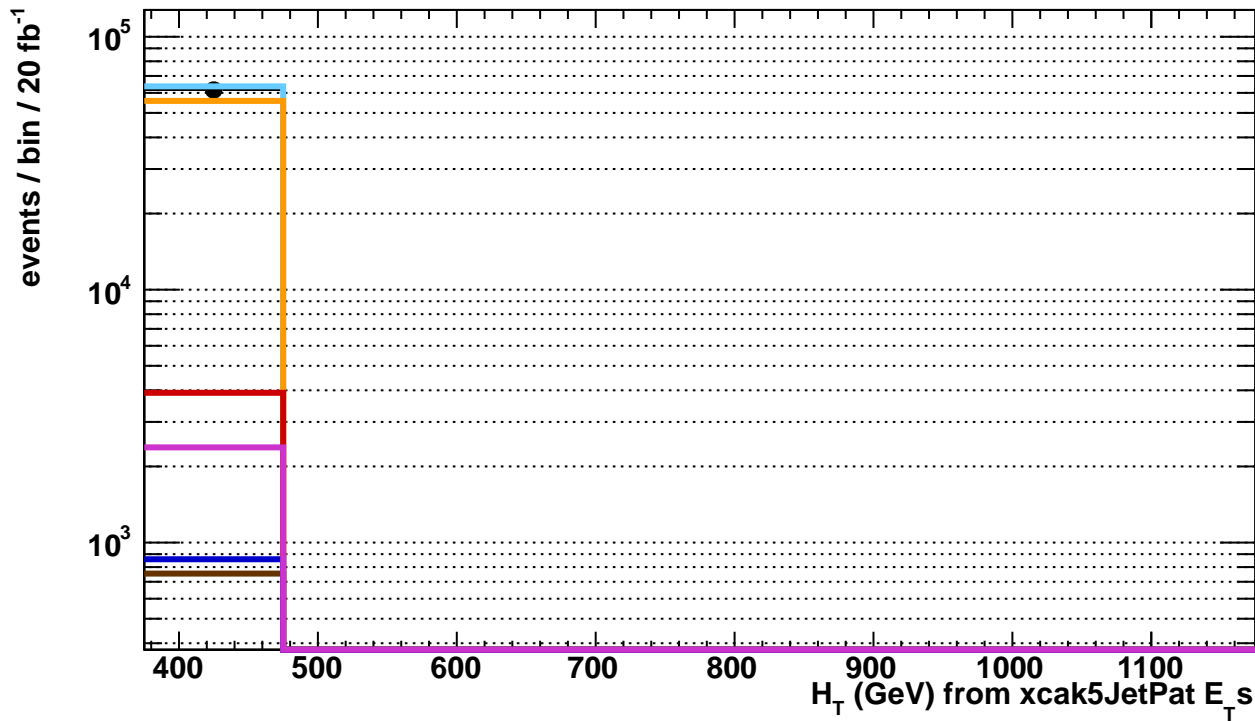
events / bin / 20 fb<sup>-1</sup>

10<sup>-1</sup>

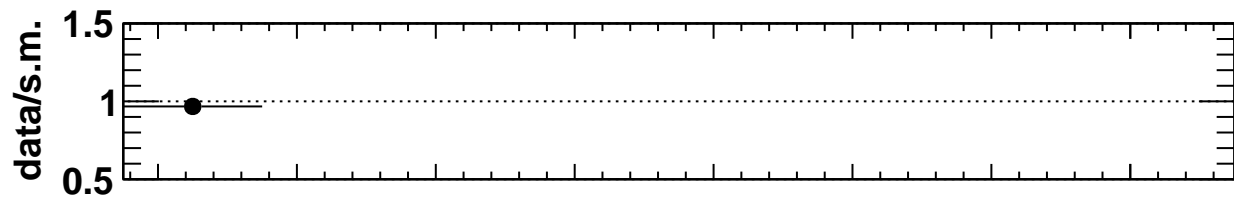
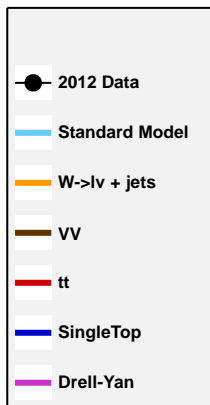


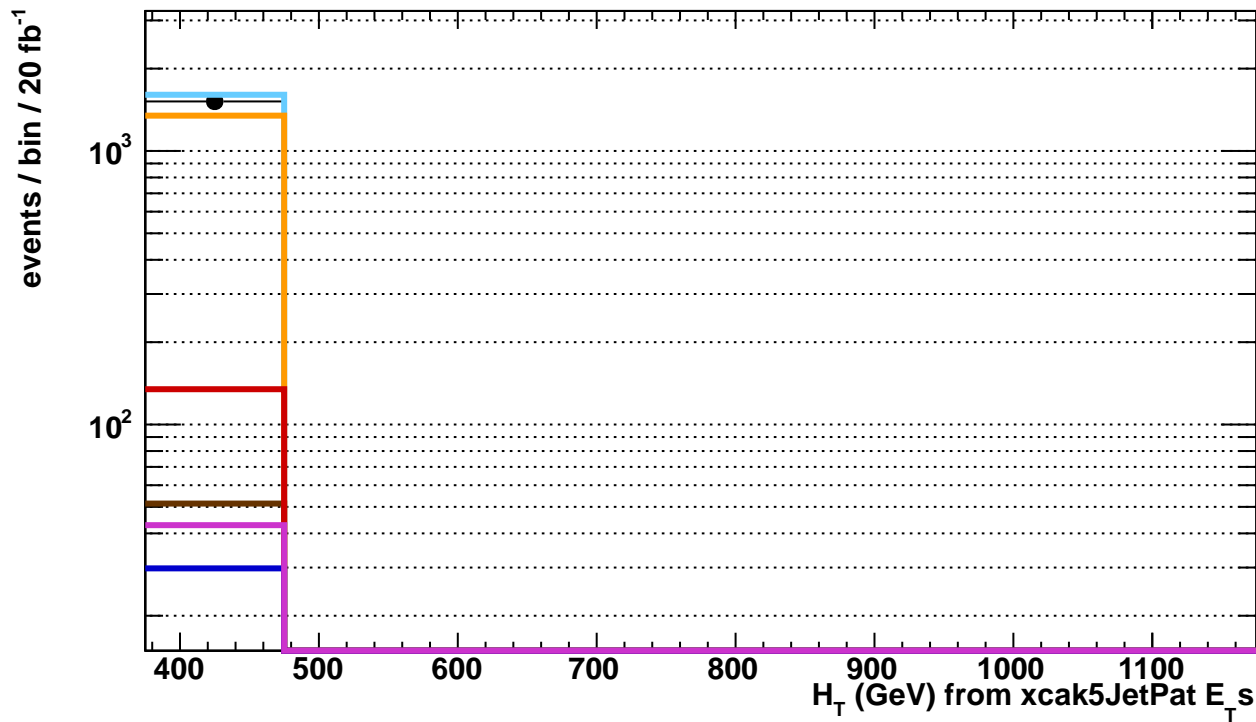
xcak5JetSumEtPat_ge4j_ge4b_dR165	
Entries	1
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	0.1678



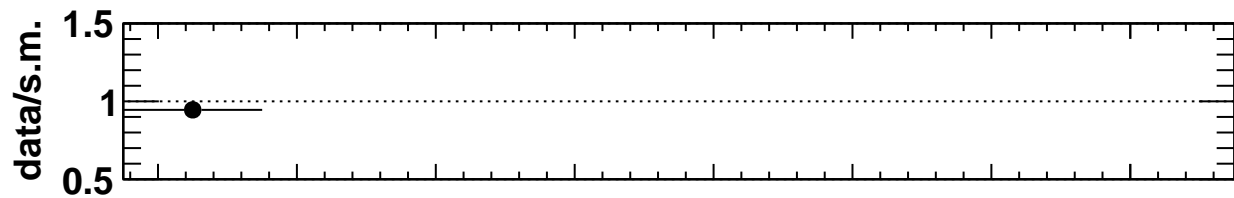
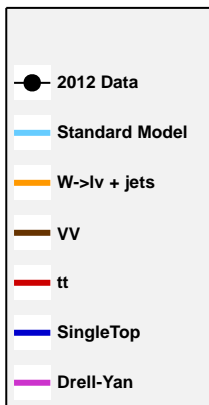


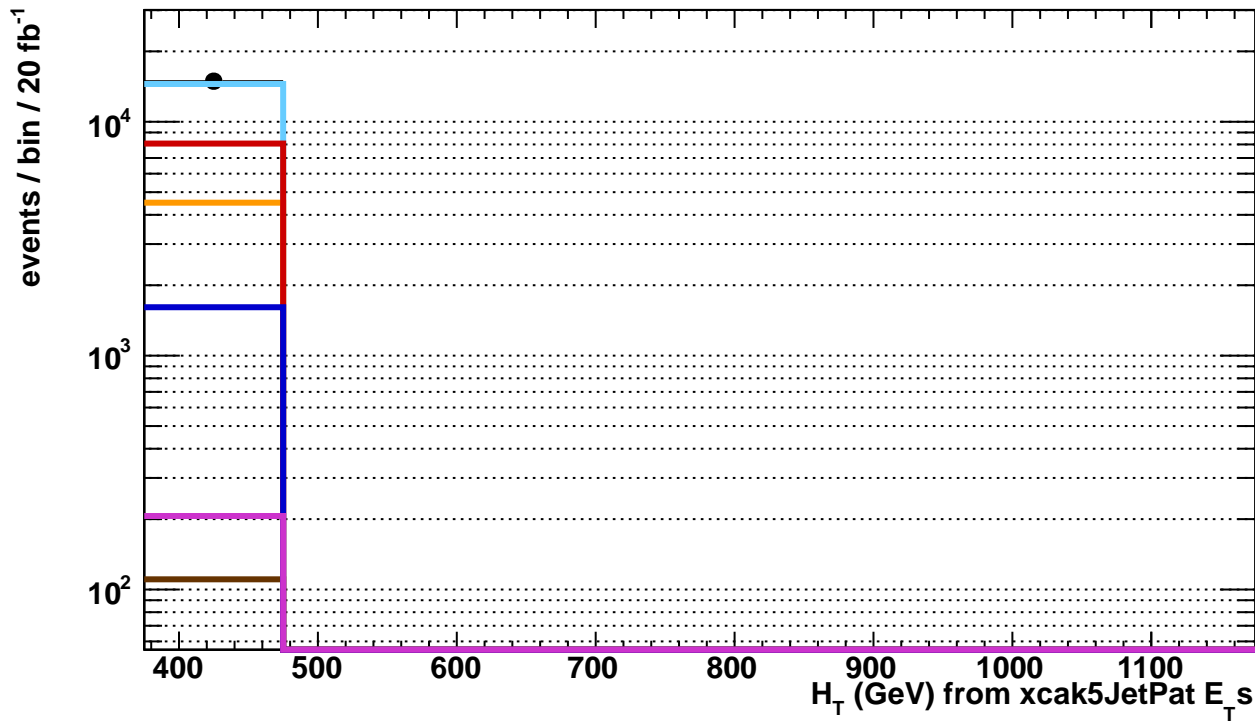
xcak5JetSumEtPat_le3_eq0b_dRge65	
Entries	61596
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	6.16e+04



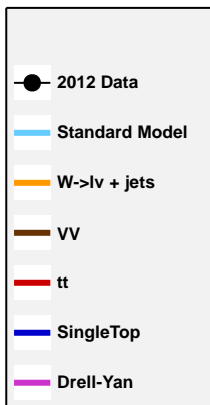


xcak5JetSumEtPat_le3j_eq0b_dRl65	
Entries	1517
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1517

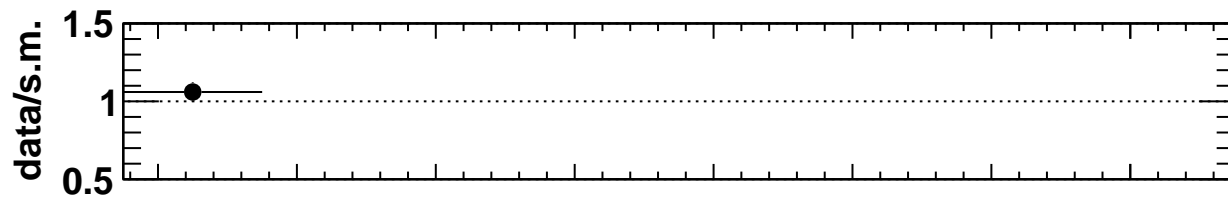
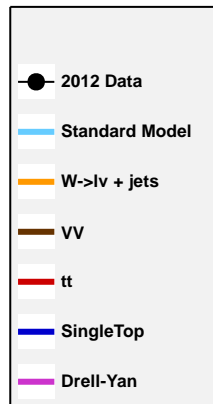
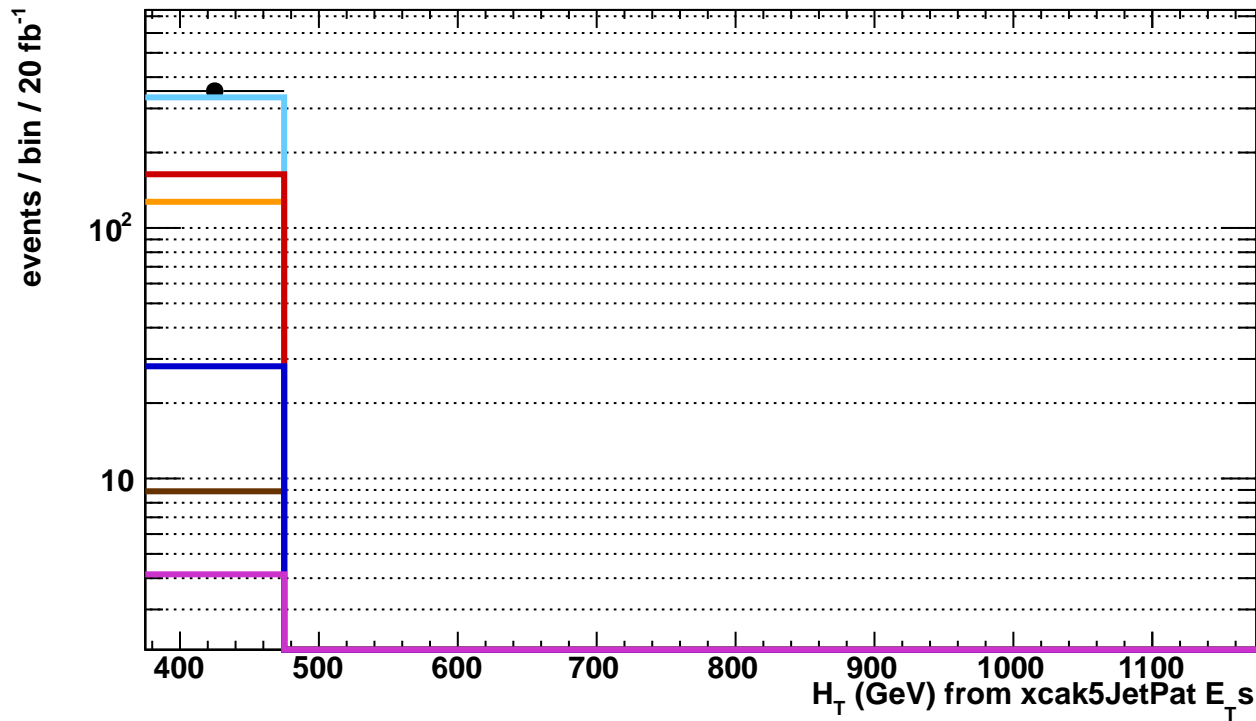




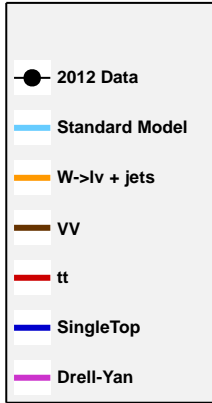
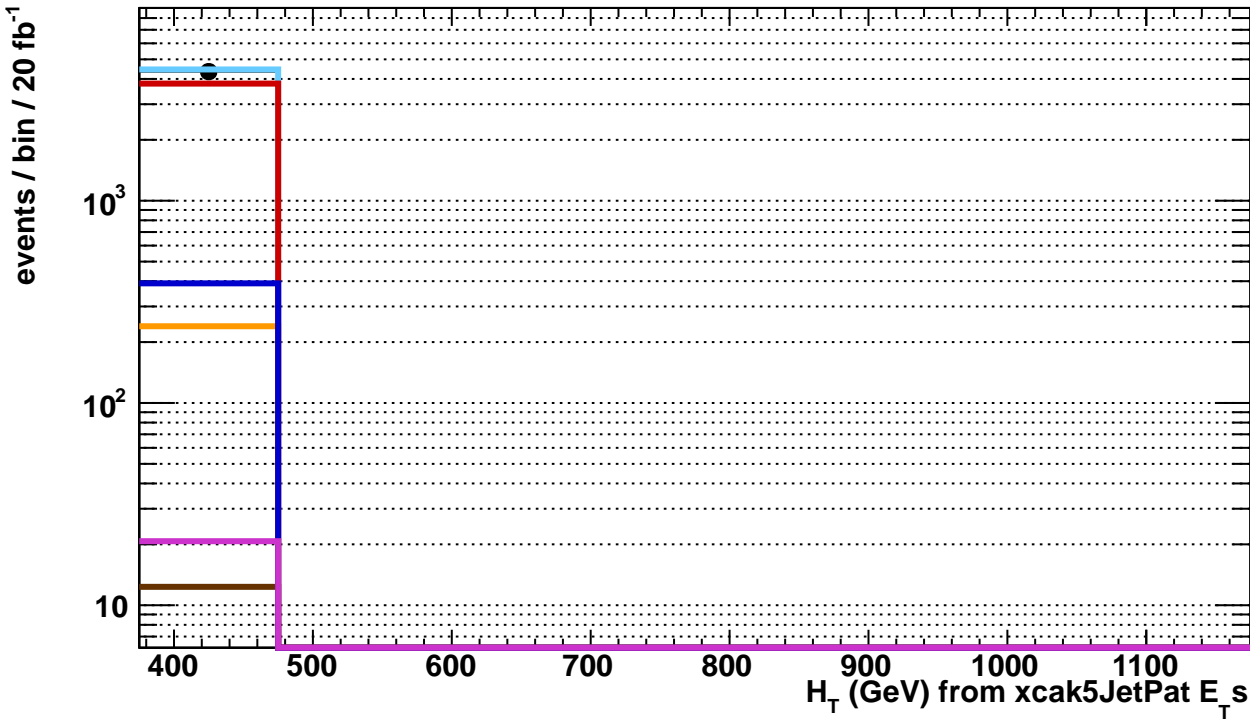
xcak5JetSumEtPat_le3_eq1b_dRge65	
Entries	14909
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	1.491e+04



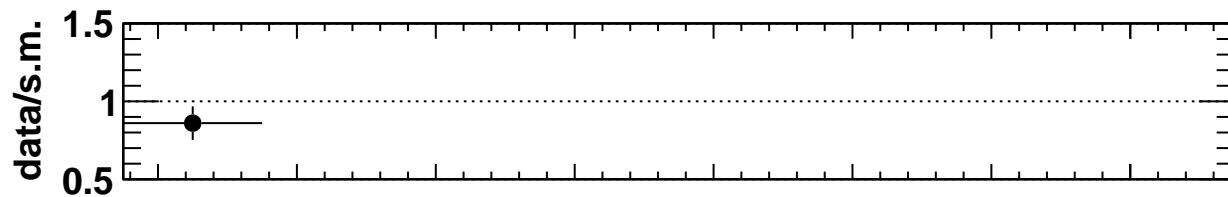
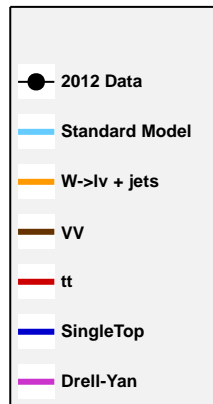
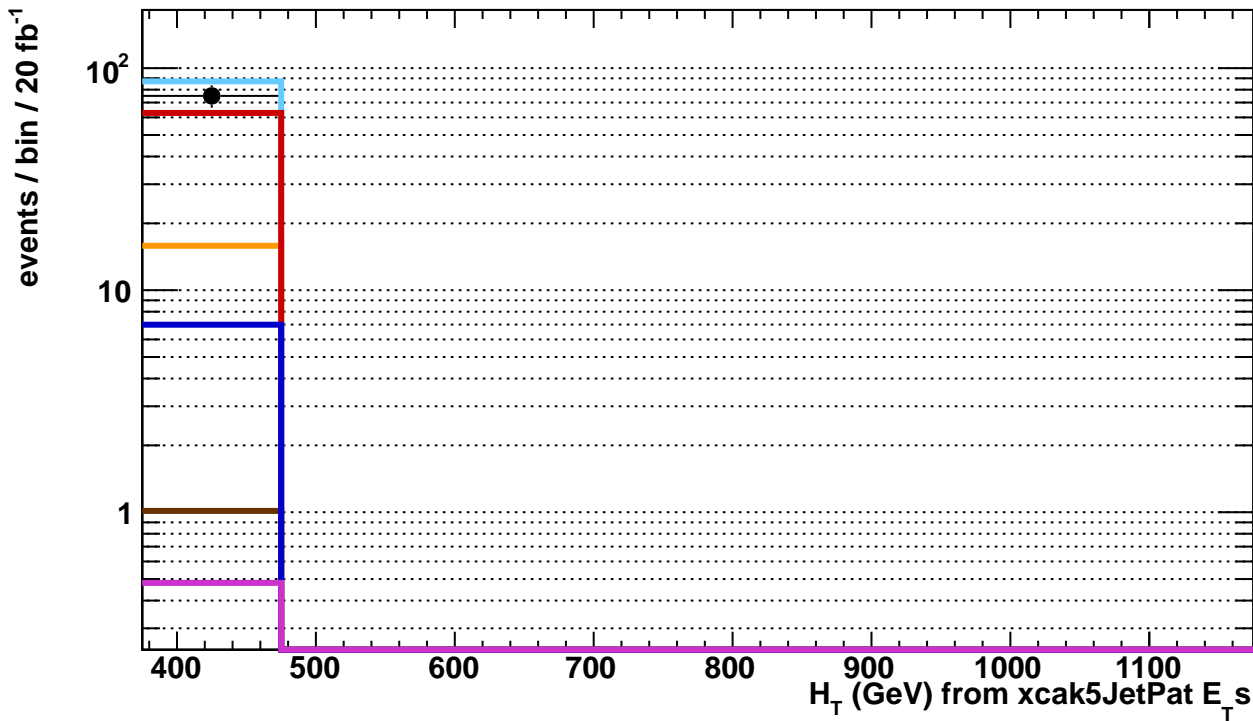
xcak5JetSumEtPat_le3j_eq1b_dRl65	
Entries	352
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	352



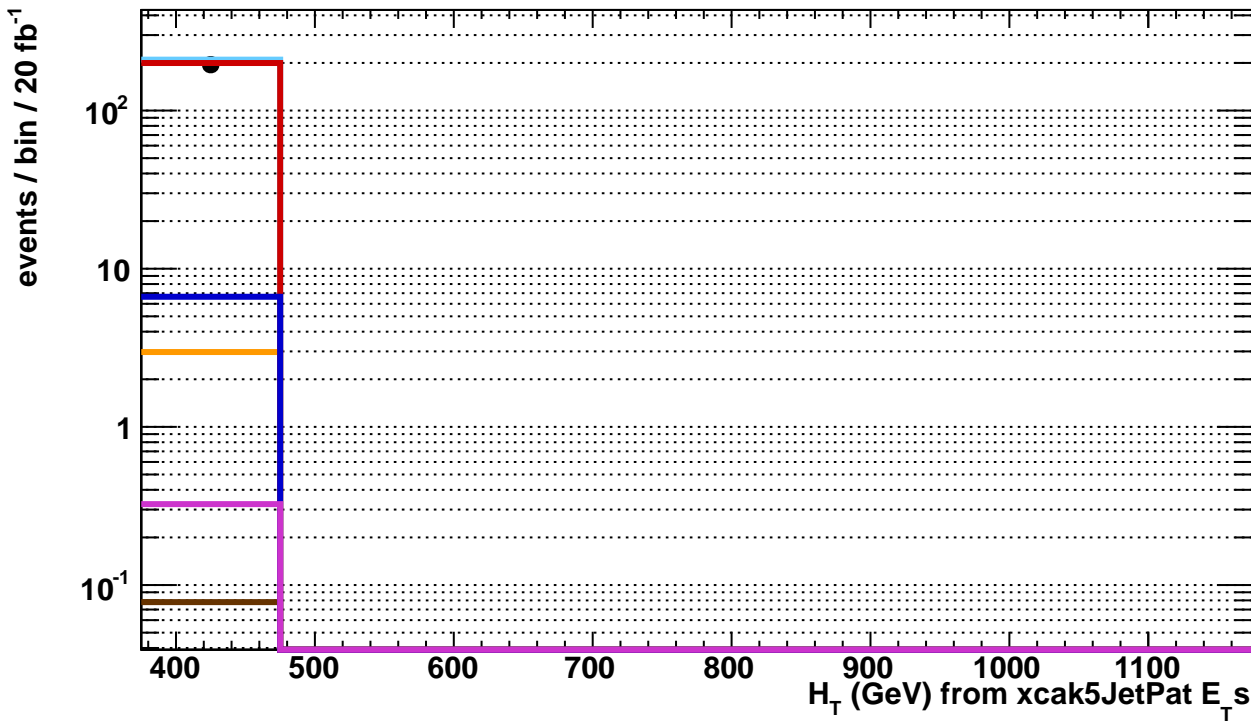
xcak5JetSumEtPat_le3_eq2b_dRge65	
Entries	4347
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	4347



xcak5JetSumEtPat_l63j_eq2b_dRl65	
Entries	75
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	75

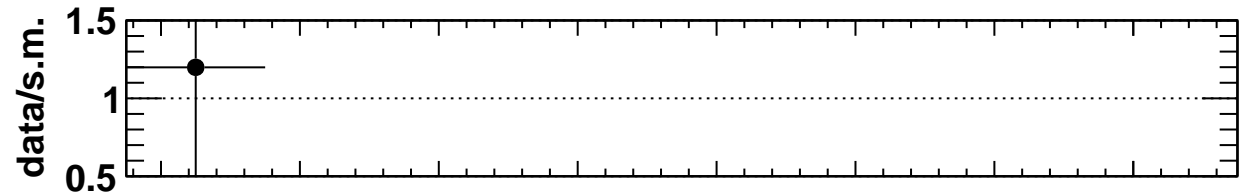
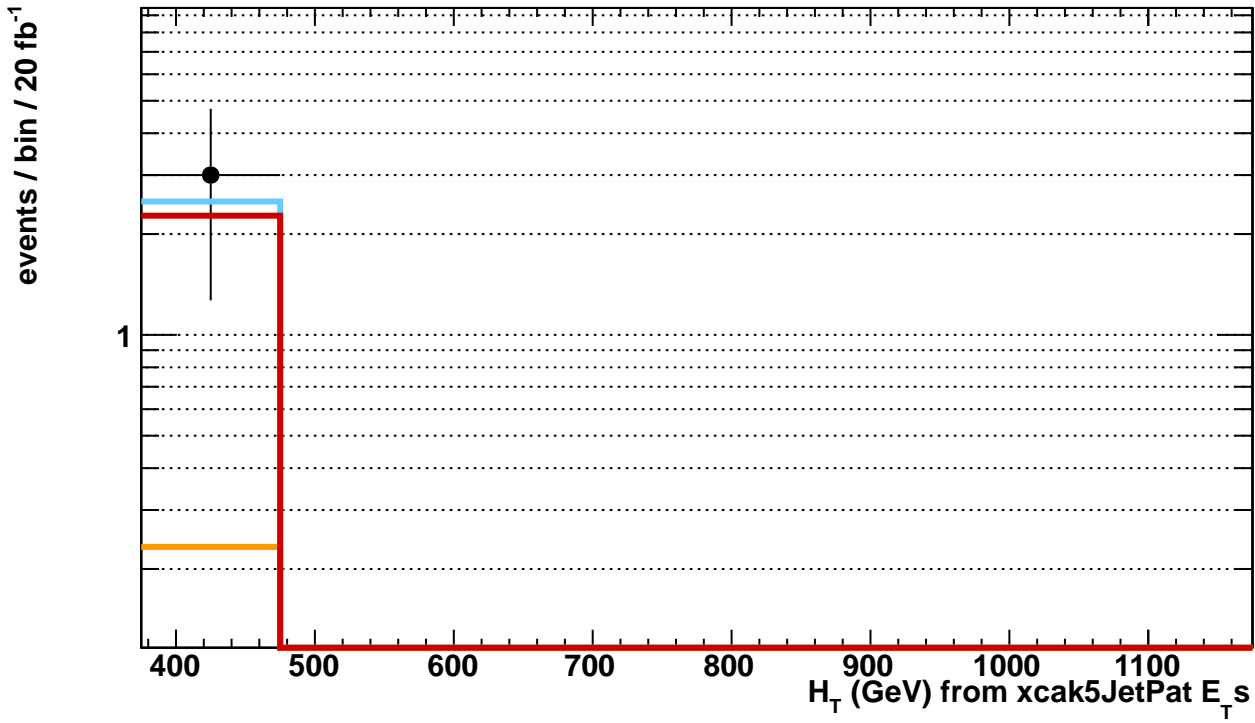
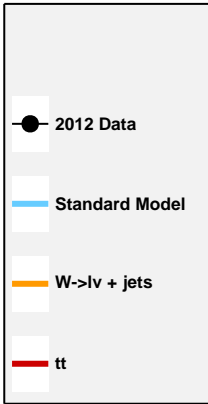


xcak5JetSumEtPat_le3_eq3b_dRge65	
Entries	195
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	195





xcak5JetSumEtPat_l63j_eq3b_dRl65	
Entries	3
Mean	425
RMS	0
Underflow	0
Overflow	0
Integral	3



```

v: multiplicity          0 <= xcak5JetIndicesOtherPat <= 0
w: multiplicity          0 <= xcak5JetIndicesWithOddMuonPat <= 0
x: uniquelyMatchedNonisoMuons xcak5JetPat
y: multiplicity          0 <= electronIndicesPat <= 0

z: multiplicity          0 <= photonIndicesPat <= 0
A: multiplicity          0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity          0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter        xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: multiplicity          1 <= muonIndicesPat <= 1

E: pt                    30.00<=muonP4Pat[i[0]].pt; muonIndicesPat
F: eta                   -2.10<=muonP4Pat[i[0]].eta<=2.10; muonIndicesPat
G: value                 30.00<=muonMtPatmetP4TypeIPF<=125.00
H: value                 xcak5JetMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPat<=1.25
I: value                 CaloRecHitSumPt<=30.00

J: value                 0.10<=xcak5JetMaxEmEnergyFractionPat

[ jetSumPlots1 ]
[ kinematicPlots1 ]
M: value                 475.00<=xcak5JetSumEtPat

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
v:	359231	1.996(1)e+6	1.035(1)e+6	6.663(8)e+4	5.888(4)e+5	1.785(3)e+5	1.266(3)e+5	0.1800(3)
w:	351218	1.983(1)e+6	1.032(1)e+6	6.650(8)e+4	5.811(4)e+5	1.772(2)e+5	1.259(3)e+5	0.1771(3)
x:	344418	1.971(1)e+6	1.027(1)e+6	6.641(8)e+4	5.755(3)e+5	1.763(2)e+5	1.249(3)e+5	0.1748(3)
y:	338715	1.569(1)e+6	7.82(1)e+5	6.283(8)e+4	4.768(3)e+5	1.630(2)e+5	8.42(3)e+4	0.2159(4)
z:	337589	1.549(1)e+6	7.68(1)e+5	6.252(8)e+4	4.740(3)e+5	1.625(2)e+5	8.22(3)e+4	0.2180(4)
A:	337320	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
B:	337302	1.546(1)e+6	7.66(1)e+5	6.242(8)e+4	4.729(3)e+5	1.622(2)e+5	8.20(3)e+4	0.2182(4)
C:	212357	8.122(8)e+5	4.428(7)e+5	2.576(5)e+4	2.320(2)e+5	6.83(2)e+4	4.34(2)e+4	0.2614(6)
D:	184117	2.402(3)e+5	1.606(2)e+5	2.30(2)e+3	5.85(1)e+4	8.53(6)e+3	1.022(7)e+4	0.767(2)
E:	162789	1.784(2)e+5	1.197(2)e+5	1.87(1)e+3	4.363(9)e+4	6.00(5)e+3	7.20(5)e+3	0.913(3)
F:	162768	1.653(2)e+5	1.093(2)e+5	1.74(1)e+3	4.221(9)e+4	5.83(5)e+3	6.22(5)e+3	0.985(3)
G:	122374	1.271(2)e+5	8.52(2)e+4	1.28(1)e+3	3.234(8)e+4	4.52(4)e+3	3.80(4)e+3	0.962(3)
H:	91256	9.38(2)e+4	6.48(1)e+4	1.01(1)e+3	2.191(7)e+4	3.24(4)e+3	2.79(3)e+3	0.973(4)
I:	90611	9.33(2)e+4	6.45(1)e+4	1.00(1)e+3	2.179(7)e+4	3.23(4)e+3	2.78(3)e+3	0.971(4)
J:	90605	-	-	-	-	-	-	-
[ jetSumPlots1 ]								
[ kinematicPlots1 ]								
M:	0	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	-