

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	497658	5.13e+05
T_t_powheg.puWeight.bTagWeight	3710227	3.82e+06
Tbar_s_powheg.puWeight.bTagWeight	139974	1.45e+05
Tbar_tW_powheg.puWeight.bTagWeight	493459	5.09e+05
Tbar_t_powheg.puWeight.bTagWeight	1935071	1.99e+06
WW_py6.puWeight.bTagWeight	9840430	1.01e+07
WZ_py6.puWeight.bTagWeight	9872282	1.02e+07
ZZ_py6.puWeight.bTagWeight	9783908	1.01e+07
dyll_HT_400ToInf_M-50.puWeight.bTagWeight	2695789	2.78e+06
dyll_HT_200To400_M-50.puWeight.bTagWeight	6892777	7.11e+06
dyll_HT_10To200_M-50.puWeight.bTagWeight	8111524	8.36e+06
ttbar_CT10_powheg.puWeight.bTagWeight.topPtWeight	26406722	2.73e+07
wj_lv_mg_ht_400ToInf_LO.puWeight.bTagWeight.xsWeight	4875847	5.72e+06
wj_lv_mg_ht_250To300_LO.puWeight.bTagWeight.xsWeight	4924990	6.01e+06
wj_lv_mg_ht_300To400_LO.puWeight.bTagWeight.xsWeight	5125022	6.48e+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	21110208	2.41e+07

file created at Mon Sep 15 23:34:44 2014

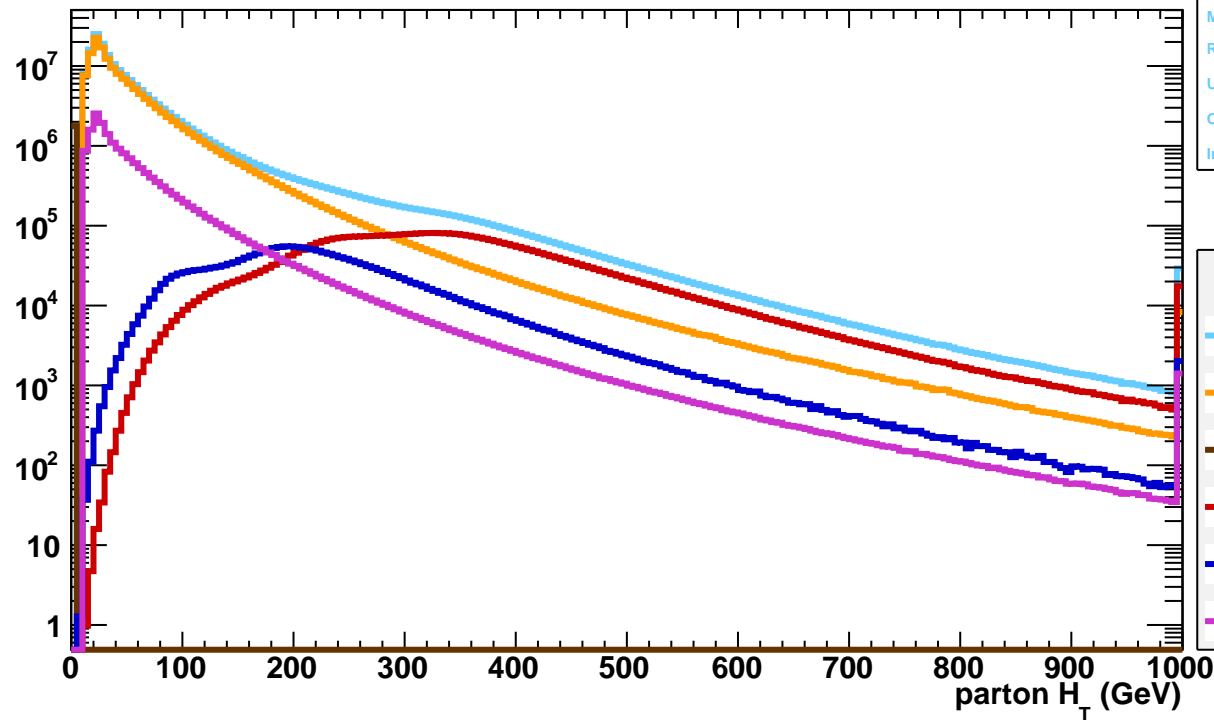
electronIndicesNonIsoPF	pass ptMin & id; fail iso
electronIndicesOtherPF	pass ptMin; fail id
electronIndicesPF	pt>10.0; (2012 Veto)
electronIndicesUnmatchedPF	electronIndicesOtherPF; no dR<0.5 match in ak5JetPFCorrectedP4Pat
genIndicesStatus3t	pdgId in [-6, 6]; status in [3]
jsonWeight	run:ls in cert/Cert_190456-208686_8TeV_22Jan2013ReReco_Collisions12_JSON.txt
lowestUnPrescaledTrigger	lowest unprescaled of HLT_IsoMu24_eta2p1_v1{1,2,3,4,5}
muonIdPog2012LoosePF	<a href="https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Loose_Muon">https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Loose_Muon</a>
muonIdPog2012TightPF	<a href="https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Tight_Muon">https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Tight_Muon</a>
muonIndicesNonIsoPF	pass ptMin & id; fail iso
muonIndicesOtherPF	pass ptMin; fail id
muonIndicesPF	IdPog2012Tight; pt>10.0 GeV; PfIsolationR04DeltaBCorrected<0.12
muonMtpFmetP4TypeIPF	muonPF, metP4TypeIPF, byHand=1
photonIndicesOtherPat	pass ptMin; fail id/iso
photonIndicesPat	pT>=25.0 GeV; photonSimpleCutBased2012TightPat
photonIndicesUnmatchedPat	photonIndicesOtherPat; no dR<0.5 match in ak5JetPFCorrectedP4Pat
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	muonPFDR<0.50; electronPFDR<0.50; photonPatDR<0.50
xcak5JetIndicesOtherPat	pass ptMin; fail jetID or etaMax
xcak5JetIndicesPat	pT>=50.0 GeV;  eta <3.0; JetIDtight
xcak5JetPFCorrectedP4Pat	muonPFDR<0.50; electronPFDR<0.50; photonPatDR<0.50
xcak5JetPFFDeadEcalDRlowPtPat	xcak5JetPFPat; nXtal>=10; cracks checked
xcak5JetPFFIndicesBtagged2Pat	(>0.679)
xcak5JetPFFIndicesOtherPat	pass ptMin; fail jetID or etaMax
xcak5JetPFFIndicesPat	pT>=50.0 GeV;  eta <3.0; JetIDloose
xcak5JetPFFIndiceshighPtPat	pT>=50.0 GeV;  eta <3.0; JetIDloose
xcak5JetPFFIndiceslowPtPat	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	1.7740(4)e+8	1.5146(4)e+8	1.7669(4)e+6	4.5550(9)e+6	2.0779(8)e+6	1.7544(6)e+7	1.3599(3)

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



genPartonHT	
Entries	1.261787e+08
Mean	63.7
RMS	77.77
Underflow	0
Overflow	0
Integral	1.774e+08

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

```

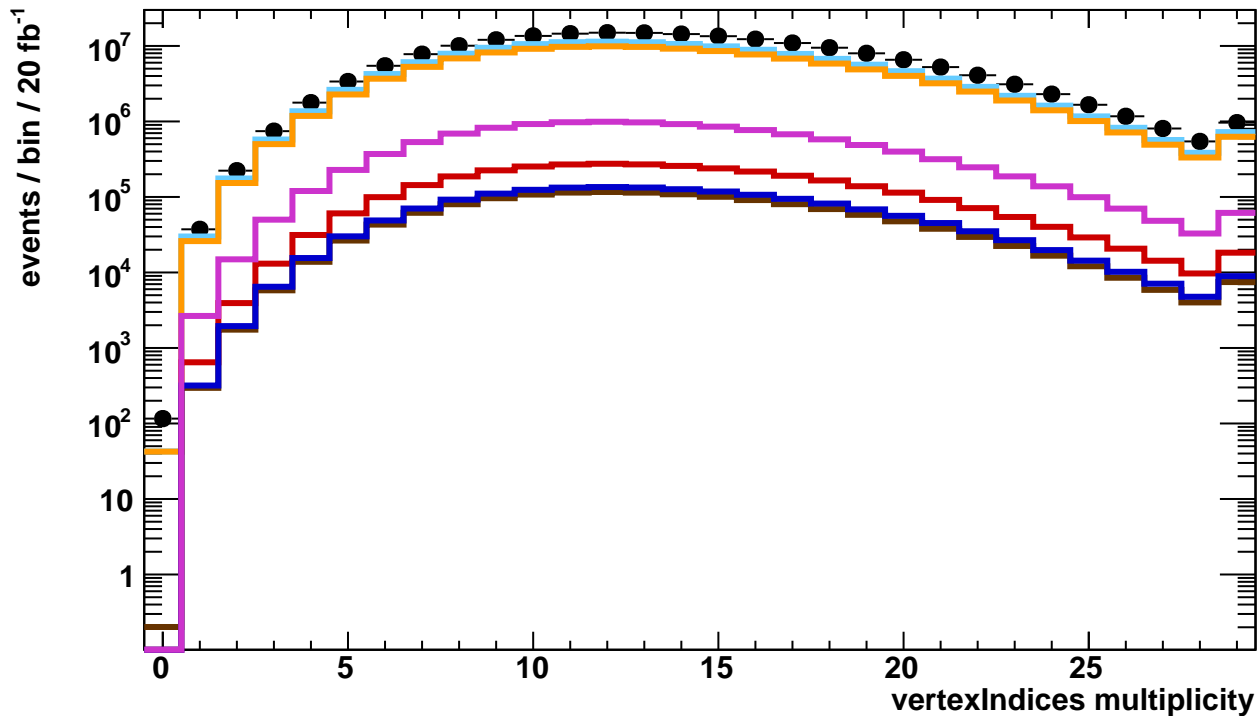
a: master          master
b: monster        <=10 tracks or >0.25 good fraction
c: hbheNoise      hbheNoise
d: value          beamHaloCSCSTightHaloId<=0.00
e: value          1.00<=trackingFailureFilterFlag

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

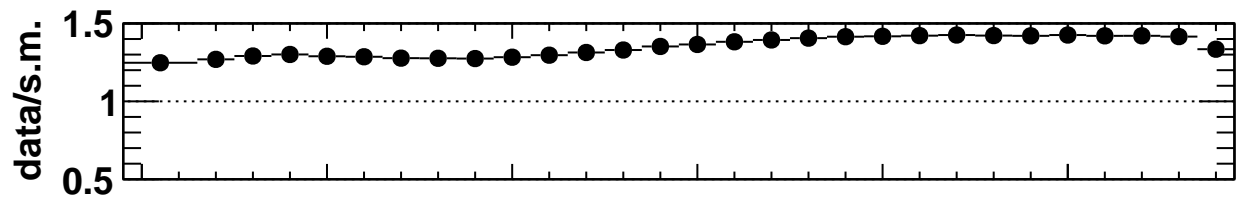
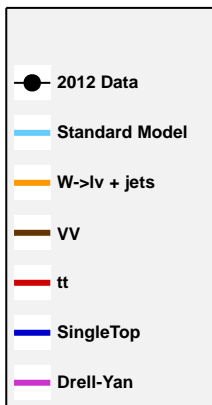
k: multiplicity   0 <= singleIsolatedTrack <= 0

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
a:	241253707	1.7740(4)e+8	1.5146(4)e+8	1.7669(4)e+6	4.5550(9)e+6	2.0779(8)e+6	1.7544(6)e+7	1.3599(3)
b:	241253512	1.7740(4)e+8	1.5146(4)e+8	1.7669(4)e+6	4.5550(9)e+6	2.0779(8)e+6	1.7544(6)e+7	1.3599(3)
c:	241085057	-	-	-	-	-	-	-
d:	240076513	1.7738(4)e+8	1.5144(4)e+8	1.7667(4)e+6	4.5542(9)e+6	2.0775(8)e+6	1.7542(6)e+7	1.3535(3)
e:	235155912	1.7738(4)e+8	1.5144(4)e+8	1.7667(4)e+6	4.5542(9)e+6	2.0775(8)e+6	1.7542(6)e+7	1.3257(3)
f:	235155912	-	-	-	-	-	-	-
g:	235146940	1.7736(4)e+8	1.5143(4)e+8	1.7664(4)e+6	4.5523(9)e+6	2.0771(8)e+6	1.7539(6)e+7	1.3258(3)
h:	235146940	1.7736(4)e+8	1.5143(4)e+8	1.7664(4)e+6	4.5523(9)e+6	2.0771(8)e+6	1.7539(6)e+7	1.3258(3)
i:	235084914	1.7731(4)e+8	1.5139(4)e+8	1.7658(4)e+6	4.5494(9)e+6	2.0766(8)e+6	1.7527(6)e+7	1.3258(3)
j:	235047767	1.7729(4)e+8	1.5138(4)e+8	1.7656(4)e+6	4.5487(9)e+6	2.0764(8)e+6	1.7523(6)e+7	1.3258(3)
k:	194453588	1.4511(4)e+8	1.2581(4)e+8	1.4813(4)e+6	3.5048(8)e+6	1.7271(8)e+6	1.2587(5)e+7	1.3401(4)



vertexIndicesMultiplicity	
Entries	1.944536e+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

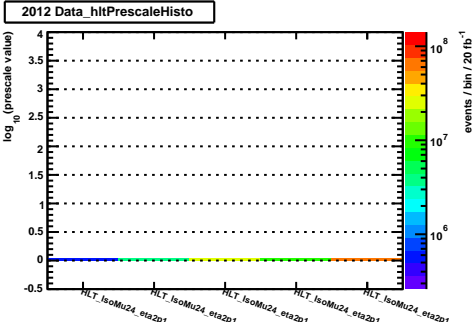
f: value          1.00<=hcalLaserEventFilterFlag
g: value          1.00<=ecalDeadCellTPFilterFlag
h: value          1.00<=eeBadScFilterFlag
i: value          1.00<=inconsistentMuonPFCandidateFilterFlag
j: value          1.00<=greedyMuonPFCandidateFilterFlag

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	1.7740(4)e+8	1.5146(4)e+8	1.7669(4)e+6	4.5550(9)e+6	2.0779(8)e+6	1.7544(6)e+7	1.3599(3)
b:	241253512	1.7740(4)e+8	1.5146(4)e+8	1.7669(4)e+6	4.5550(9)e+6	2.0779(8)e+6	1.7544(6)e+7	1.3599(3)
c:	241085057	-	-	-	-	-	-	-
d:	240076513	1.7738(4)e+8	1.5144(4)e+8	1.7667(4)e+6	4.5542(9)e+6	2.0775(8)e+6	1.7542(6)e+7	1.3535(3)
e:	235155912	1.7738(4)e+8	1.5144(4)e+8	1.7667(4)e+6	4.5542(9)e+6	2.0775(8)e+6	1.7542(6)e+7	1.3257(3)
f:	235155912	-	-	-	-	-	-	-
g:	235146940	1.7736(4)e+8	1.5143(4)e+8	1.7664(4)e+6	4.5523(9)e+6	2.0771(8)e+6	1.7539(6)e+7	1.3258(3)
h:	235146940	1.7736(4)e+8	1.5143(4)e+8	1.7664(4)e+6	4.5523(9)e+6	2.0771(8)e+6	1.7539(6)e+7	1.3258(3)
i:	235084914	1.7731(4)e+8	1.5139(4)e+8	1.7658(4)e+6	4.5494(9)e+6	2.0766(8)e+6	1.7527(6)e+7	1.3258(3)
j:	235047767	1.7729(4)e+8	1.5138(4)e+8	1.7656(4)e+6	4.5487(9)e+6	2.0764(8)e+6	1.7523(6)e+7	1.3258(3)
k:	194453588	1.4511(4)e+8	1.2581(4)e+8	1.4813(4)e+6	3.5048(8)e+6	1.7271(8)e+6	1.2587(5)e+7	1.3401(4)
l:	194453472	1.4511(4)e+8	1.2581(4)e+8	1.4813(4)e+6	3.5048(8)e+6	1.7271(8)e+6	1.2587(5)e+7	1.3401(4)
m:	110710173	-	-	-	-	-	-	-





```

o: physicsDeclaredFilter                                physicsDeclaredFilter
p: jetEtaSelector                                     xcak5JetPFPat; |eta[index[0]]|<=2.5
q: jetPtSelector                                      xcak5JetPFPat; pT[index[0]]>=100.0 GeV
r: jetPtSelector                                      xcak5JetPFPat; pT[index[1]]>=100.0 GeV
s: value                                              375.00<=xcak5JetPFSumEtPat
t: multiplicity                                       2 <= xcak5JetPFIndicesPat

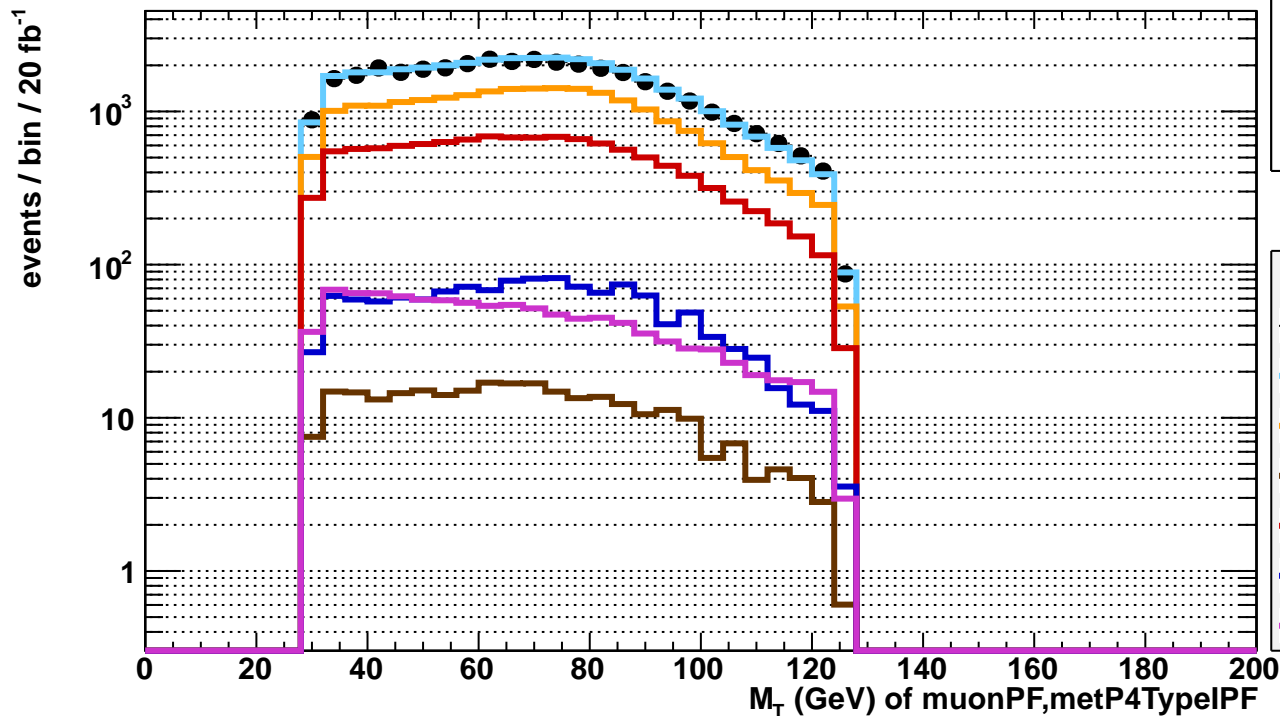
u: multiplicity                                       0 <= xcak5JetPFIndicesOtherPat <= 0
v: multiplicity                                       0 <= xcak5JetPFIndicesWithOddMuonPat <= 0
w: uniquelyMatchedNonisoMuons                       xcak5JetPFPat
x: multiplicity                                       0 <= electronIndicesPF <= 0
y: multiplicity                                       0 <= photonIndicesPat <= 0

z: multiplicity                                       0 <= electronIndicesUnmatchedPF <= 0
A: multiplicity                                       0 <= photonIndicesUnmatchedPat <= 0
B: deadEcalFilter                                    xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
C: multiplicity                                       1 <= muonIndicesPF <= 1
D: pt                                                 30.00<=muonP4PF[i[0]].pt; muonIndicesPF

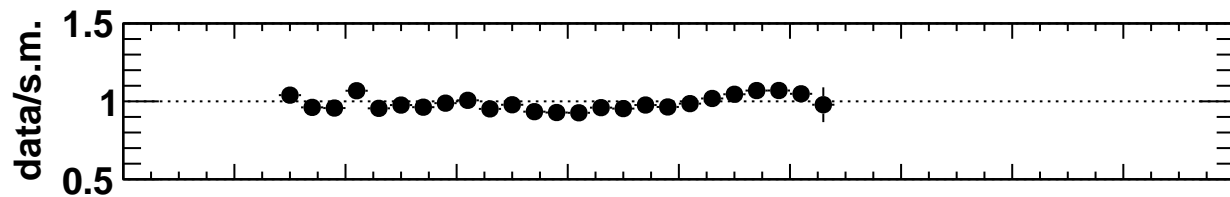
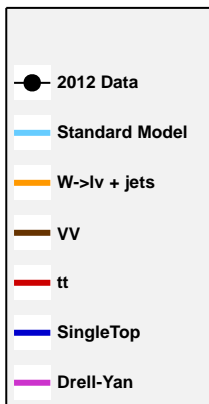
E: eta                                                -2.10<=muonP4PF[i[0]].eta<=2.10; muonIndicesPF
F: value                                              30.00<=muonMtPFmetP4TypeIPF<=125.00

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
o:	110631153	-	-	-	-	-	-	
p:	11599801	3.660(2)e+7	2.798(2)e+7	7.986(3)e+5	3.3273(8)e+6	1.3813(7)e+6	3.108(3)e+6	0.3170(2)
q:	2058940	8.178(5)e+6	5.236(4)e+6	1.668(1)e+5	1.7666(6)e+6	4.226(4)e+5	5.867(9)e+5	0.2518(2)
r:	360314	1.9629(8)e+6	8.688(6)e+5	5.216(7)e+4	7.754(4)e+5	1.637(2)e+5	1.027(2)e+5	0.1836(3)
s:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
t:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
u:	136642	9.389(4)e+5	3.105(2)e+5	2.280(5)e+4	4.908(3)e+5	7.75(2)e+4	3.733(5)e+4	0.1455(4)
v:	131249	9.308(4)e+5	3.082(2)e+5	2.275(5)e+4	4.862(3)e+5	7.69(2)e+4	3.678(4)e+4	0.1410(4)
w:	130855	9.292(4)e+5	3.079(2)e+5	2.274(5)e+4	4.850(3)e+5	7.68(2)e+4	3.672(4)e+4	0.1408(4)
x:	128978	7.816(4)e+5	2.276(2)e+5	2.177(4)e+4	4.370(3)e+5	7.21(2)e+4	2.313(4)e+4	0.1650(5)
y:	128348	7.745(4)e+5	2.231(2)e+5	2.166(4)e+4	4.353(3)e+5	7.19(2)e+4	2.254(4)e+4	0.1657(5)
z:	128322	7.740(4)e+5	2.230(2)e+5	2.165(4)e+4	4.351(3)e+5	7.18(2)e+4	2.252(4)e+4	0.1658(5)
A:	128313	7.740(4)e+5	2.229(2)e+5	2.165(4)e+4	4.350(3)e+5	7.18(2)e+4	2.251(4)e+4	0.1658(5)
B:	62869	2.458(2)e+5	9.95(1)e+4	5.78(2)e+3	1.120(1)e+5	1.912(8)e+4	9.45(2)e+3	0.256(1)
C:	55351	6.85(1)e+4	4.236(8)e+4	487(7)	2.084(6)e+4	2.31(3)e+3	2.52(1)e+3	0.808(4)
D:	50894	5.452(9)e+4	3.383(7)e+4	408(6)	1.648(5)e+4	1.78(3)e+3	2011(9)	0.934(4)
E:	50891	5.187(9)e+4	3.175(7)e+4	384(6)	1.617(5)e+4	1.75(3)e+3	1814(8)	0.981(5)
F:	36430	3.735(8)e+4	2.316(6)e+4	274(5)	1.163(4)e+4	1.27(2)e+3	1027(6)	0.975(5)



muonMtPFmetP4TypeIPF	
Entries	36430
Mean	69.34
RMS	23.25
Underflow	0
Overflow	0
Integral	3.643e+04



```

p: jetEtaSelector          xcak5JetPFPat; |eta[index[0]]|<=2.5
q: jetPtSelector          xcak5JetPFPat; pT[index[0]]>=100.0 GeV
r: jetPtSelector          xcak5JetPFPat; pT[index[1]]>=100.0 GeV
s: value                  375.00<=xcak5JetPFsumEtPat
t: multiplicity           2 <= xcak5JetPFIIndicesPat

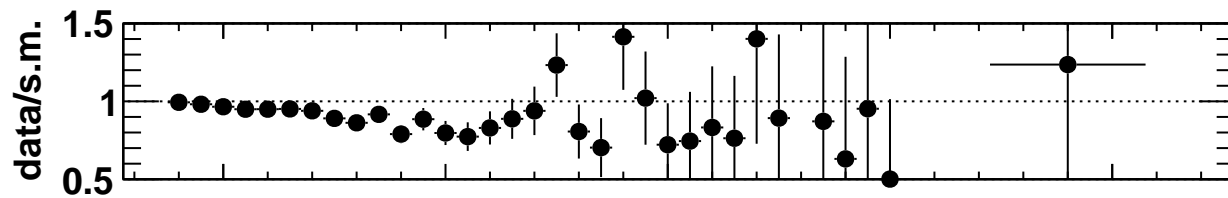
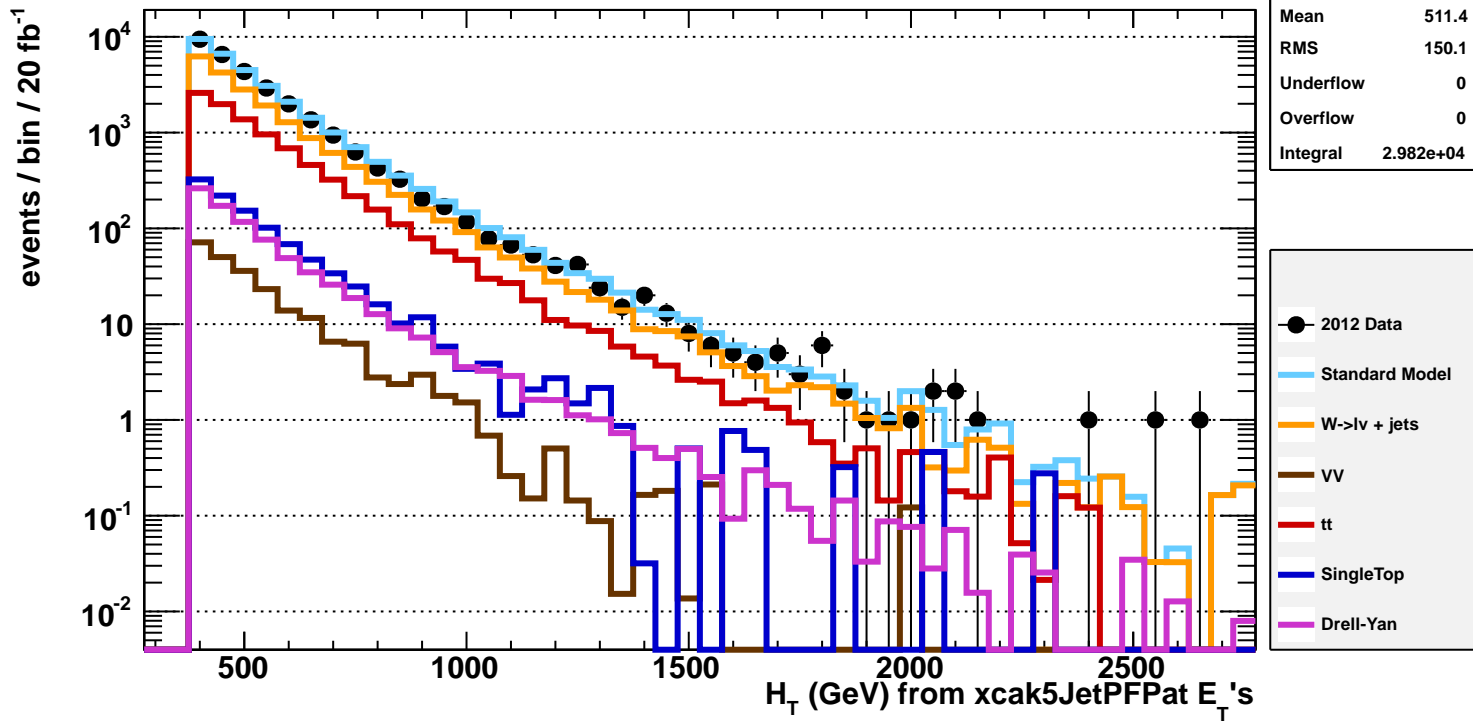
u: multiplicity           0 <= xcak5JetPFIIndicesOtherPat <= 0
v: multiplicity           0 <= xcak5JetPFIIndicesWithOddMuonPat <= 0
w: uniquelyMatchedNonisoMuons xcak5JetPFPat
x: multiplicity           0 <= electronIndicesPF <= 0
y: multiplicity           0 <= photonIndicesPat <= 0

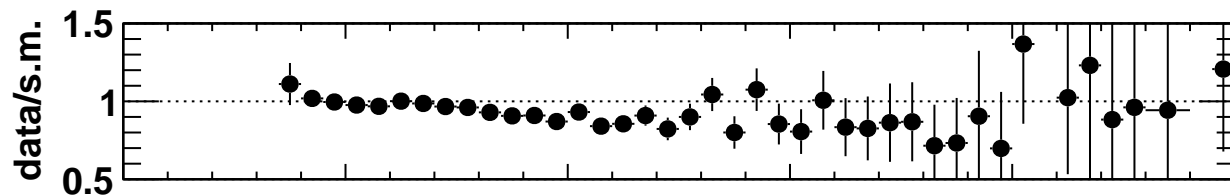
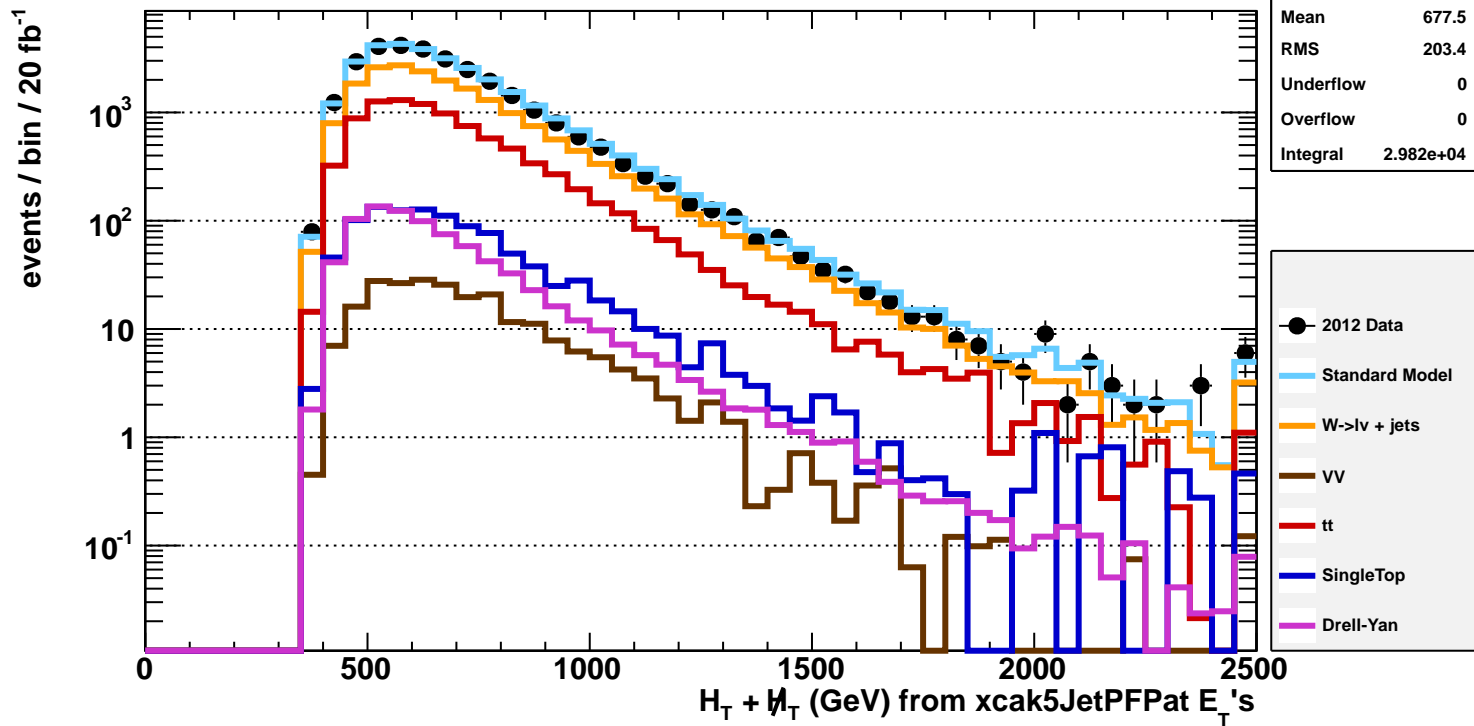
z: multiplicity           0 <= electronIndicesUnmatchedPF <= 0
A: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
B: deadEcalFilter         xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
C: multiplicity           1 <= muonIndicesPF <= 1
D: pt                     30.00<=muonP4PF[i[0]].pt; muonIndicesPF

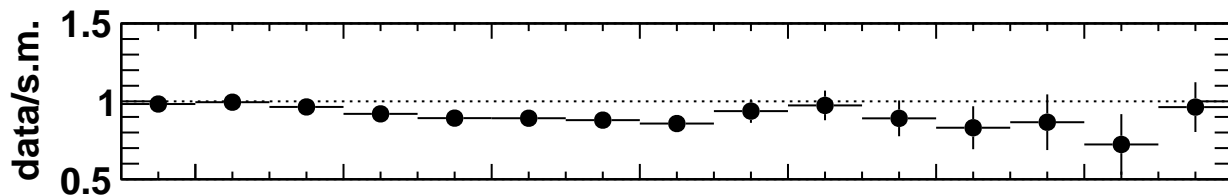
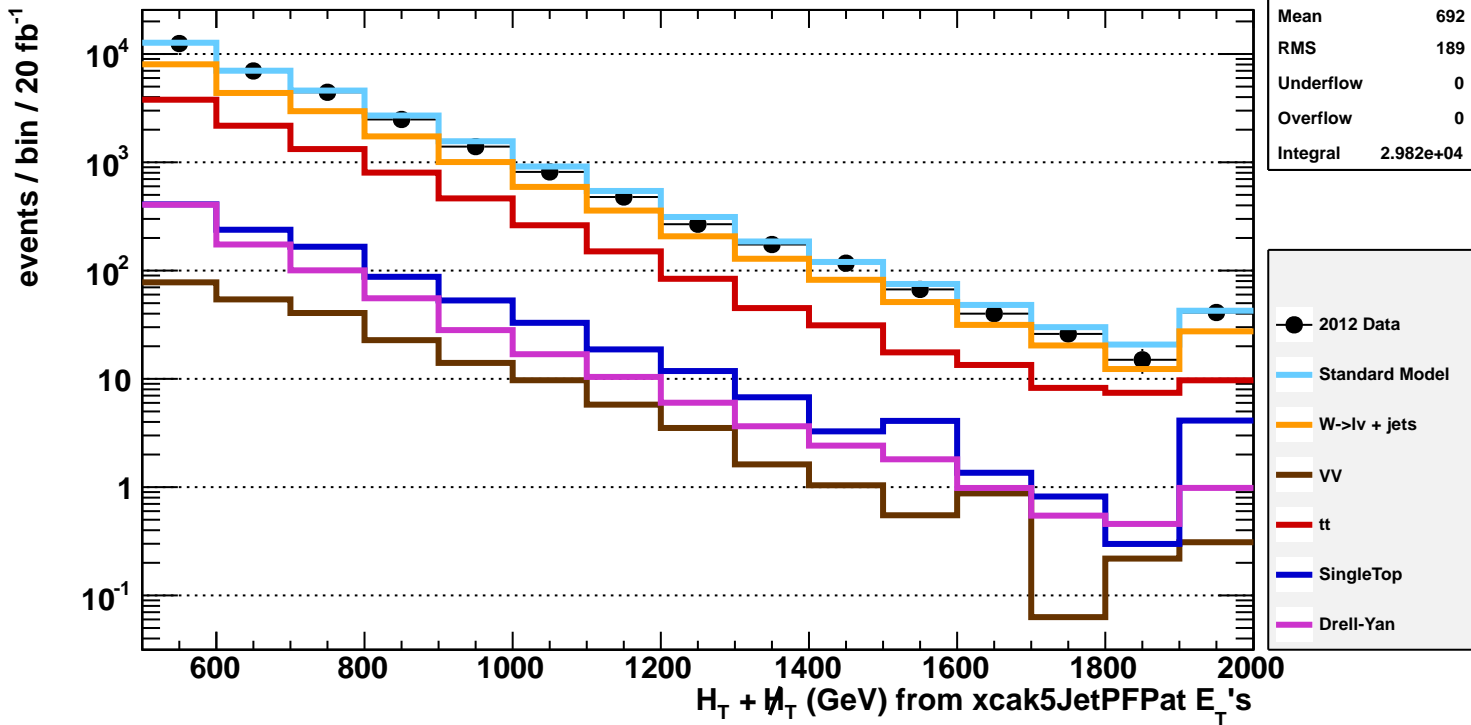
E: eta                    -2.10<=muonP4PF[i[0]].eta<=2.10; muonIndicesPF
F: value                  30.00<=muonMtPFFmetP4TypeIPF<=125.00
G: value                  xcak5JetPFMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPF<=1.25

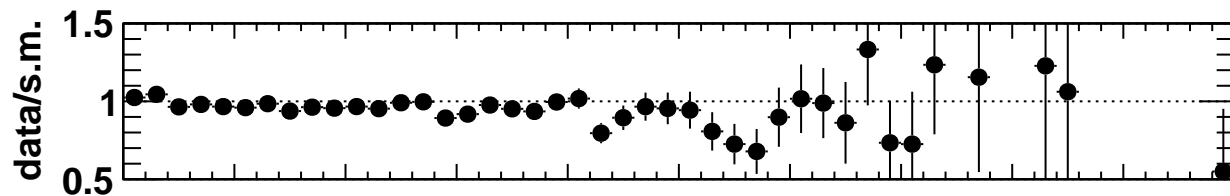
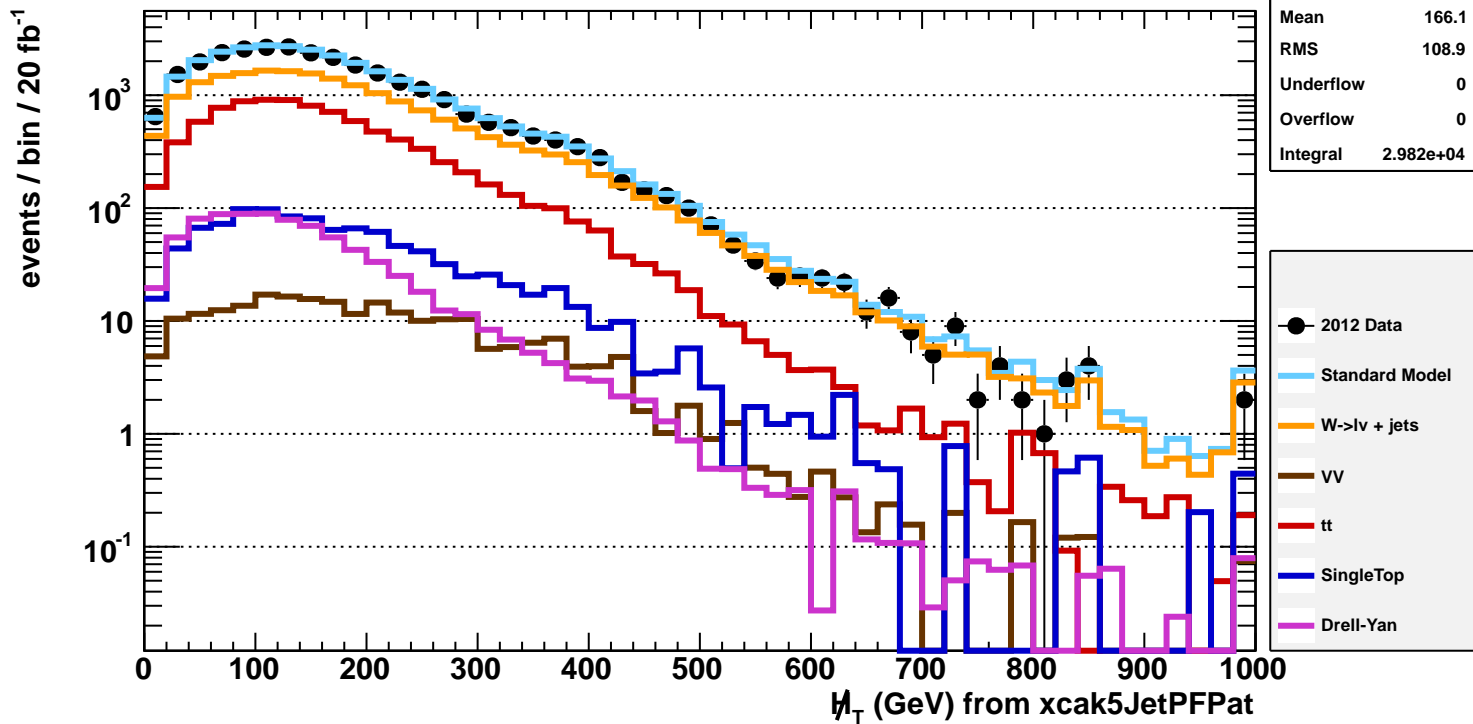
```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
p:	11599801	3.660(2)e+7	2.798(2)e+7	7.986(3)e+5	3.3273(8)e+6	1.3813(7)e+6	3.108(3)e+6	0.3170(2)
q:	2058940	8.178(5)e+6	5.236(4)e+6	1.668(1)e+5	1.7666(6)e+6	4.226(4)e+5	5.867(9)e+5	0.2518(2)
r:	360314	1.9629(8)e+6	8.688(6)e+5	5.216(7)e+4	7.754(4)e+5	1.637(2)e+5	1.027(2)e+5	0.1836(3)
s:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
t:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
u:	136642	9.389(4)e+5	3.105(2)e+5	2.280(5)e+4	4.908(3)e+5	7.75(2)e+4	3.733(5)e+4	0.1455(4)
v:	131249	9.308(4)e+5	3.082(2)e+5	2.275(5)e+4	4.862(3)e+5	7.69(2)e+4	3.678(4)e+4	0.1410(4)
w:	130855	9.292(4)e+5	3.079(2)e+5	2.274(5)e+4	4.850(3)e+5	7.68(2)e+4	3.672(4)e+4	0.1408(4)
x:	128978	7.816(4)e+5	2.276(2)e+5	2.177(4)e+4	4.370(3)e+5	7.21(2)e+4	2.313(4)e+4	0.1650(5)
y:	128348	7.745(4)e+5	2.231(2)e+5	2.166(4)e+4	4.353(3)e+5	7.19(2)e+4	2.254(4)e+4	0.1657(5)
z:	128322	7.740(4)e+5	2.230(2)e+5	2.165(4)e+4	4.351(3)e+5	7.18(2)e+4	2.252(4)e+4	0.1658(5)
A:	128313	7.740(4)e+5	2.229(2)e+5	2.165(4)e+4	4.350(3)e+5	7.18(2)e+4	2.251(4)e+4	0.1658(5)
B:	62869	2.458(2)e+5	9.95(1)e+4	5.78(2)e+3	1.120(1)e+5	1.912(8)e+4	9.45(2)e+3	0.256(1)
C:	55351	6.85(1)e+4	4.236(8)e+4	487(7)	2.084(6)e+4	2.31(3)e+3	2.52(1)e+3	0.808(4)
D:	50894	5.452(9)e+4	3.383(7)e+4	408(6)	1.648(5)e+4	1.78(3)e+3	2011(9)	0.934(4)
E:	50891	5.187(9)e+4	3.175(7)e+4	384(6)	1.617(5)e+4	1.75(3)e+3	1814(8)	0.981(5)
F:	36430	3.735(8)e+4	2.316(6)e+4	274(5)	1.163(4)e+4	1.27(2)e+3	1027(6)	0.975(5)
G:	29820	3.088(7)e+4	1.962(5)e+4	233(5)	9.18(4)e+3	1.04(2)e+3	808(5)	0.966(6)

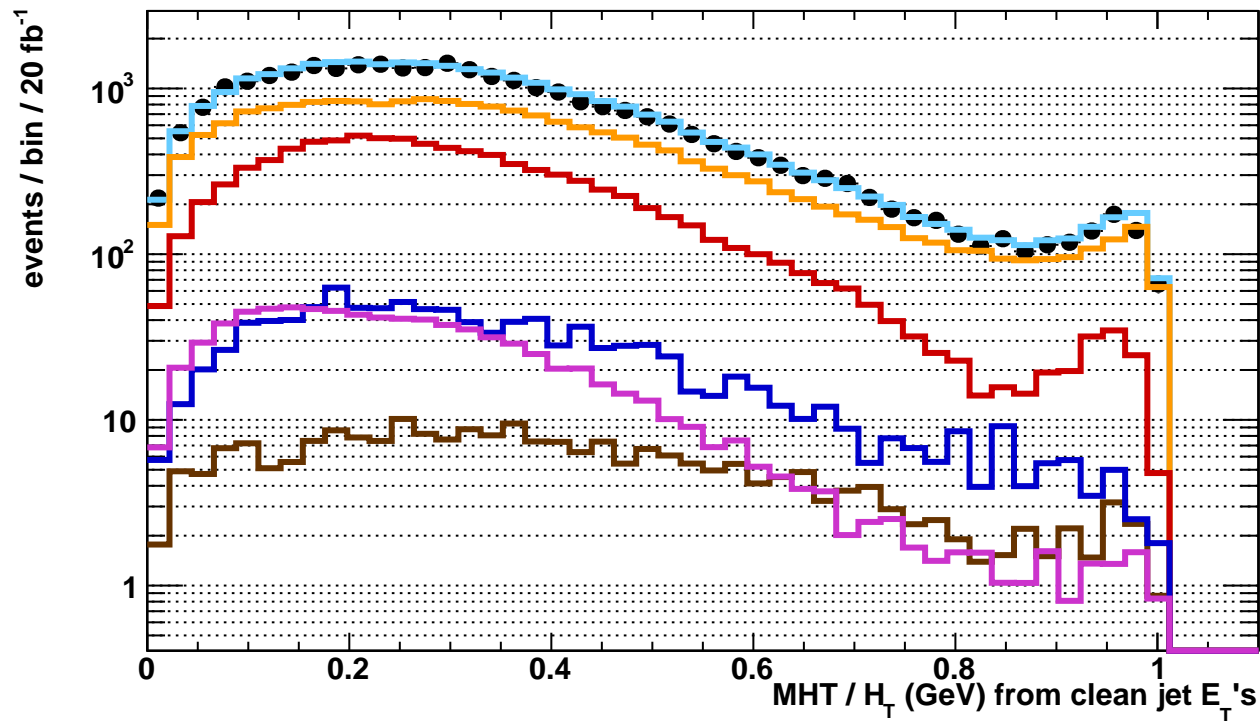




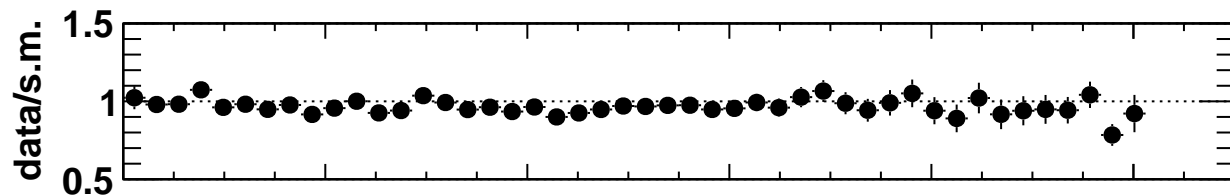
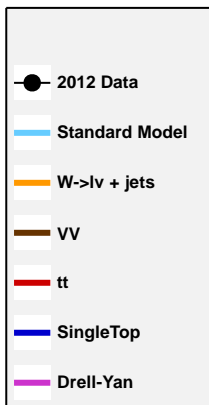


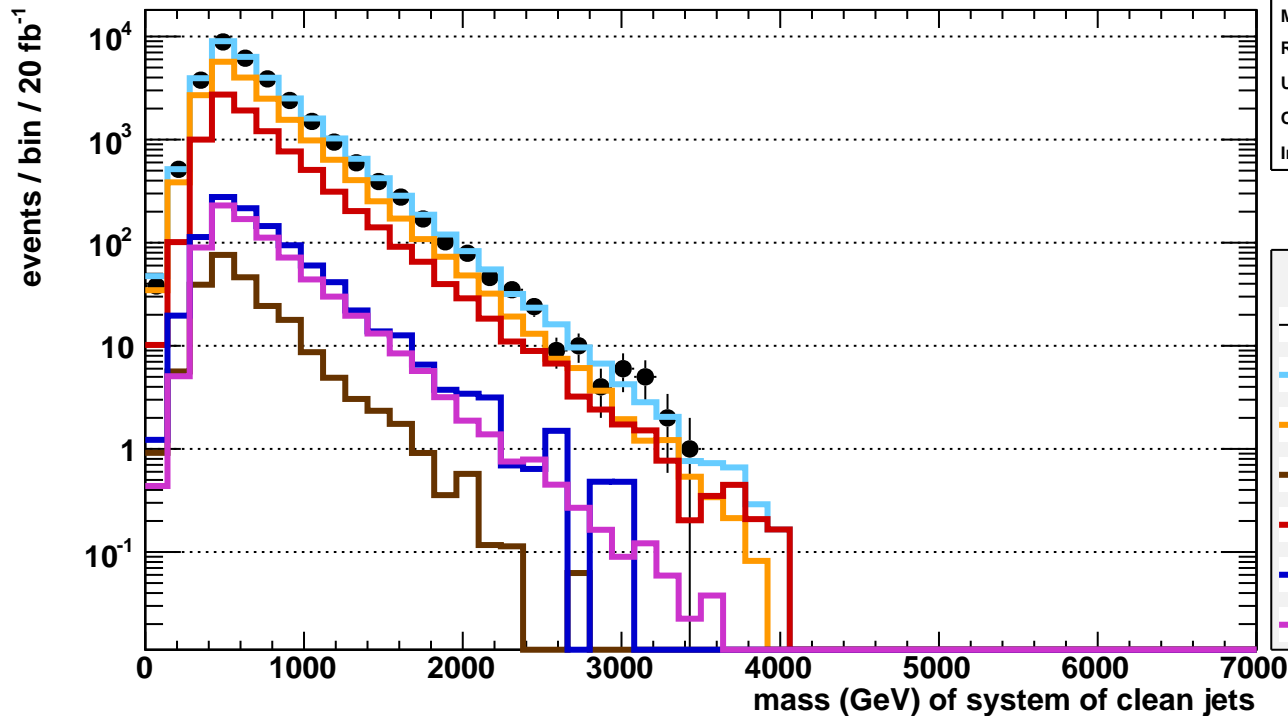




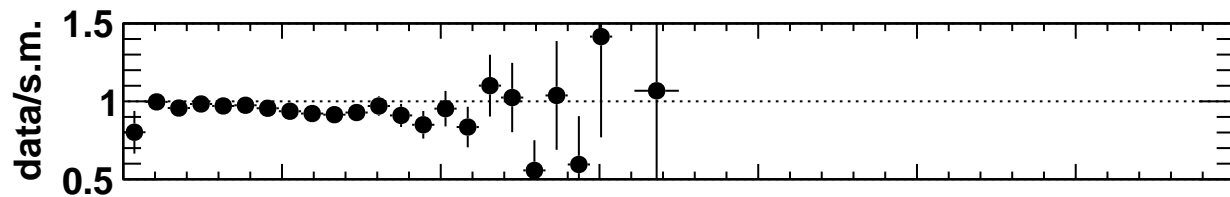
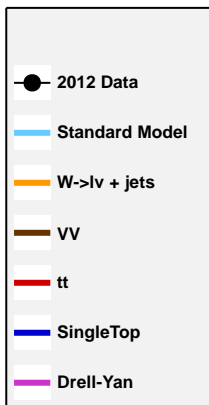


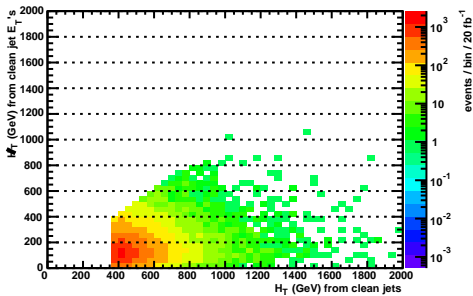
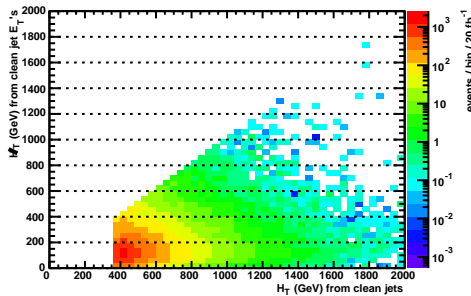
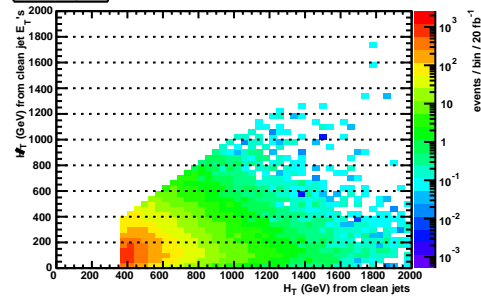
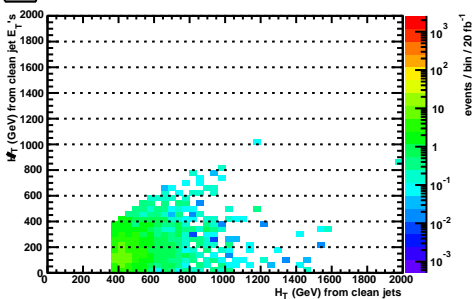
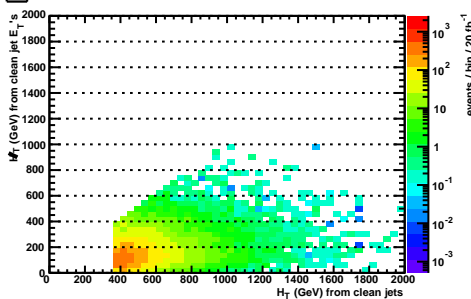
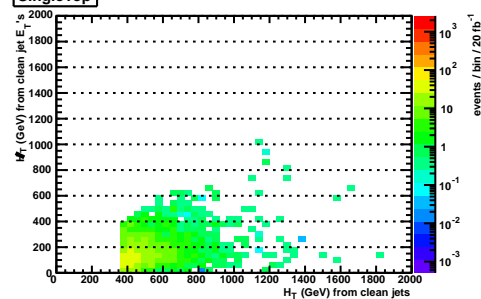
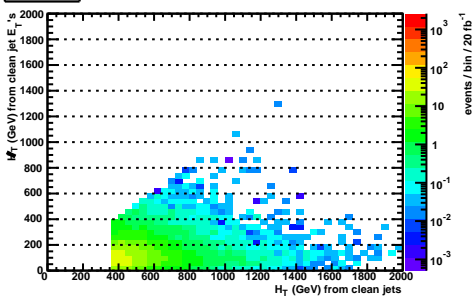
xcak5JetPFmHtOverHtPat	
Entries	29820
Mean	0.3336
RMS	0.2093
Underflow	0
Overflow	0
Integral	2.982e+04

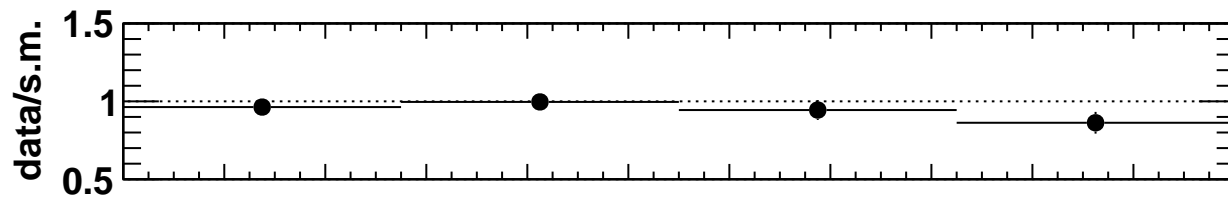
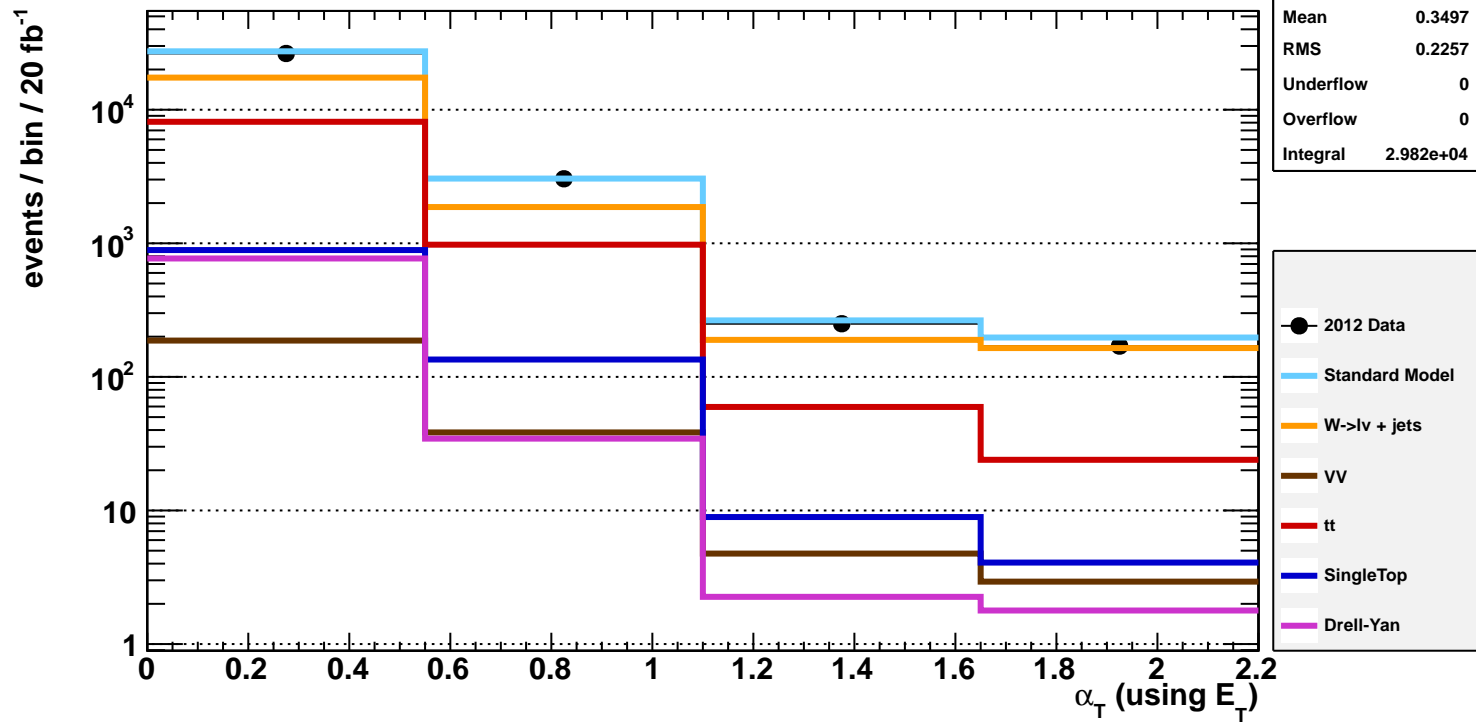


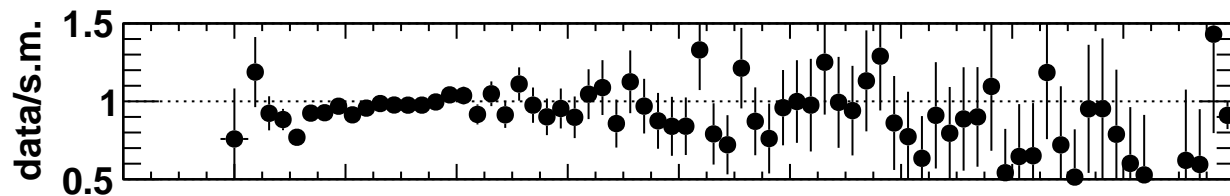
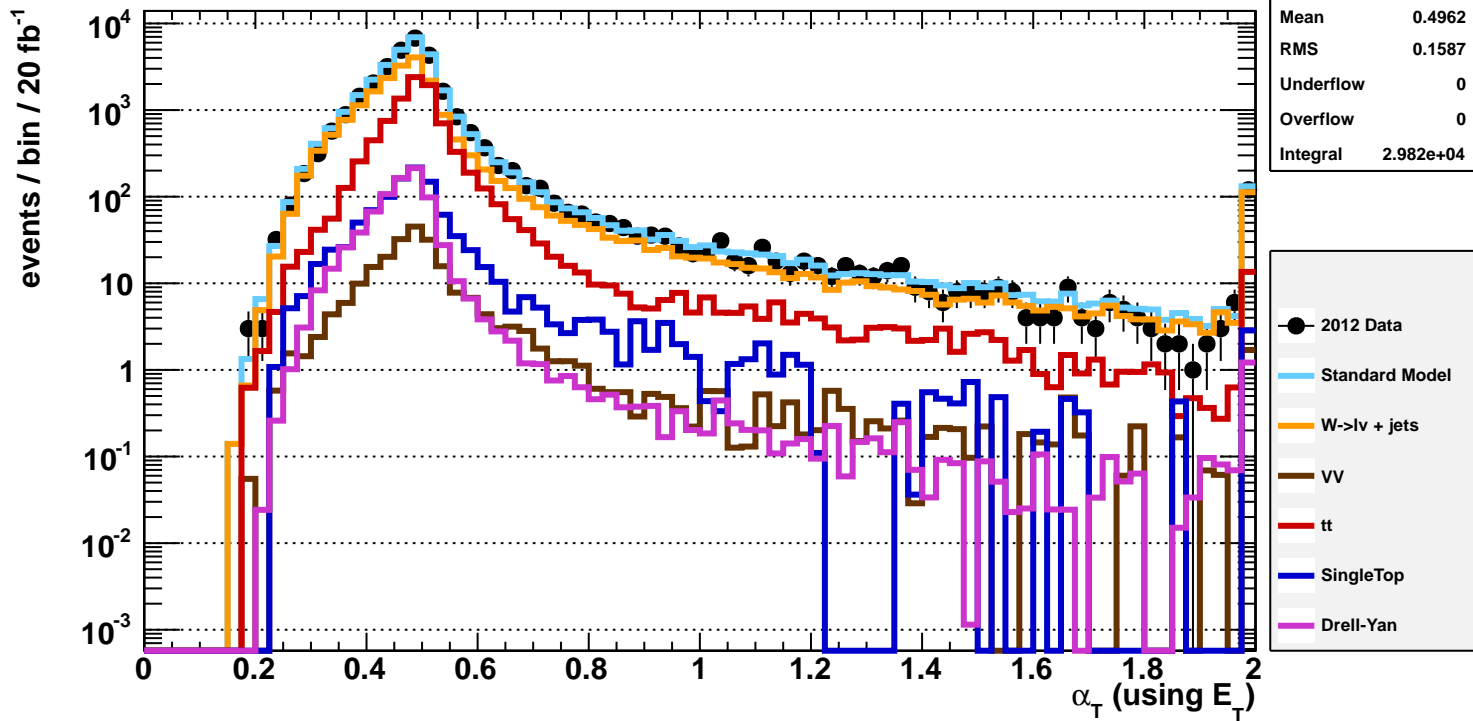


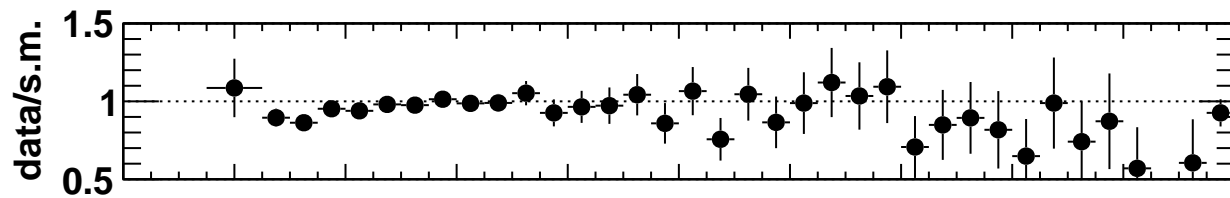
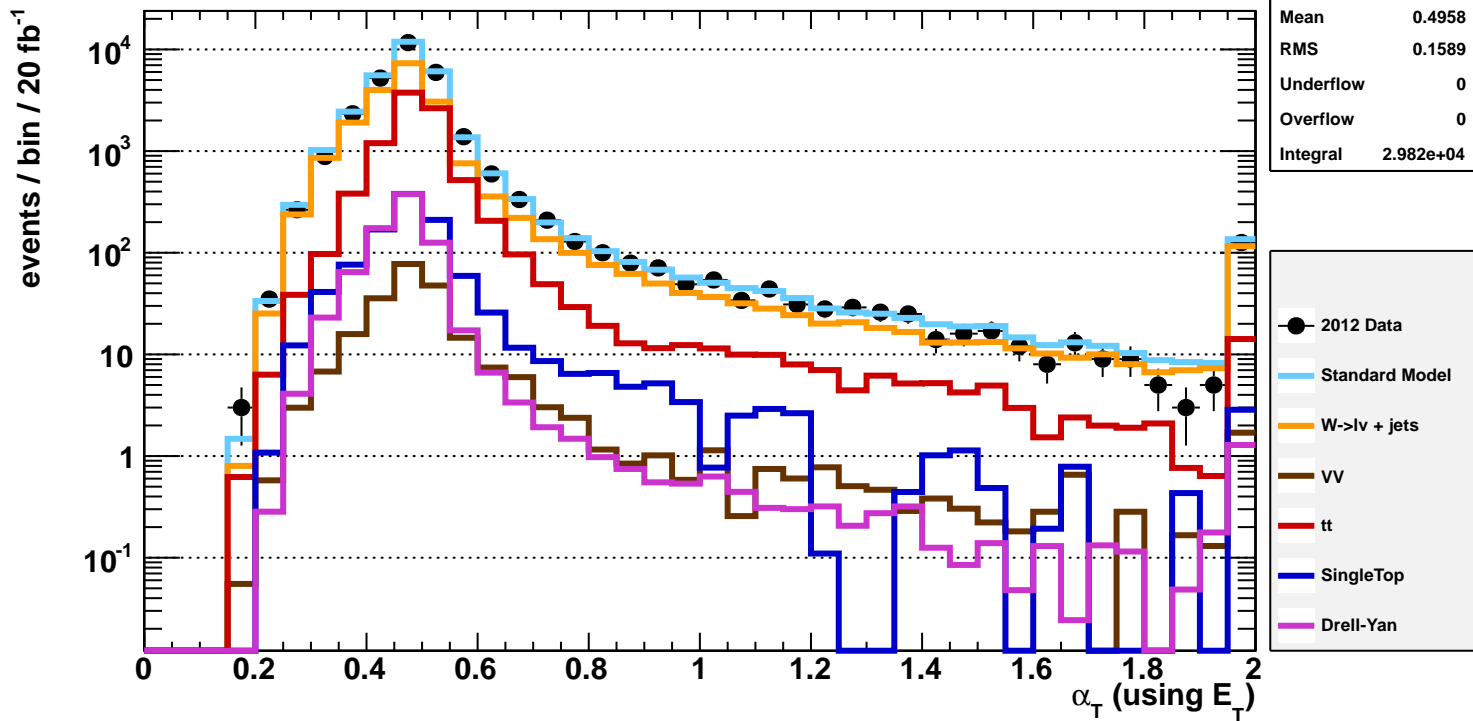
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Mean	681.9
RMS	322.1
Underflow	0
Overflow	0
Integral	2.982e+04

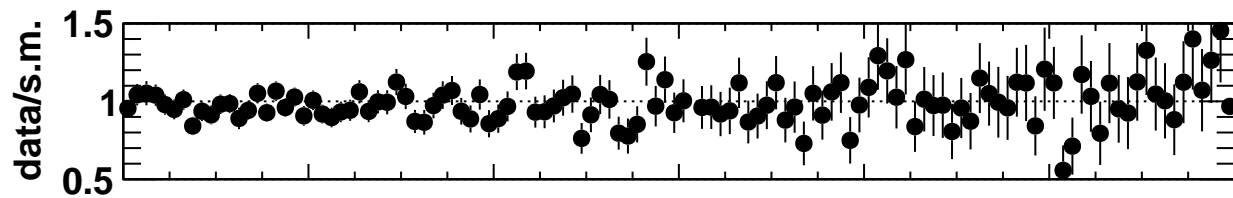
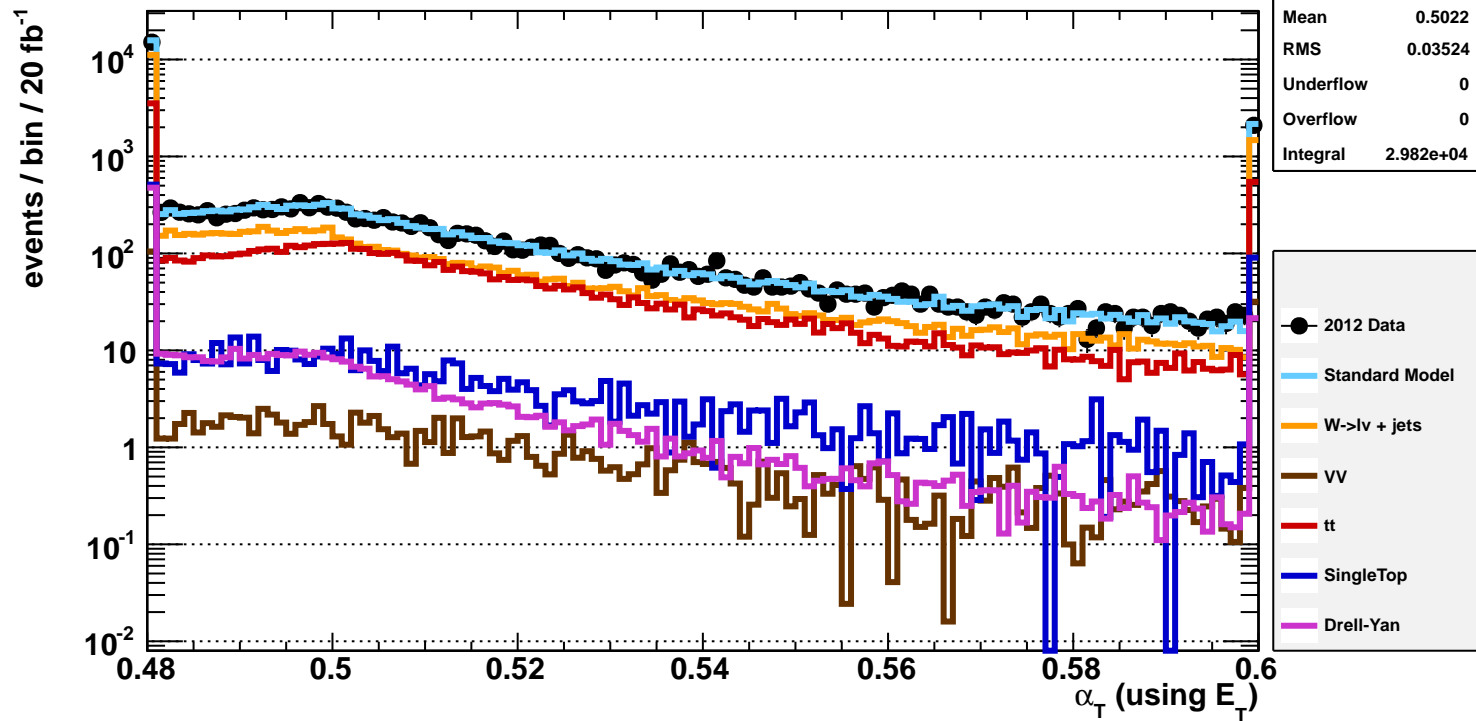


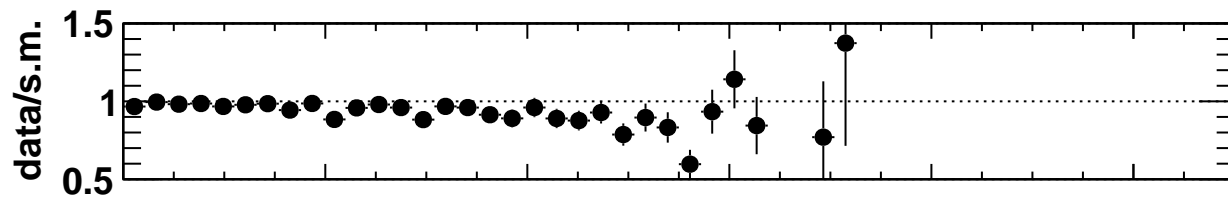
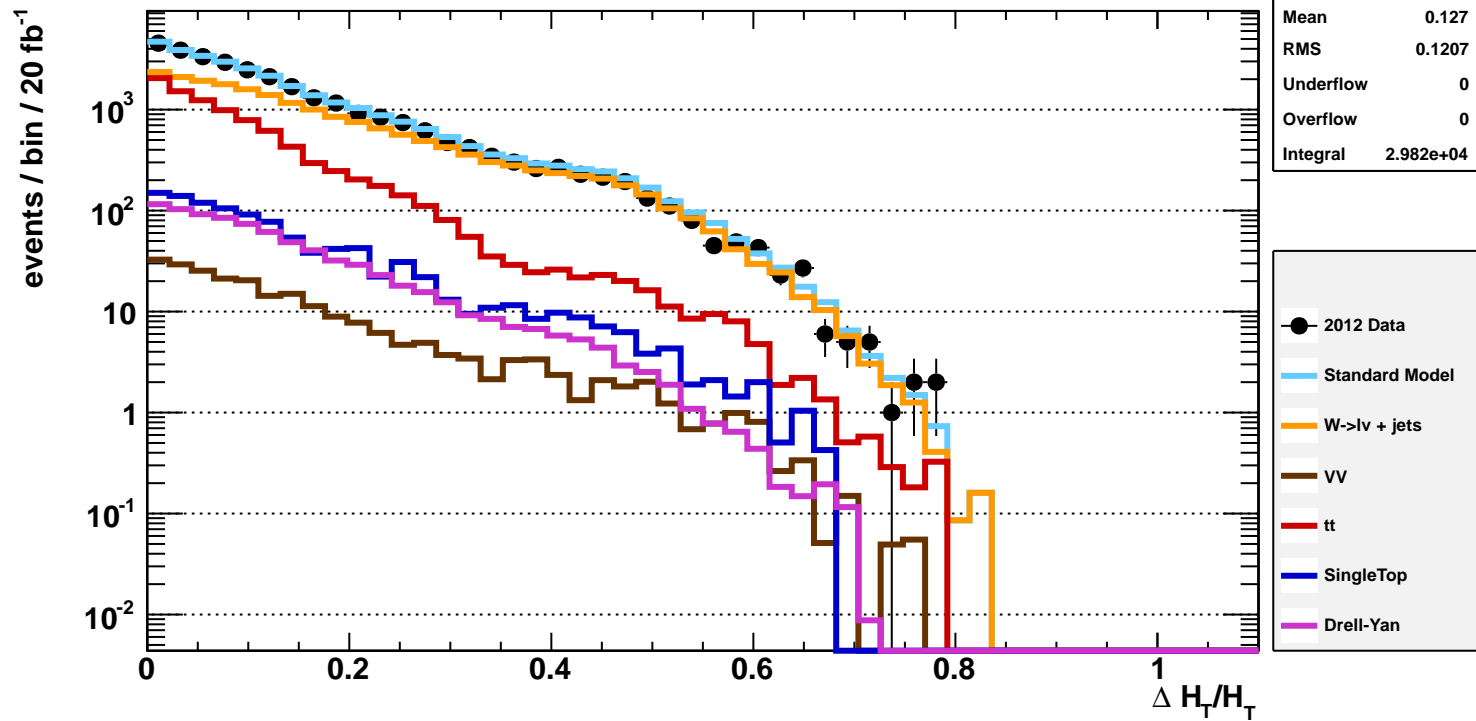
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**



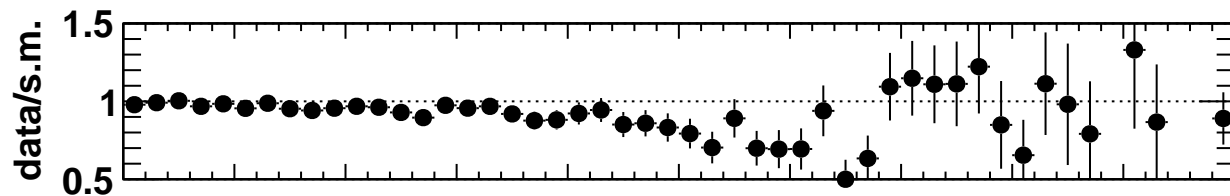
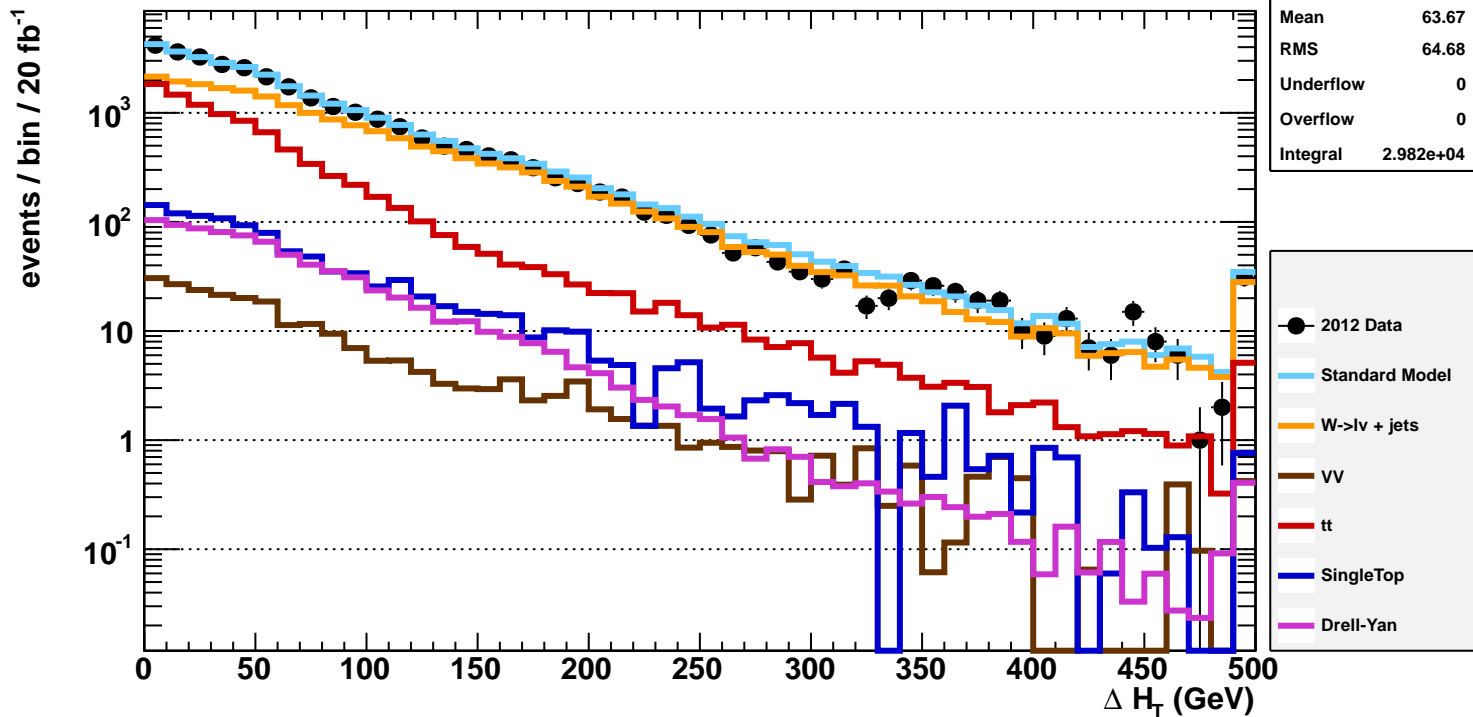


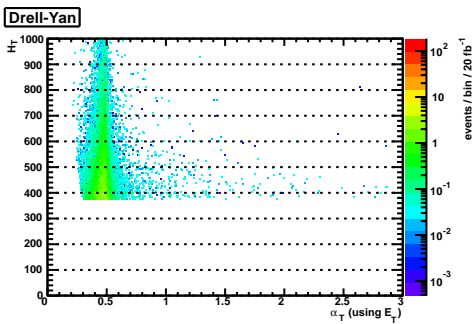
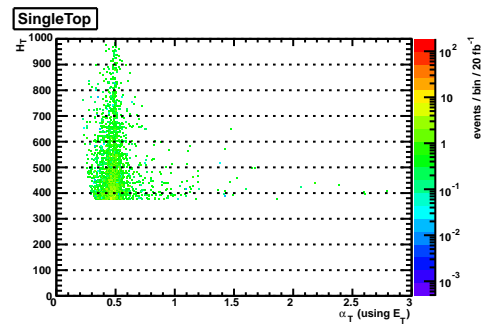
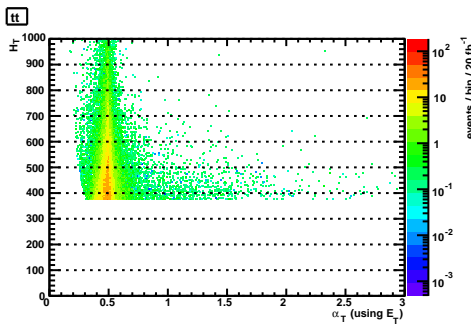
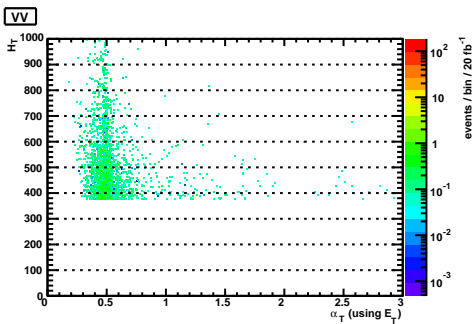
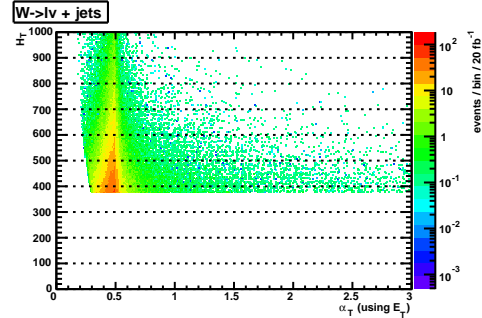
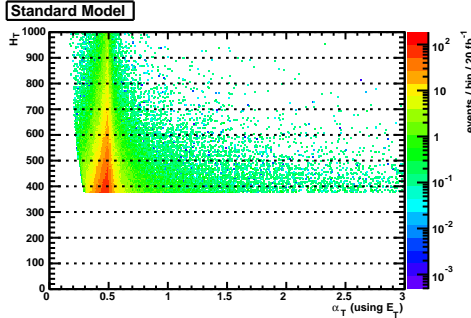
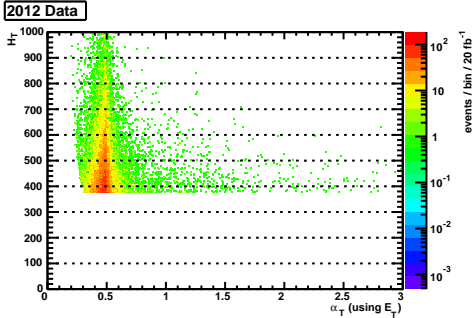


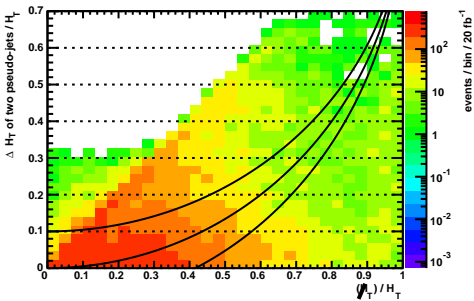
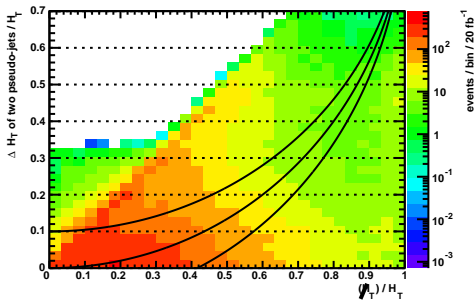
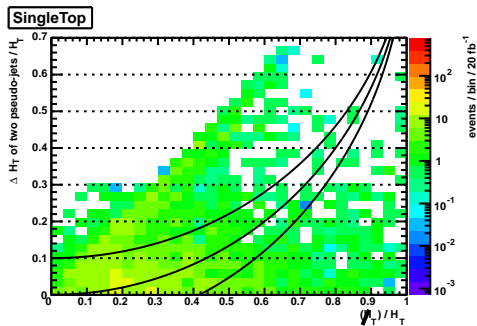
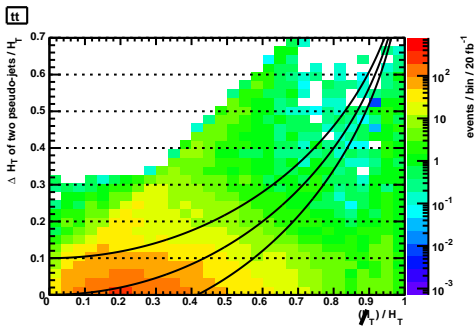
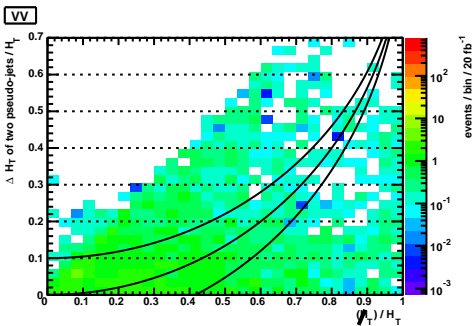
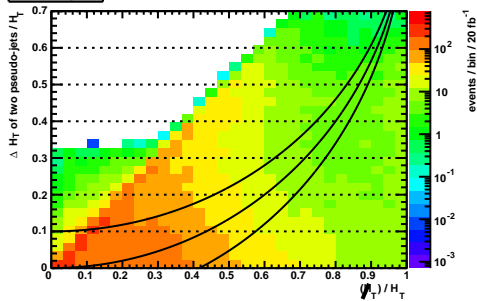
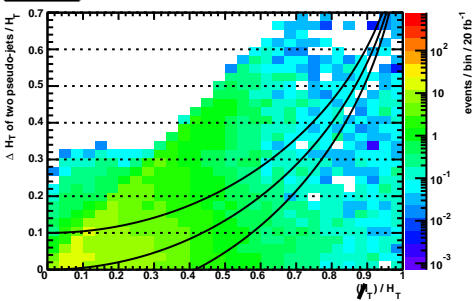


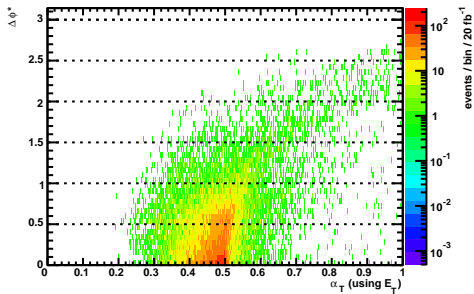
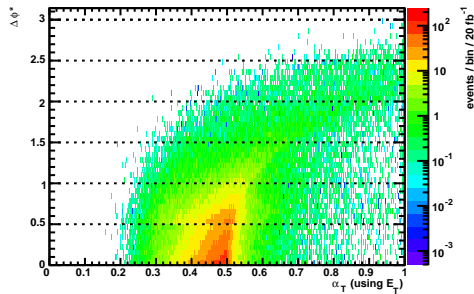
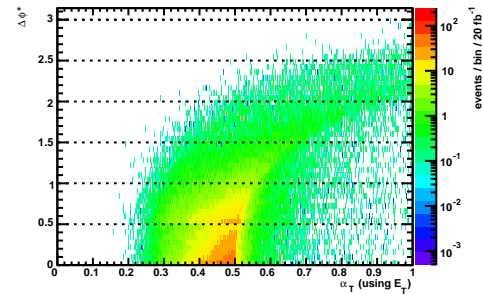
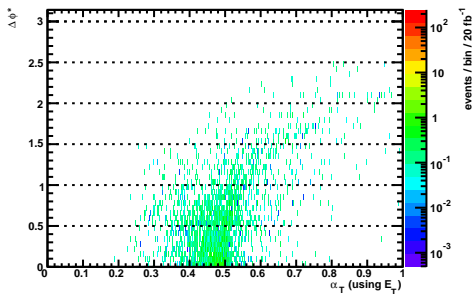
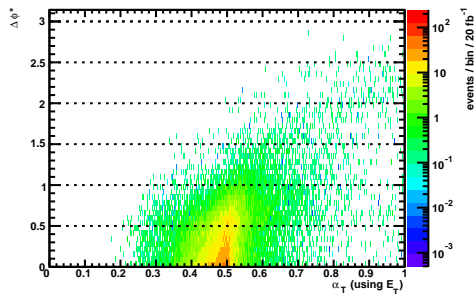
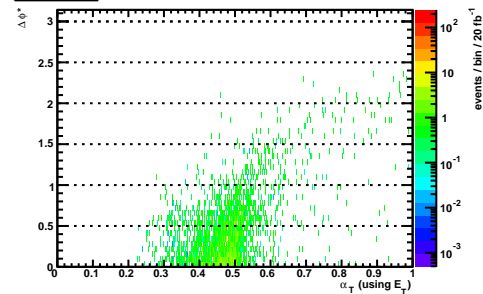
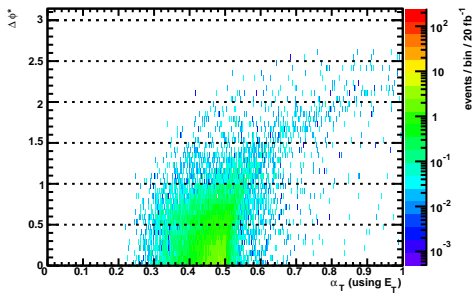


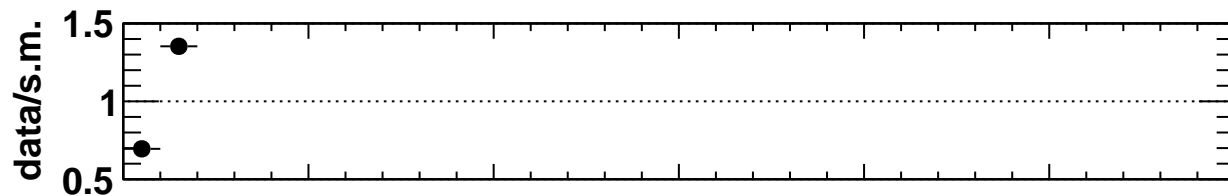
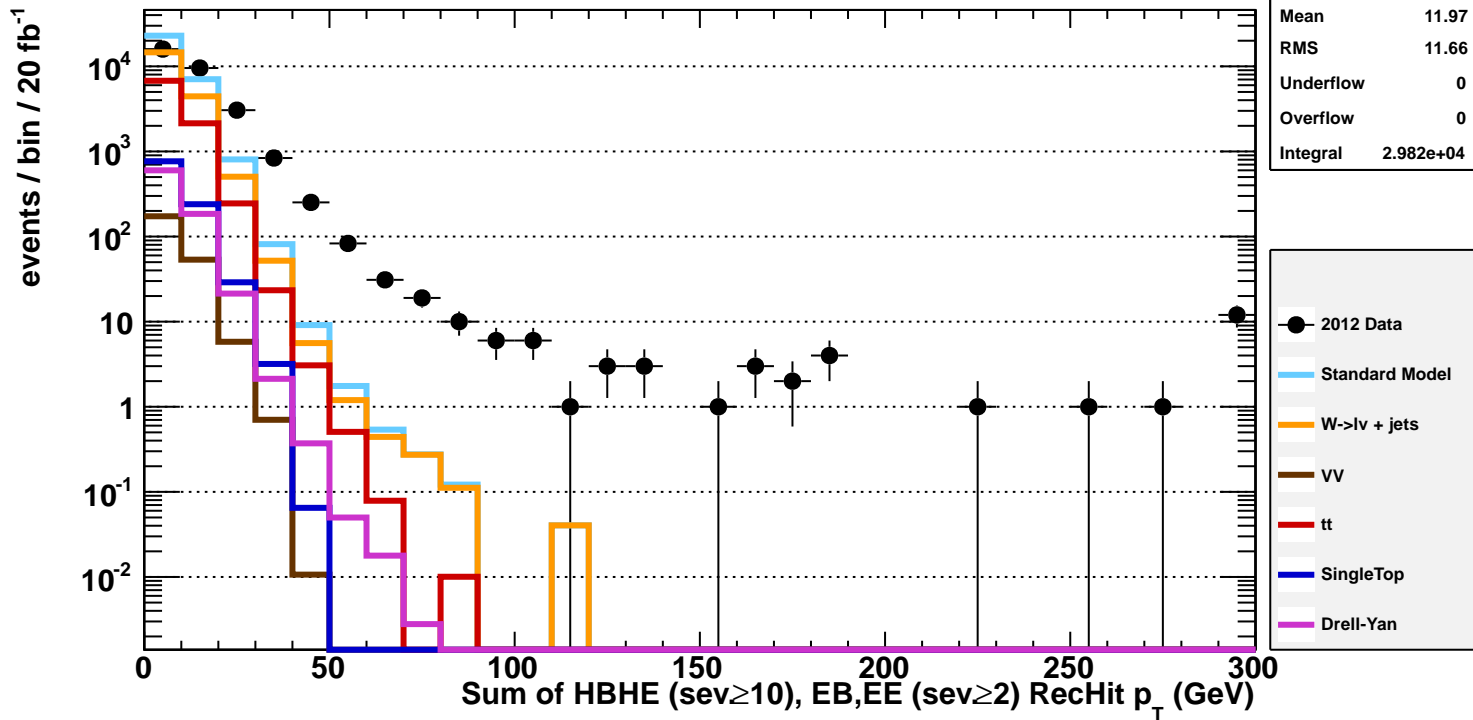






**2012 Data****Standard Model****W→lv + jets****Drell-Yan**

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



```

q: jetPtSelector          xcak5JetPFPat; pT[index[0]]>=100.0 GeV
r: jetPtSelector          xcak5JetPFPat; pT[index[1]]>=100.0 GeV
s: value                  375.00<=xcak5JetPFSumEtPat
t: multiplicity           2 <= xcak5JetPFIIndicesPat

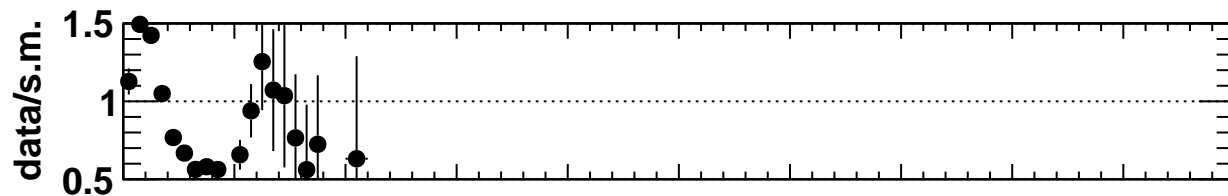
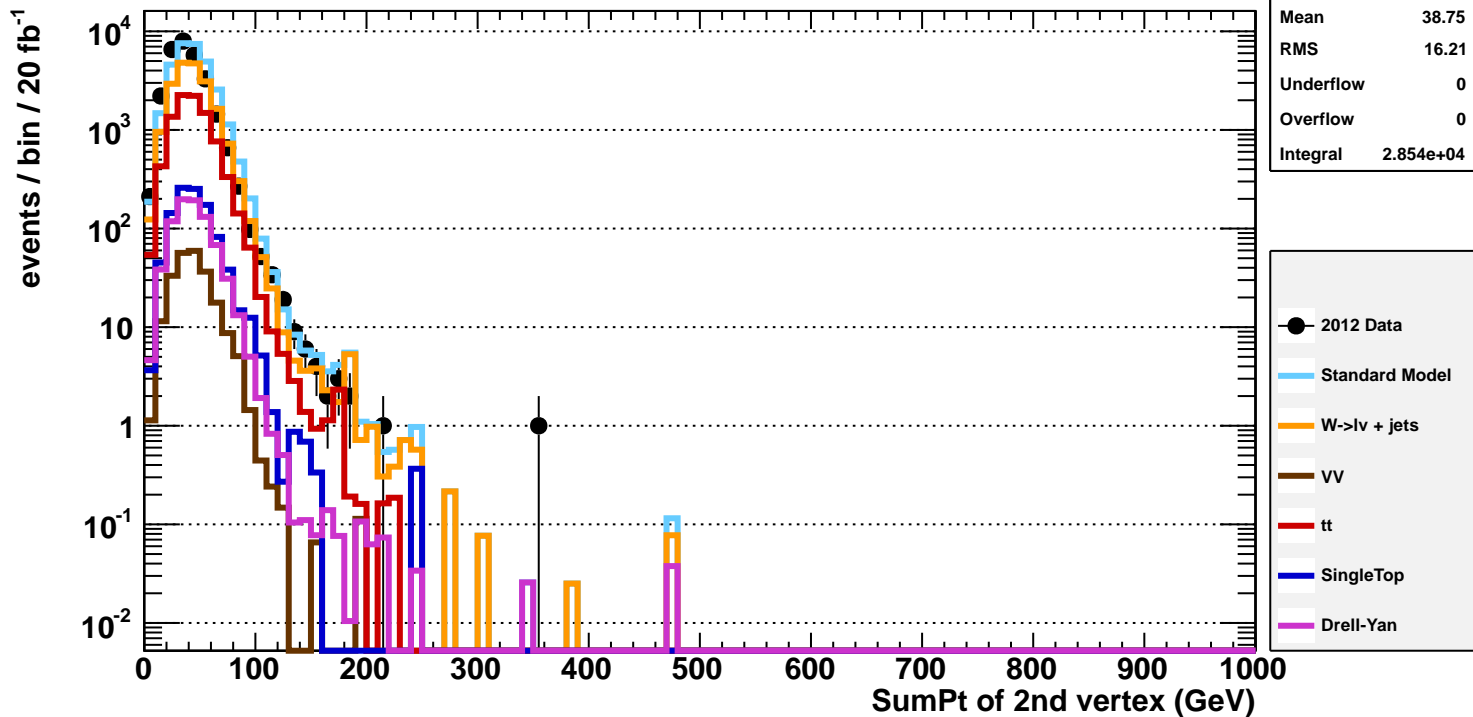
u: multiplicity           0 <= xcak5JetPFIIndicesOtherPat <= 0
v: multiplicity           0 <= xcak5JetPFIIndicesWithOddMuonPat <= 0
w: uniquelyMatchedNonisoMuons xcak5JetPFPat
x: multiplicity           0 <= electronIndicesPF <= 0
y: multiplicity           0 <= photonIndicesPat <= 0

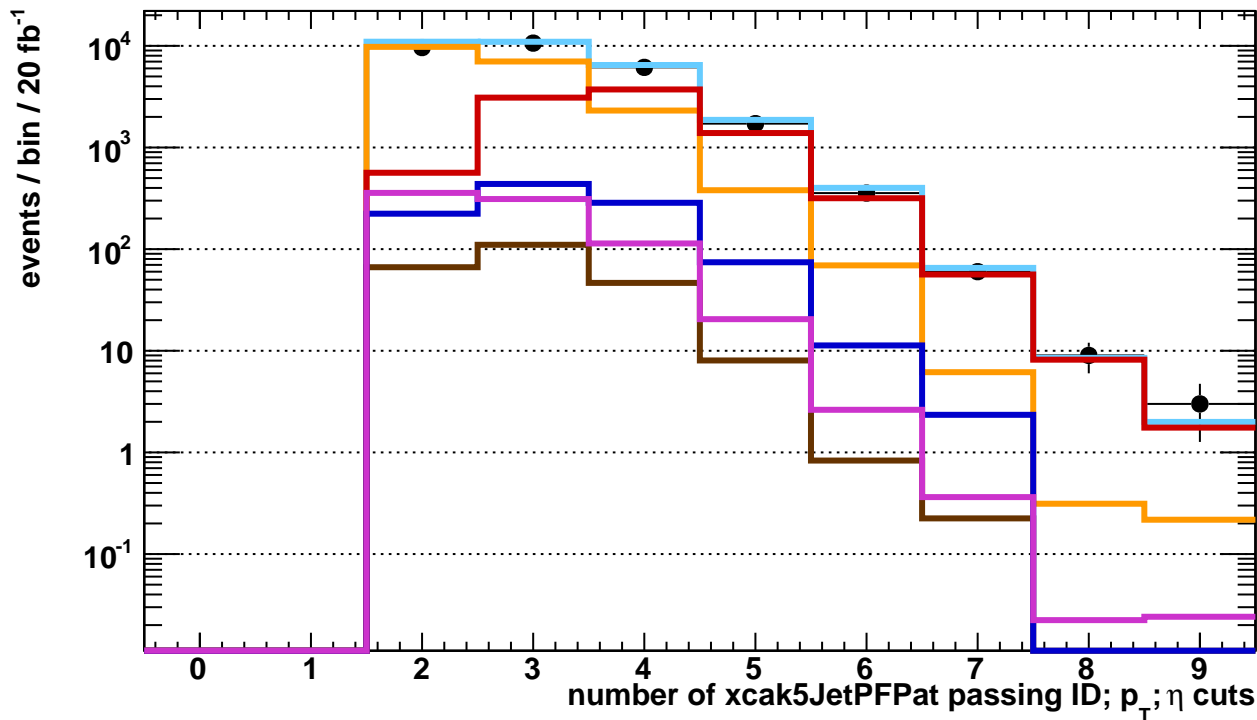
z: multiplicity           0 <= electronIndicesUnmatchedPF <= 0
A: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
B: deadEcalFilter         xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
C: multiplicity           1 <= muonIndicesPF <= 1
D: pt                     30.00<=muonP4PF[i[0]].pt; muonIndicesPF

E: eta                    -2.10<=muonP4PF[i[0]].eta<=2.10; muonIndicesPF
F: value                  30.00<=muonMtPFFmetP4TypeIPF<=125.00
G: value                  xcak5JetPFMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPF<=1.25
H: value                  PFRecHitSumPt<=30.00

```

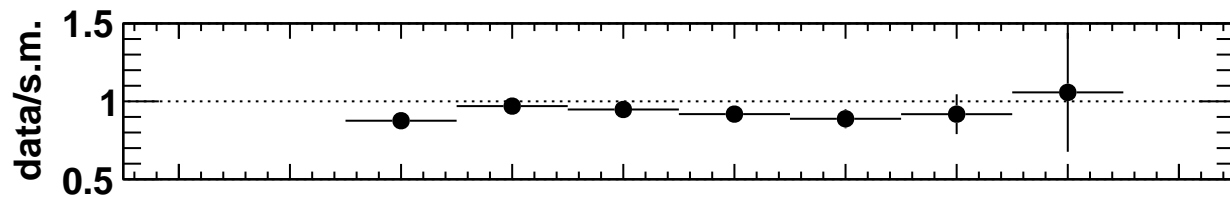
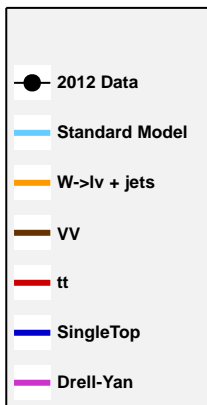
	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
q:	2058940	8.178(5)e+6	5.236(4)e+6	1.668(1)e+5	1.7666(6)e+6	4.226(4)e+5	5.867(9)e+5	0.2518(2)
r:	360314	1.9629(8)e+6	8.688(6)e+5	5.216(7)e+4	7.754(4)e+5	1.637(2)e+5	1.027(2)e+5	0.1836(3)
s:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
t:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
u:	136642	9.389(4)e+5	3.105(2)e+5	2.280(5)e+4	4.908(3)e+5	7.75(2)e+4	3.733(5)e+4	0.1455(4)
v:	131249	9.308(4)e+5	3.082(2)e+5	2.275(5)e+4	4.862(3)e+5	7.69(2)e+4	3.678(4)e+4	0.1410(4)
w:	130855	9.292(4)e+5	3.079(2)e+5	2.274(5)e+4	4.850(3)e+5	7.68(2)e+4	3.672(4)e+4	0.1408(4)
x:	128978	7.816(4)e+5	2.276(2)e+5	2.177(4)e+4	4.370(3)e+5	7.21(2)e+4	2.313(4)e+4	0.1650(5)
y:	128348	7.745(4)e+5	2.231(2)e+5	2.166(4)e+4	4.353(3)e+5	7.19(2)e+4	2.254(4)e+4	0.1657(5)
z:	128322	7.740(4)e+5	2.230(2)e+5	2.165(4)e+4	4.351(3)e+5	7.18(2)e+4	2.252(4)e+4	0.1658(5)
A:	128313	7.740(4)e+5	2.229(2)e+5	2.165(4)e+4	4.350(3)e+5	7.18(2)e+4	2.251(4)e+4	0.1658(5)
B:	62869	2.458(2)e+5	9.95(1)e+4	5.78(2)e+3	1.120(1)e+5	1.912(8)e+4	9.45(2)e+3	0.256(1)
C:	55351	6.85(1)e+4	4.236(8)e+4	487(7)	2.084(6)e+4	2.31(3)e+3	2.52(1)e+3	0.808(4)
D:	50894	5.452(9)e+4	3.383(7)e+4	408(6)	1.648(5)e+4	1.78(3)e+3	2011(9)	0.934(4)
E:	50891	5.187(9)e+4	3.175(7)e+4	384(6)	1.617(5)e+4	1.75(3)e+3	1814(8)	0.981(5)
F:	36430	3.735(8)e+4	2.316(6)e+4	274(5)	1.163(4)e+4	1.27(2)e+3	1027(6)	0.975(5)
G:	29820	3.088(7)e+4	1.962(5)e+4	233(5)	9.18(4)e+3	1.04(2)e+3	808(5)	0.966(6)
H:	28544	3.079(7)e+4	1.956(5)e+4	232(5)	9.15(4)e+3	1.03(2)e+3	806(5)	0.927(6)





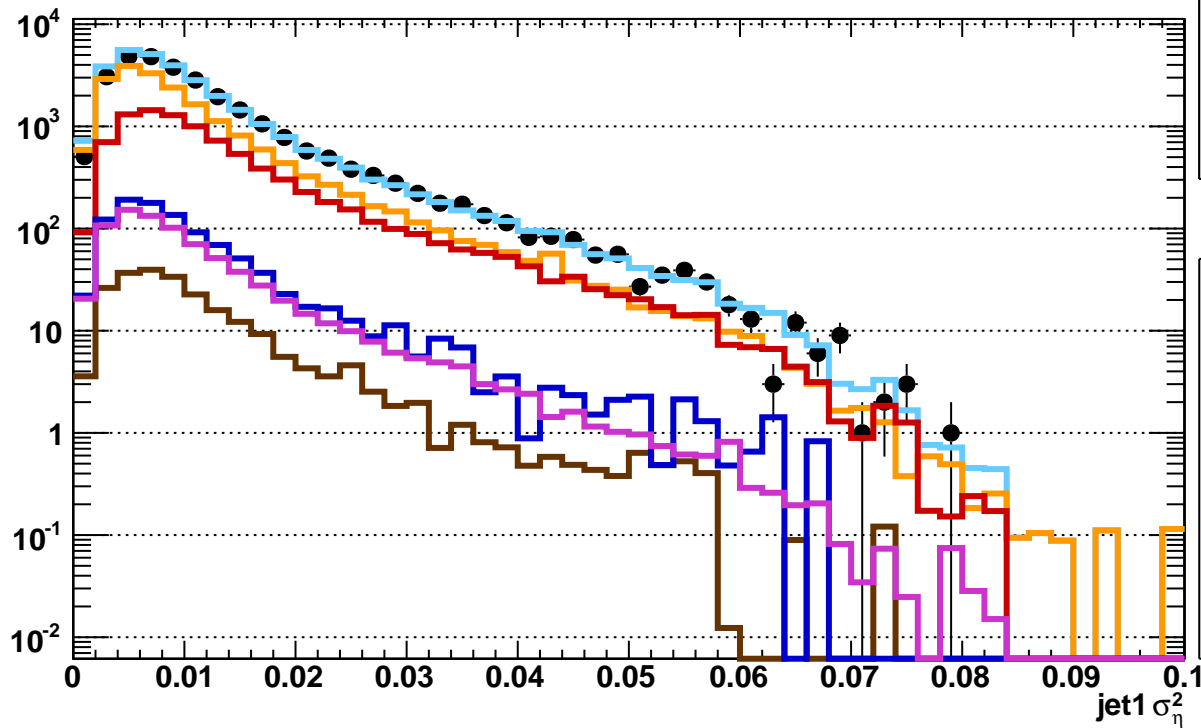
jetMultiplicity

Entries	28544
Mean	3.047
RMS	0.9737
Underflow	0
Overflow	0
Integral	2.854e+04

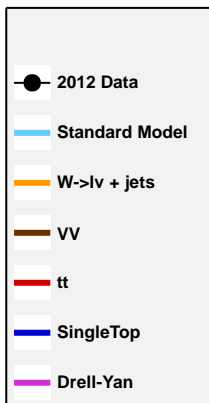




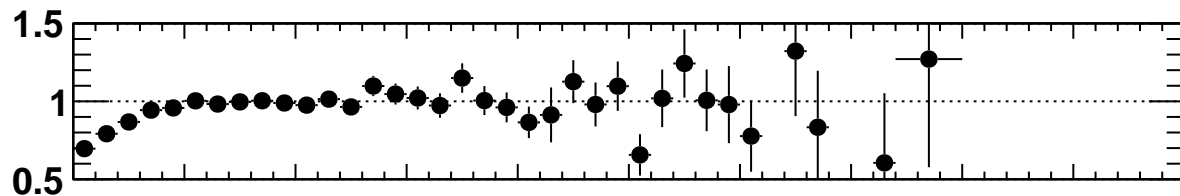
events / bin / 20 fb<sup>-1</sup>

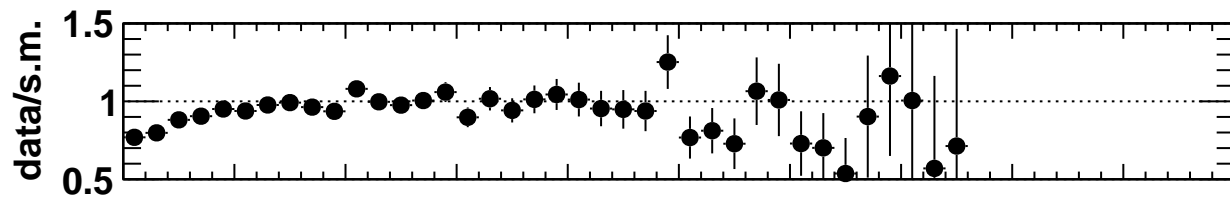
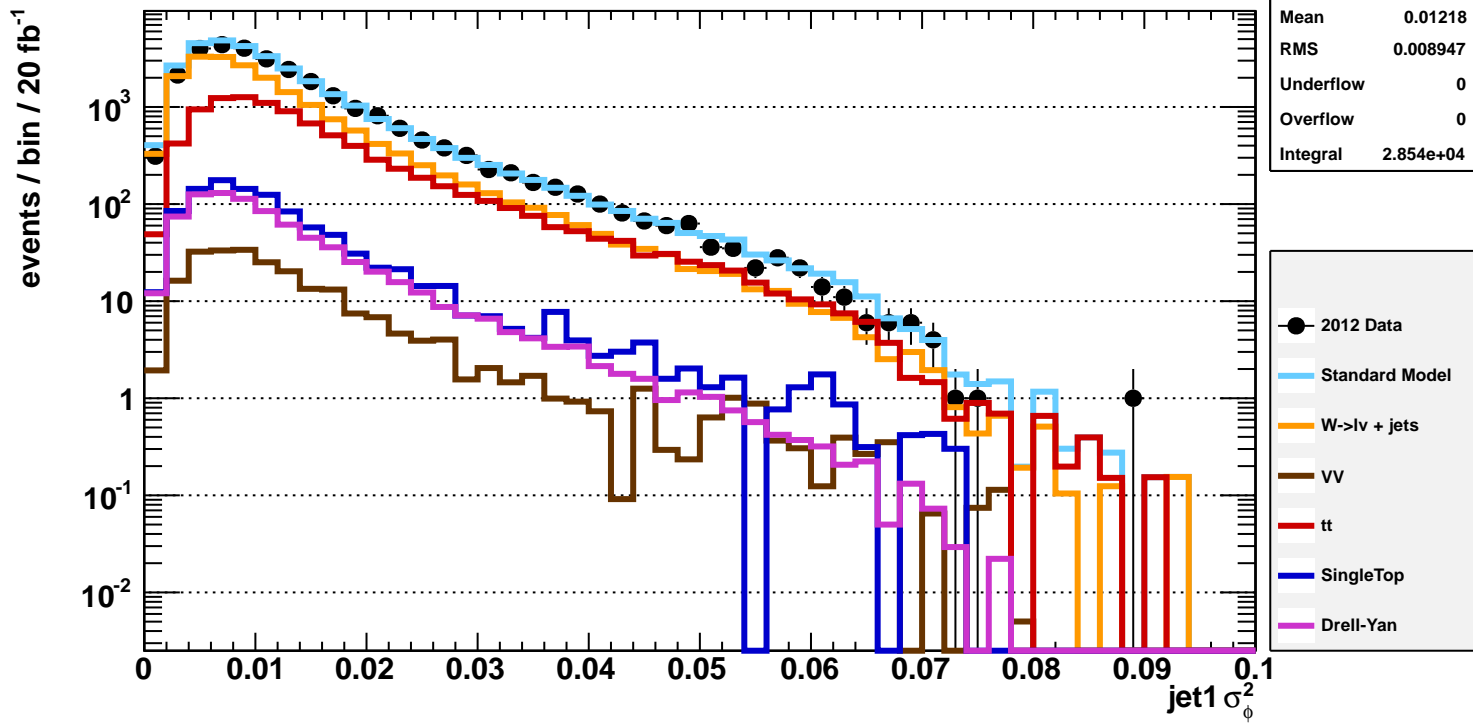


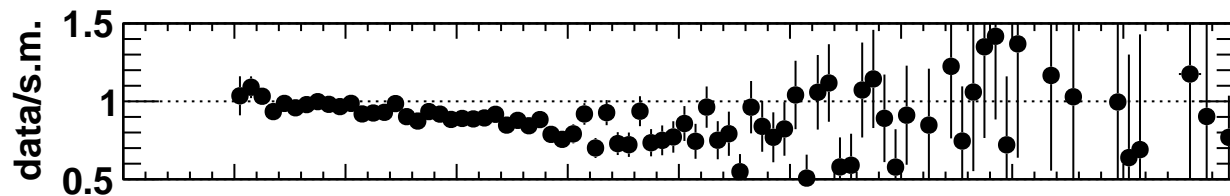
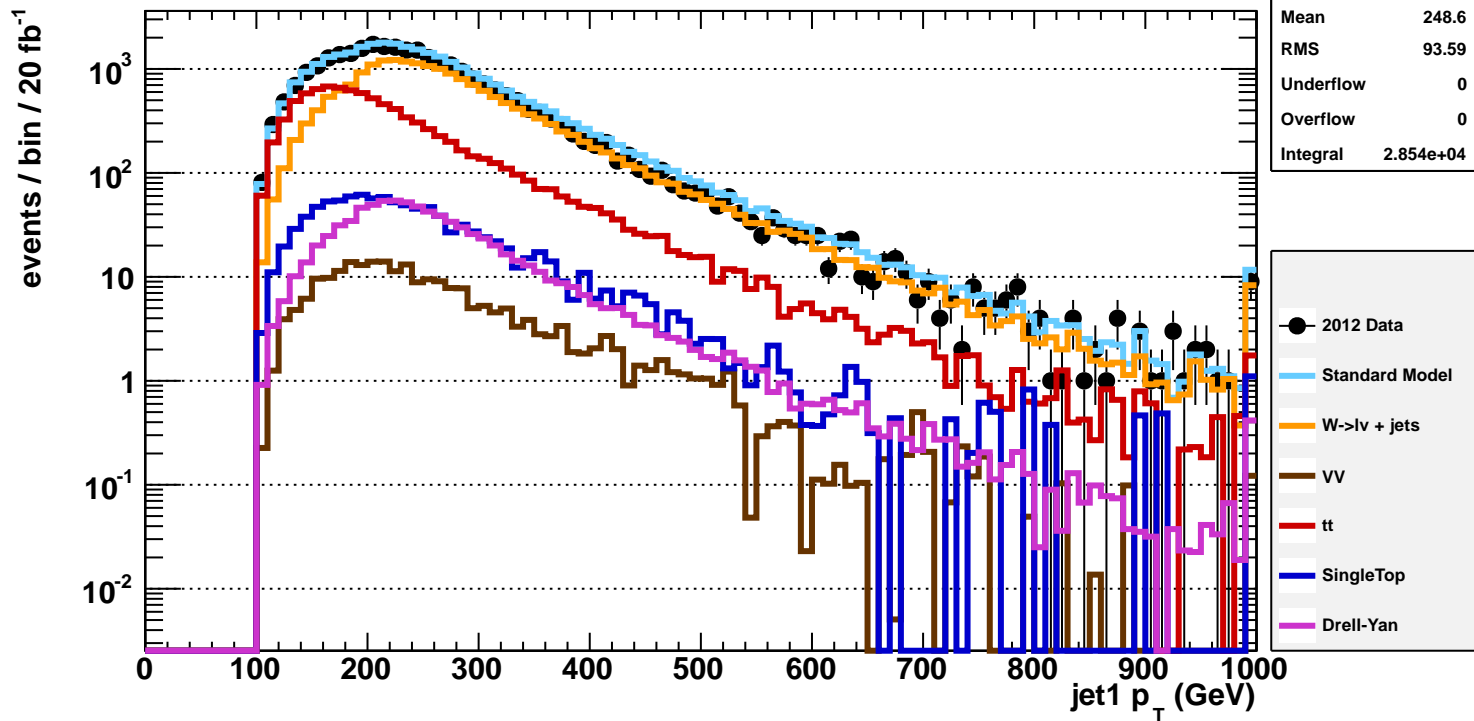
xcak5JetPFPat1Eta2mom	
Entries	28544
Mean	0.01115
RMS	0.008957
Underflow	0
Overflow	0
Integral	2.854e+04



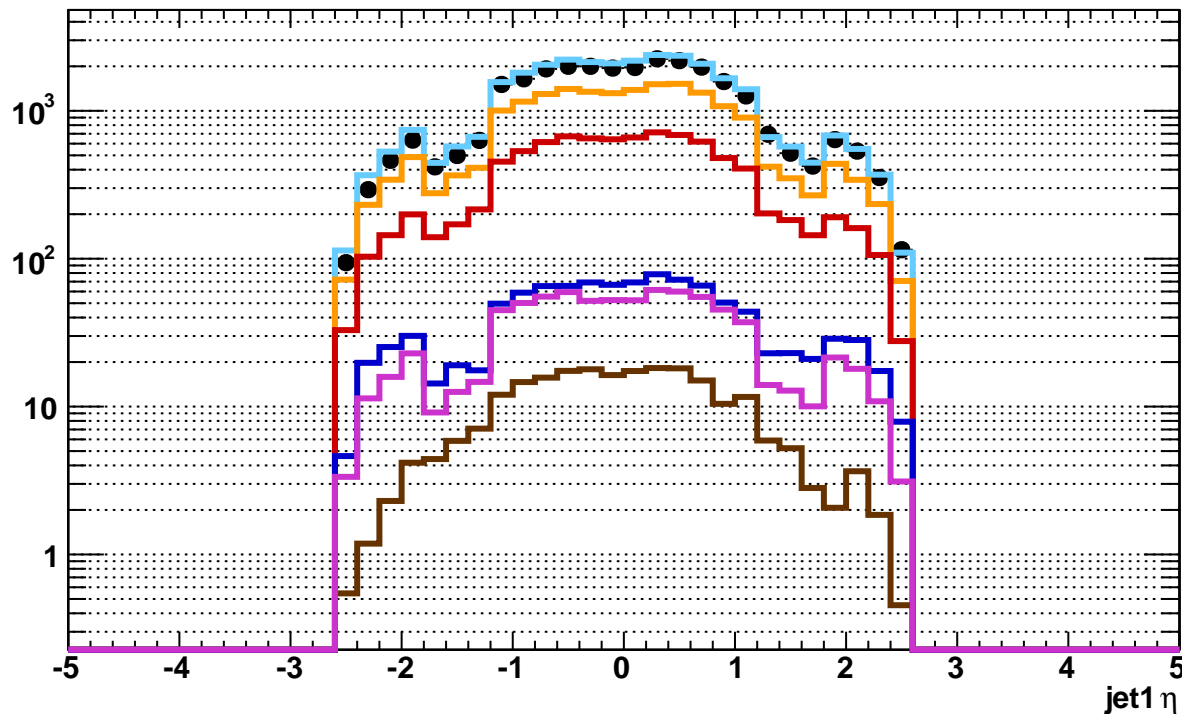
data/s.m.



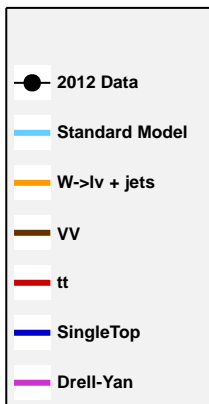




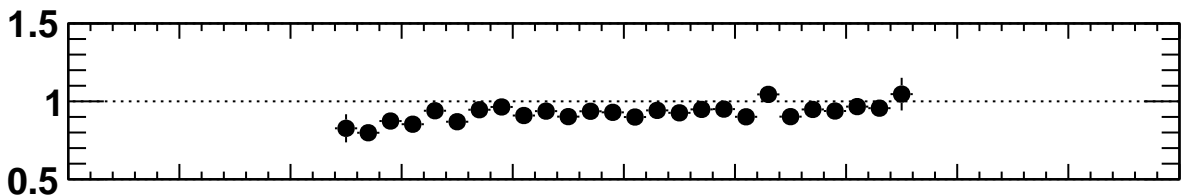
events / bin / 20 fb<sup>-1</sup>



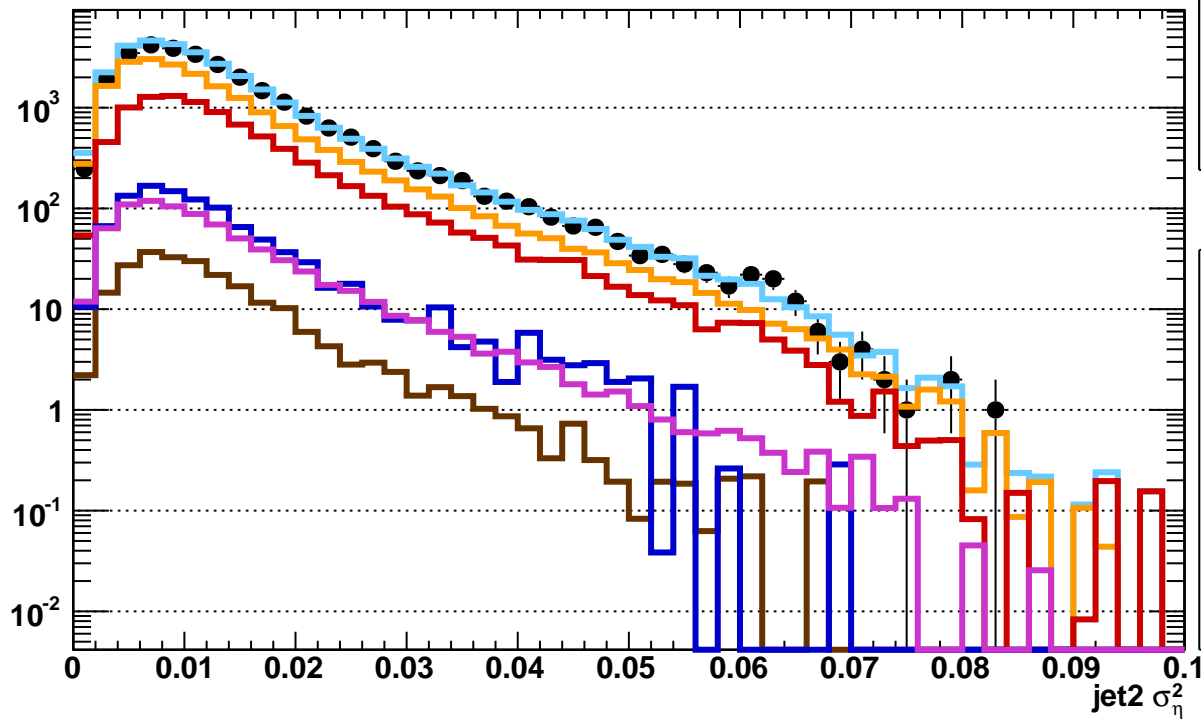
xcak5JetPFPat1eta	
Entries	28544
Mean	0.01215
RMS	1.023
Underflow	0
Overflow	0
Integral	2.854e+04



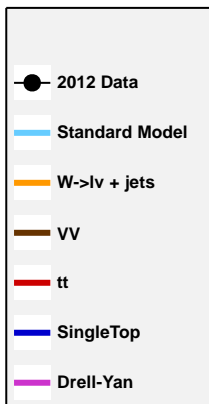
data/s.m.



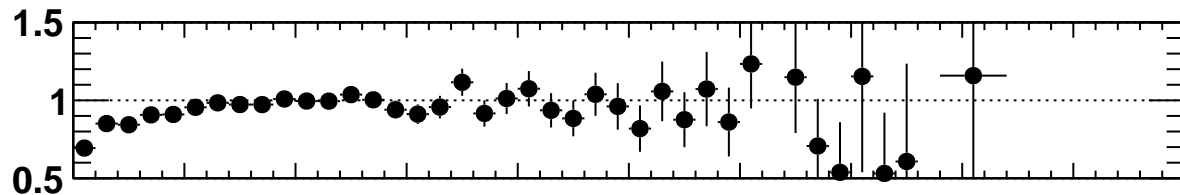
events / bin / 20 fb<sup>-1</sup>



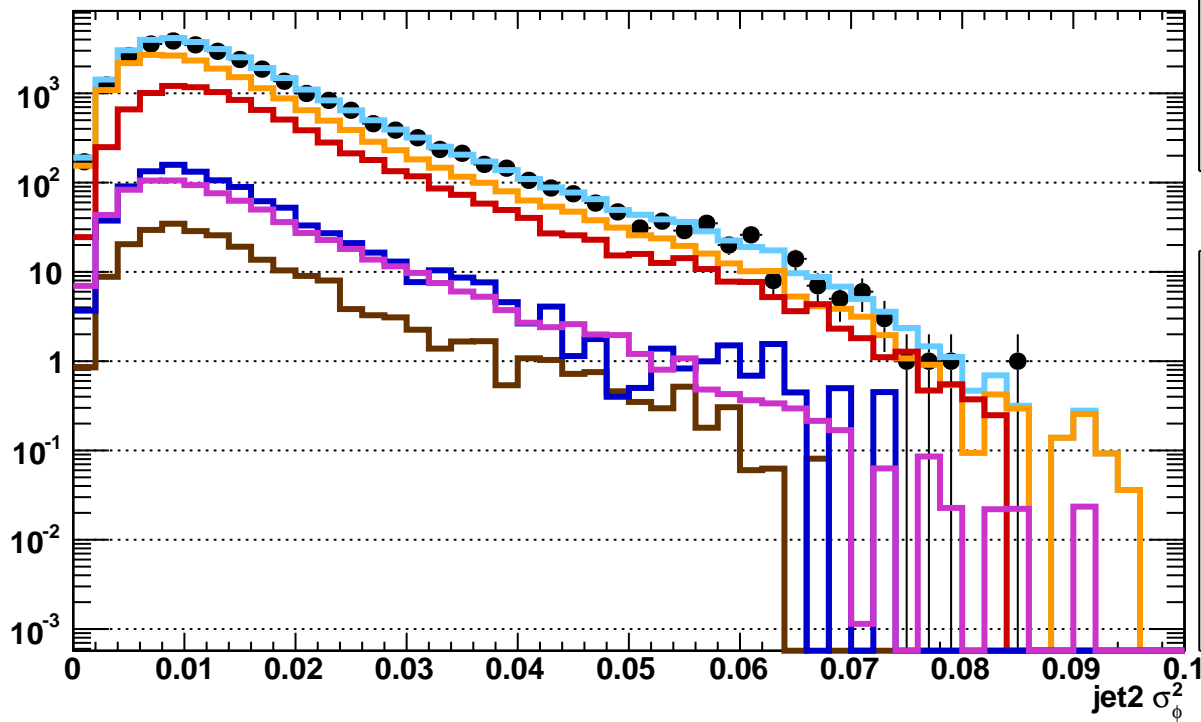
xcak5JetPFPat2Eta2mom	
Entries	28544
Mean	0.01258
RMS	0.008931
Underflow	0
Overflow	0
Integral	2.854e+04



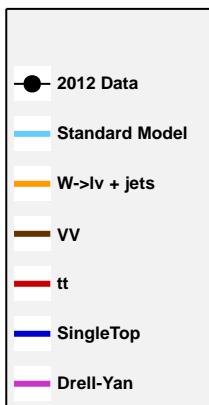
data/s.m.



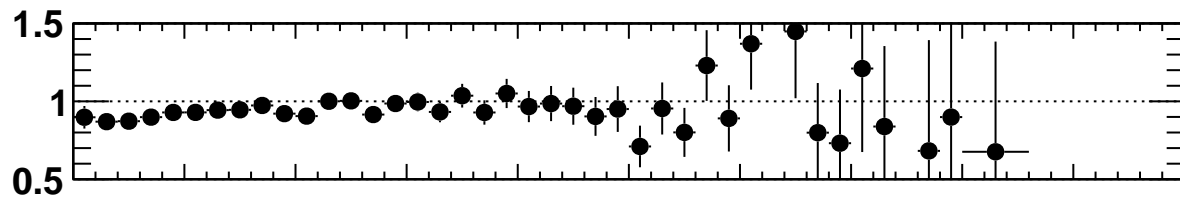
events / bin / 20 fb<sup>-1</sup>

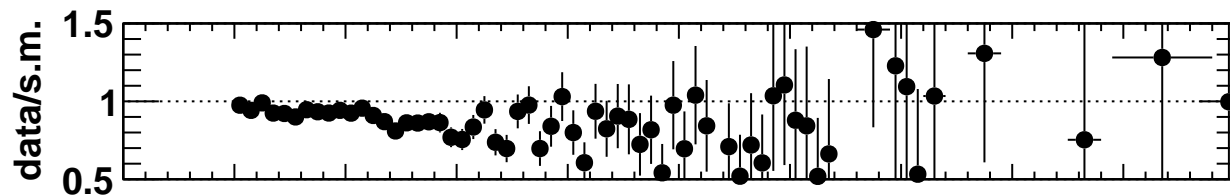
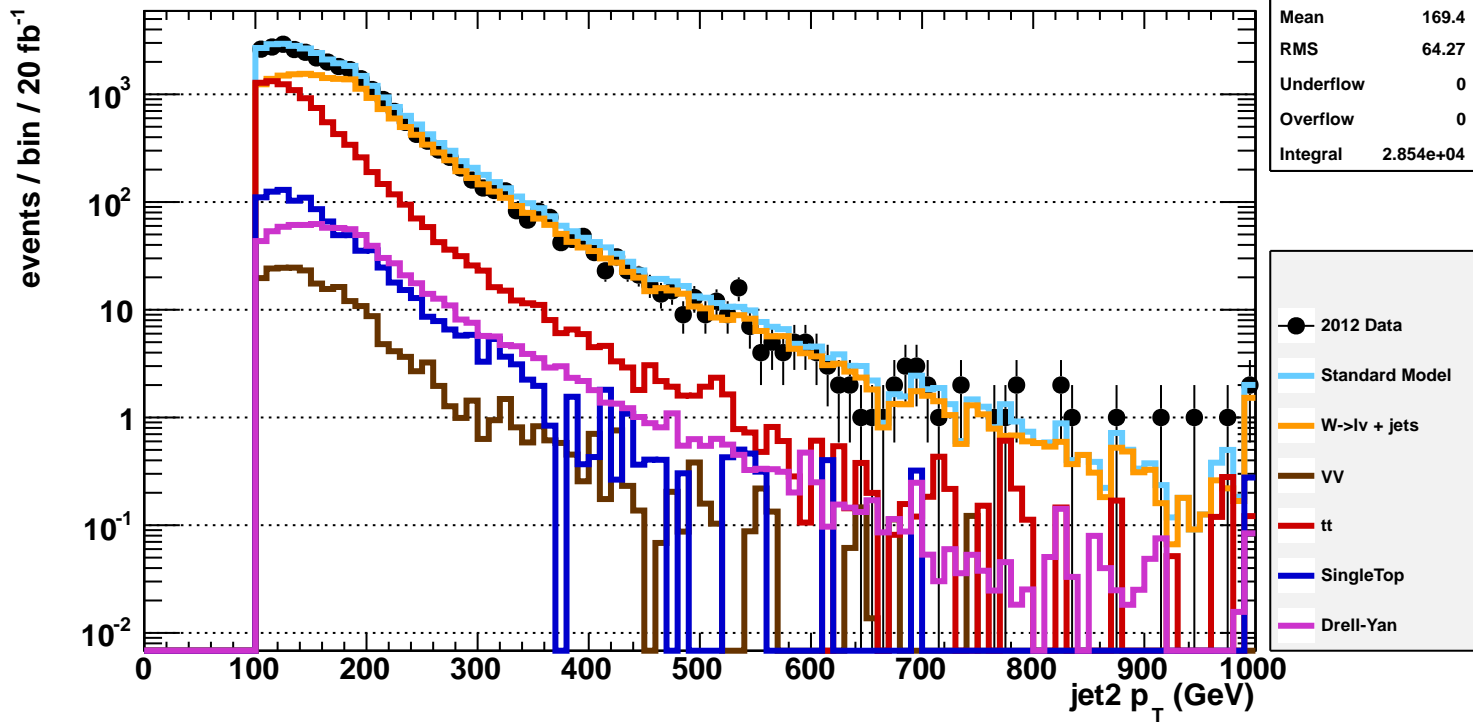


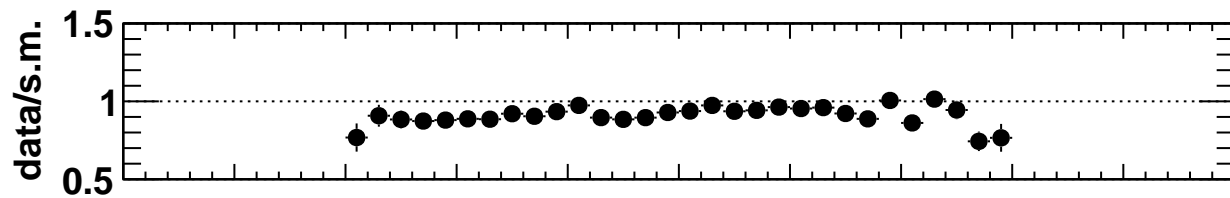
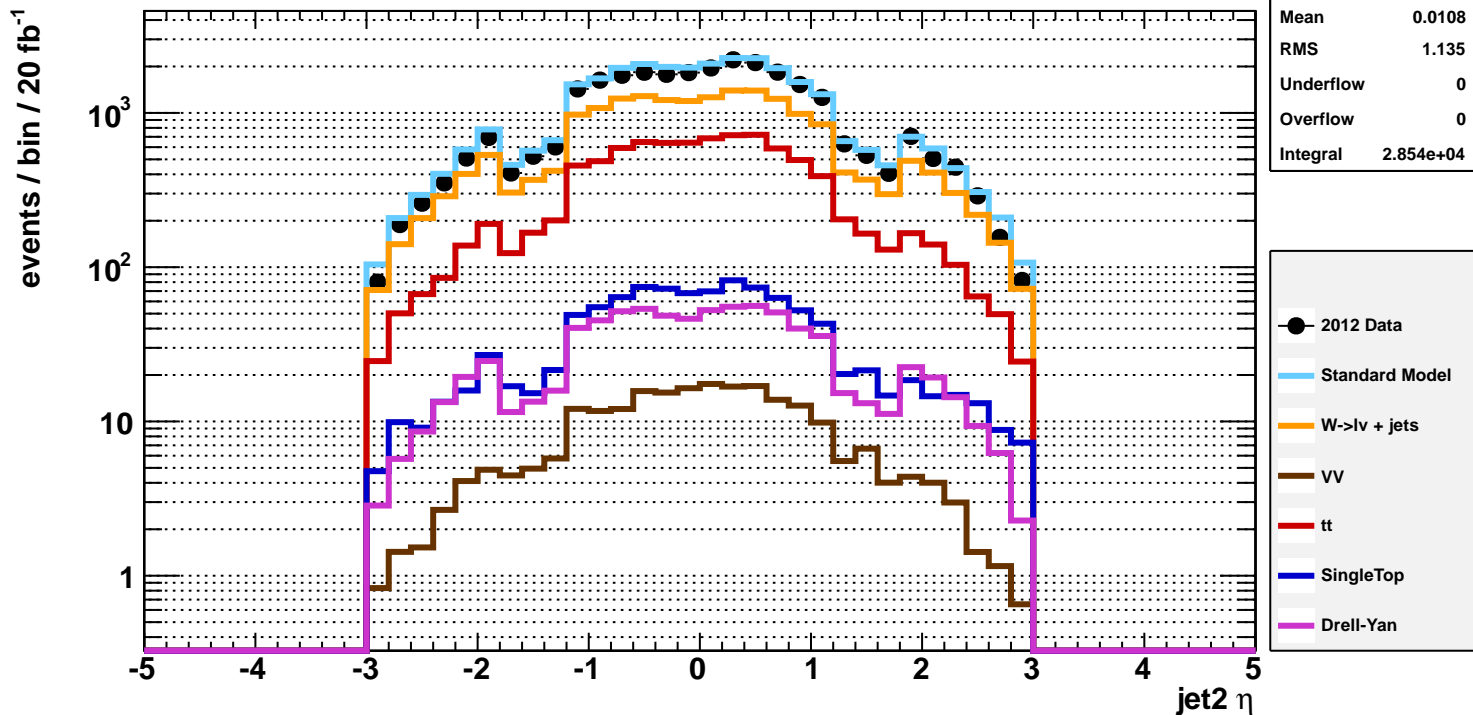
xcak5JetPFPat2Phi2mom	
Entries	28544
Mean	0.01378
RMS	0.009054
Underflow	0
Overflow	0
Integral	2.854e+04



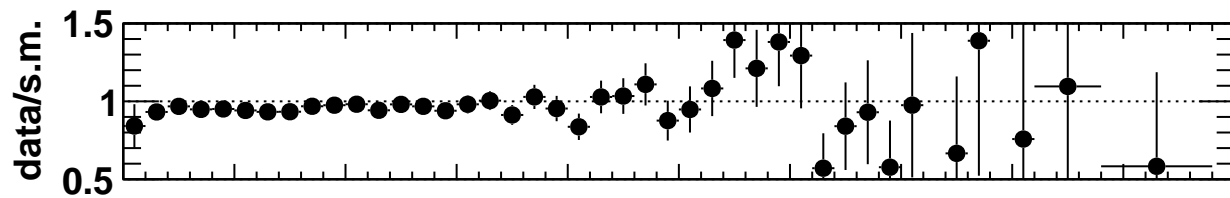
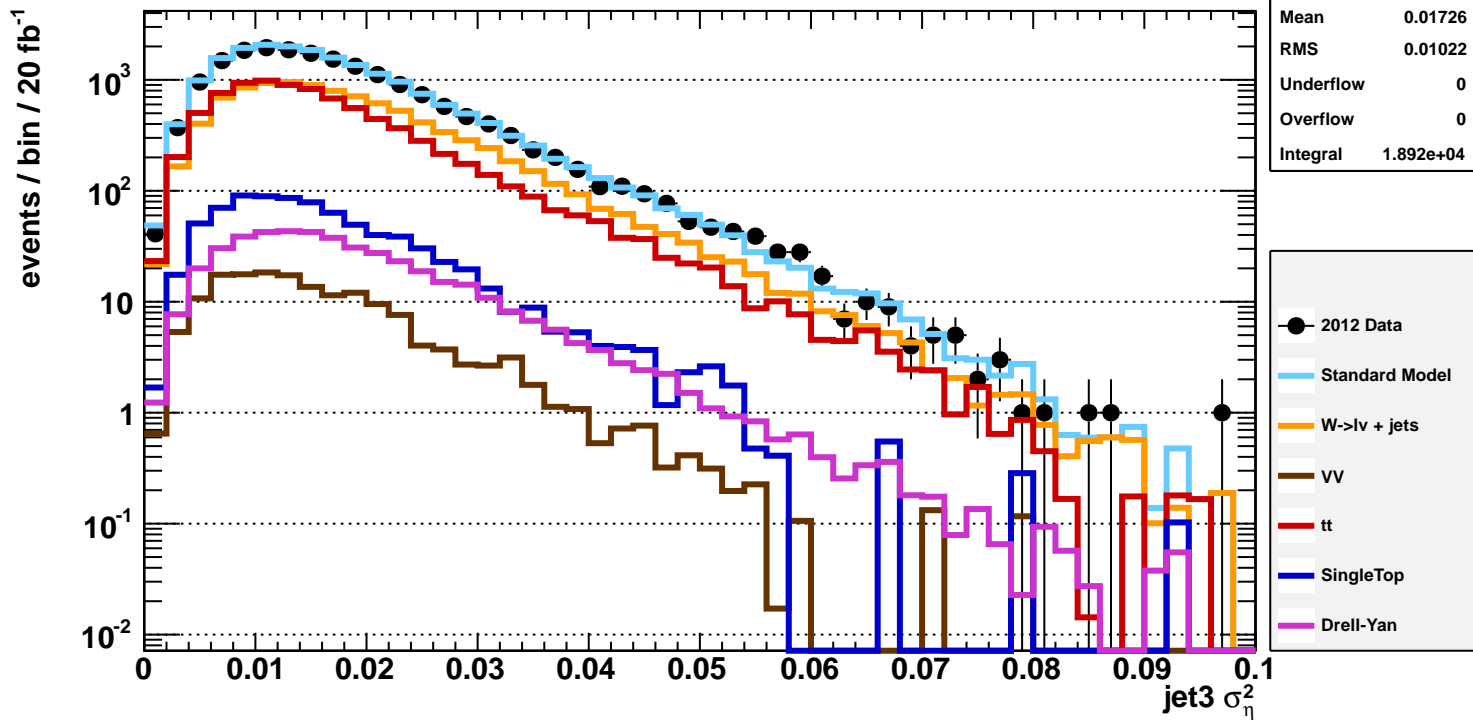
data/s.m.

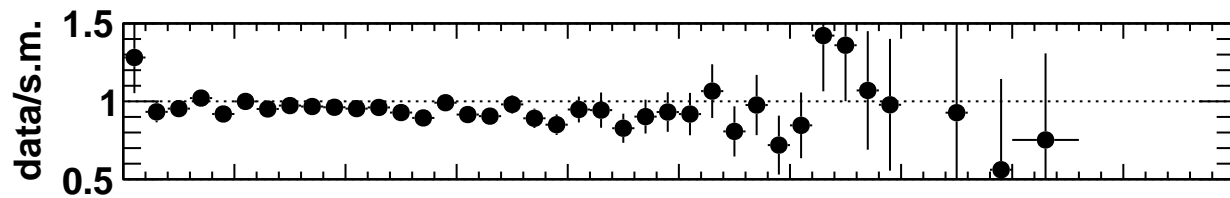
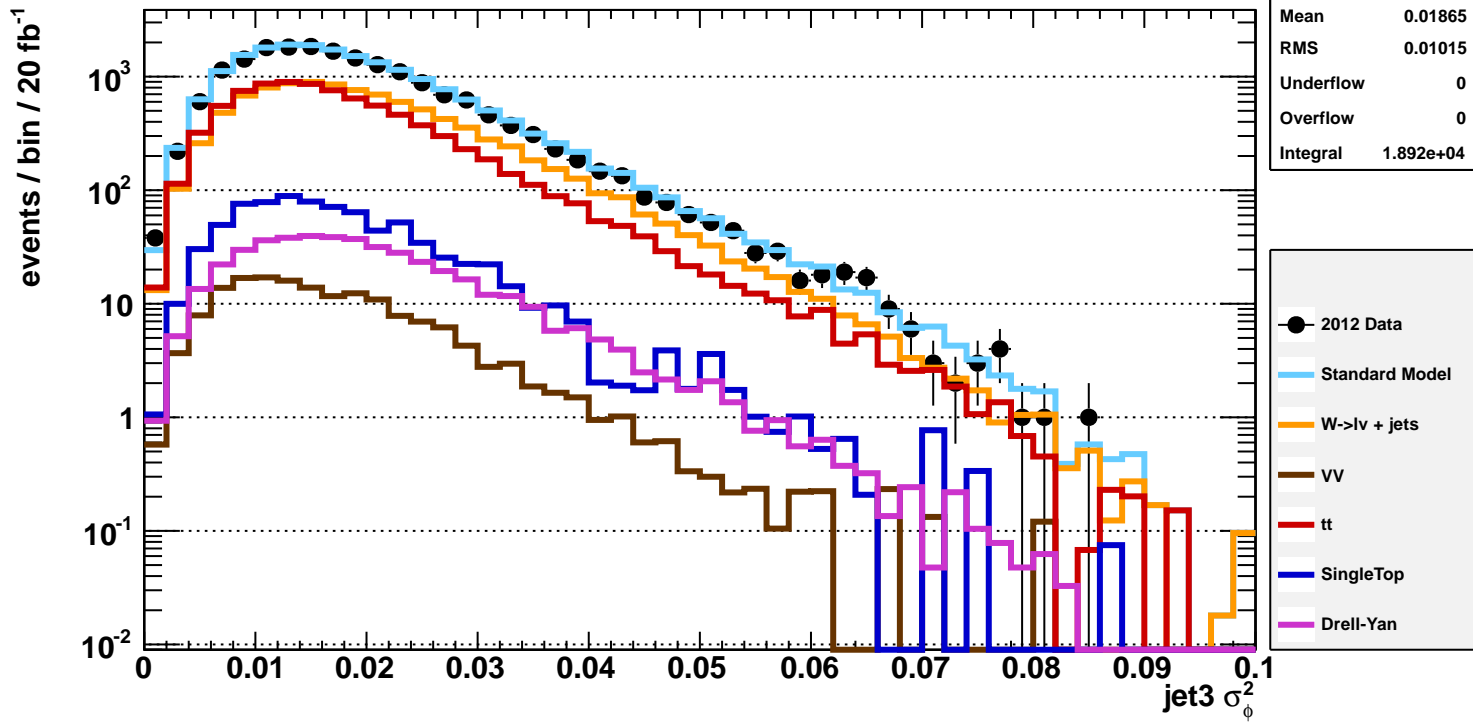




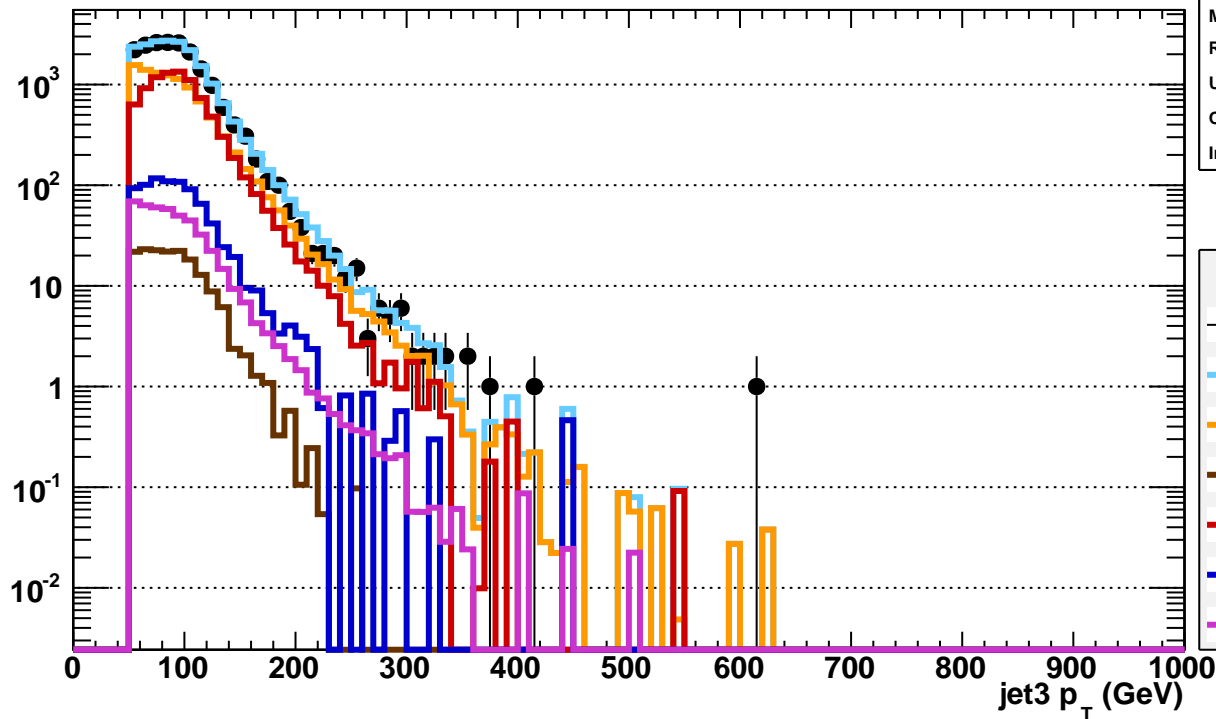




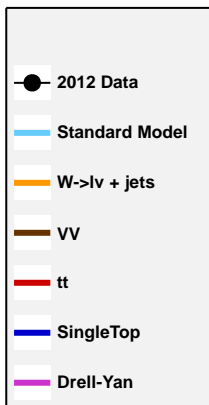




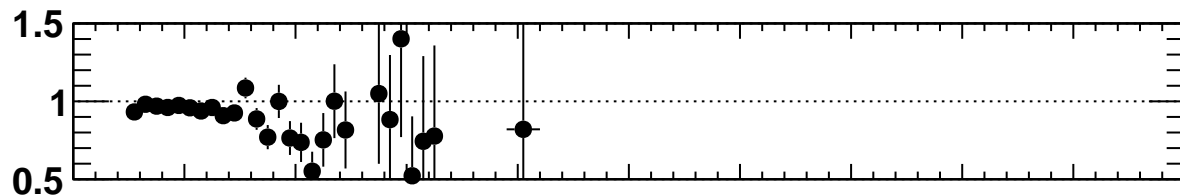
events / bin / 20 fb<sup>-1</sup>

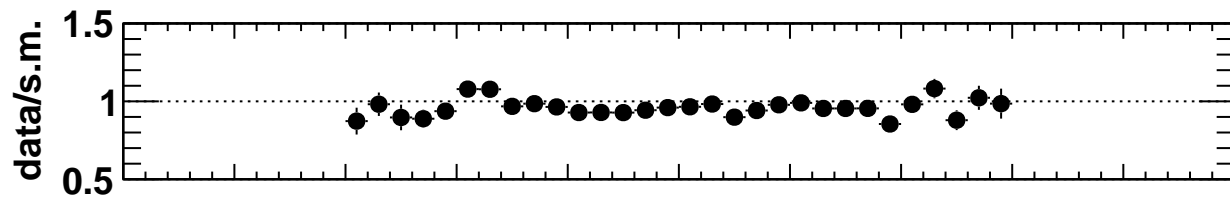
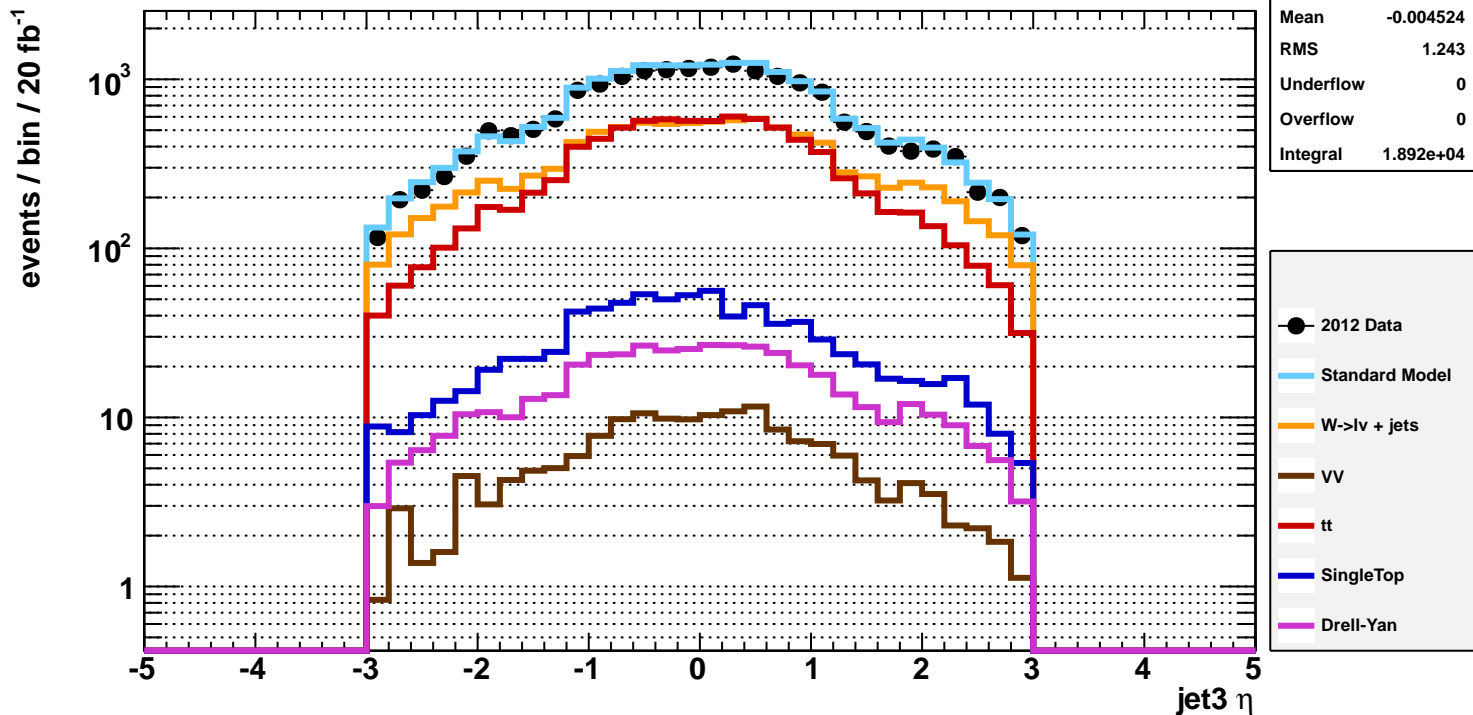


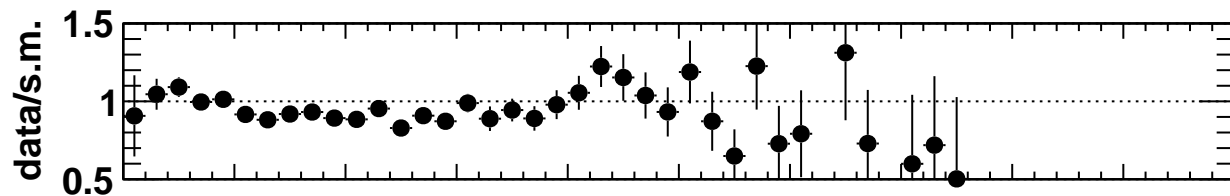
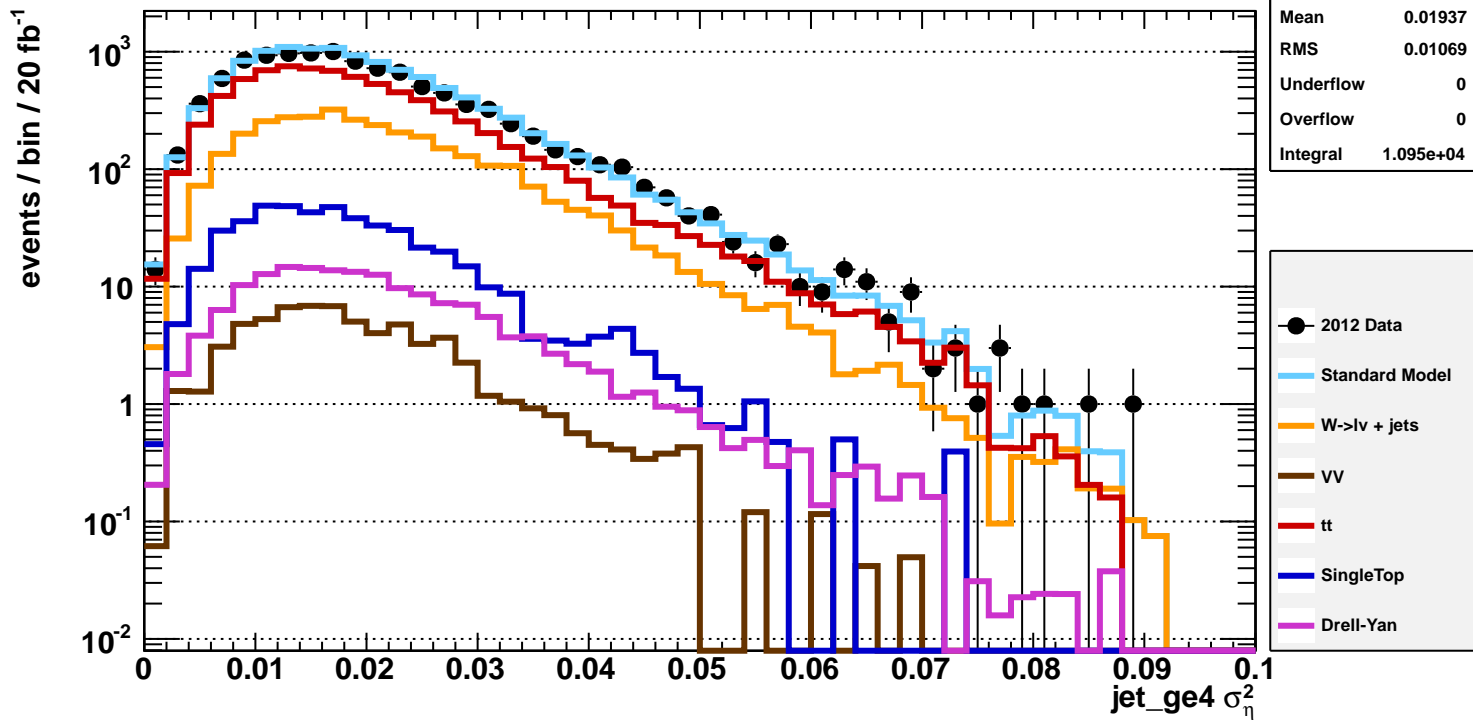
xcak5JetPFPat3Pt	
Entries	18925
Mean	92.79
RMS	31.25
Underflow	0
Overflow	0
Integral	1.892e+04

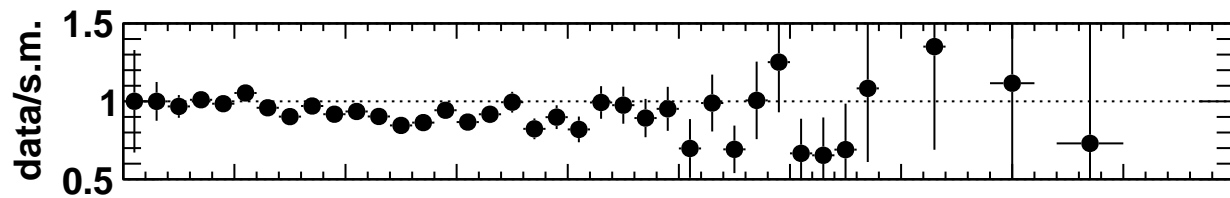
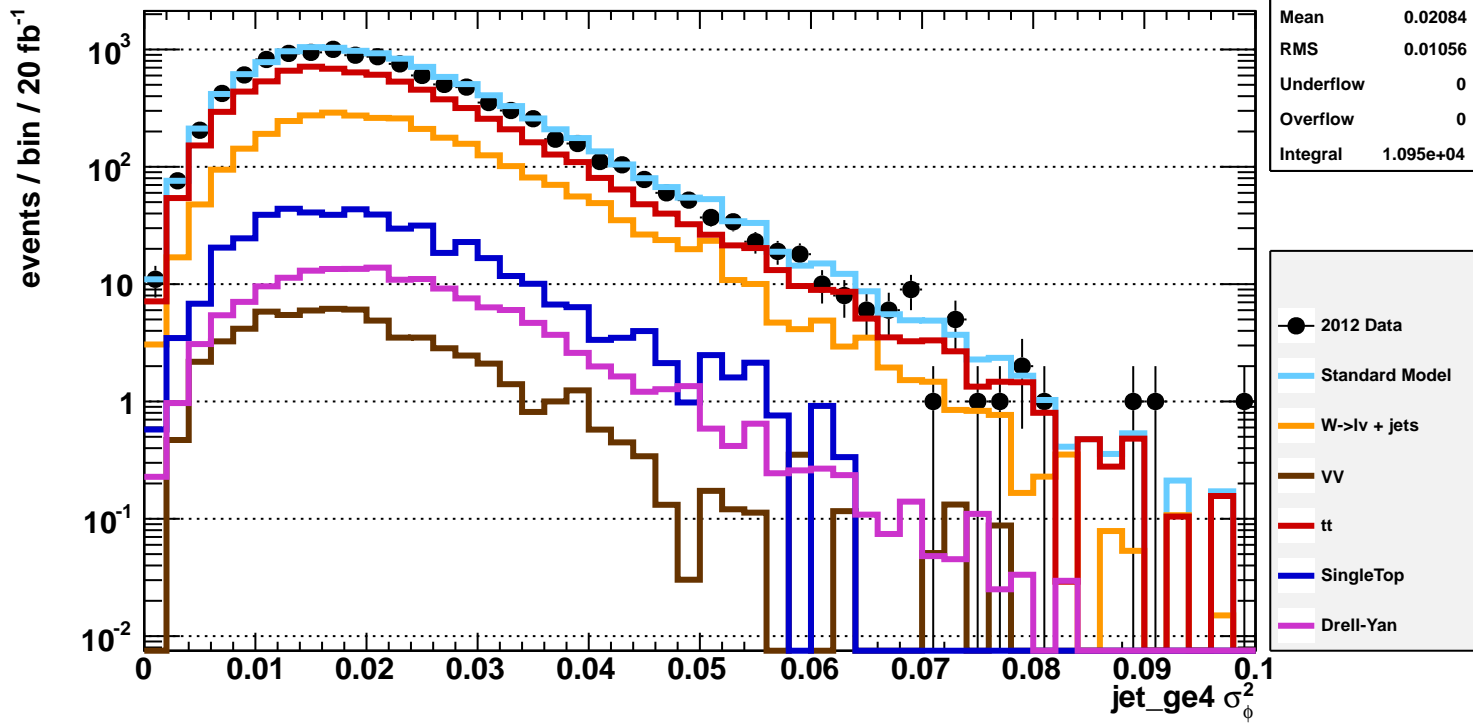


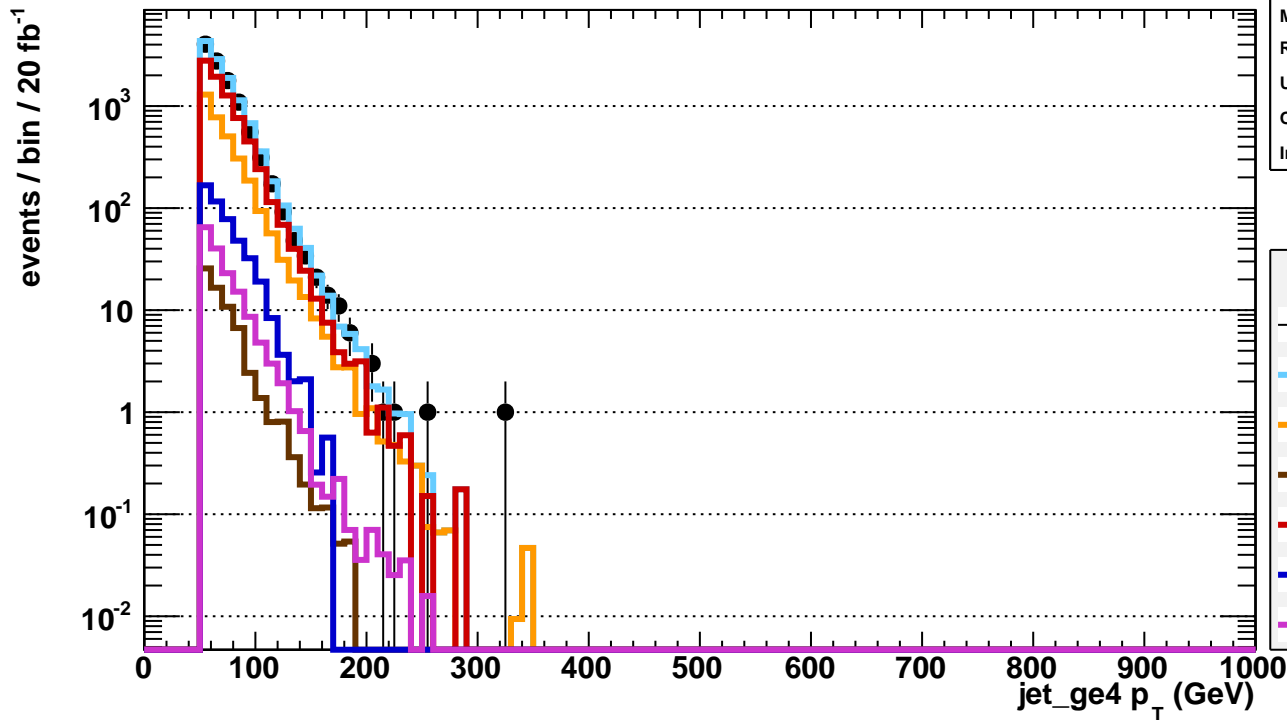
data/s.m.



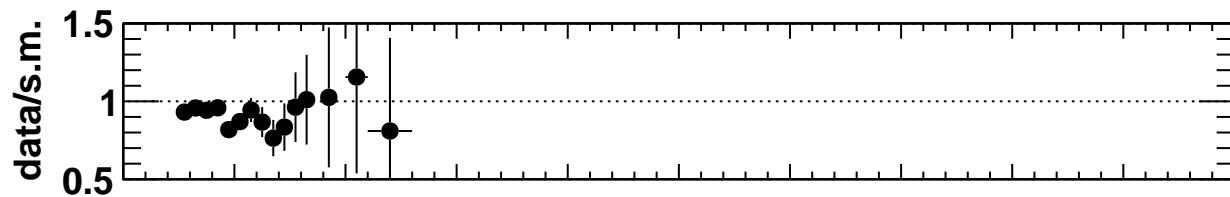


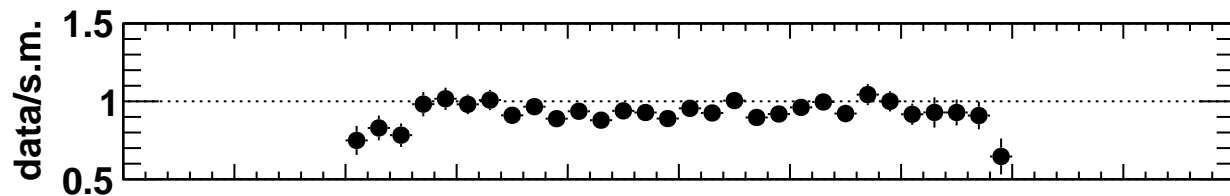
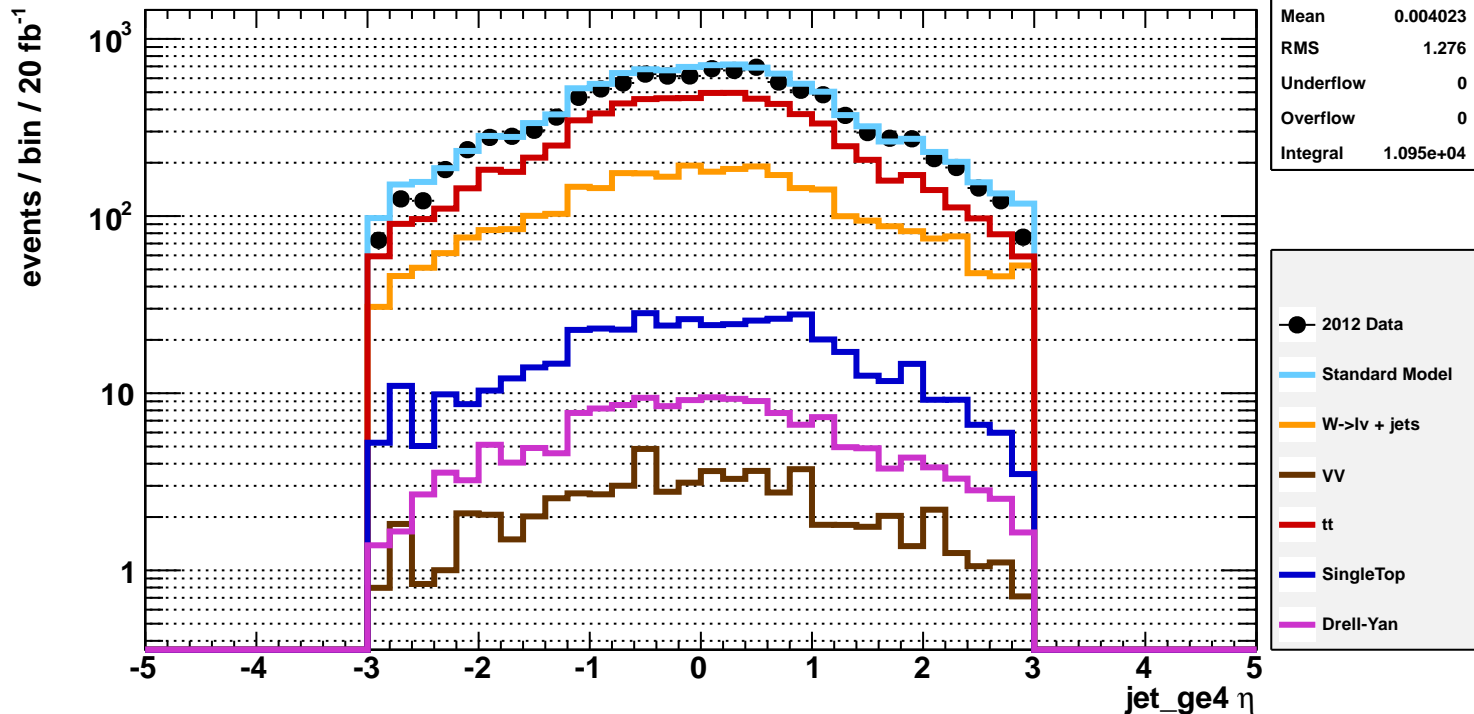




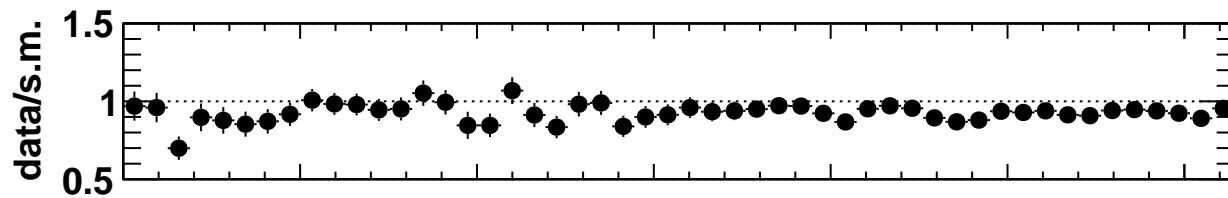
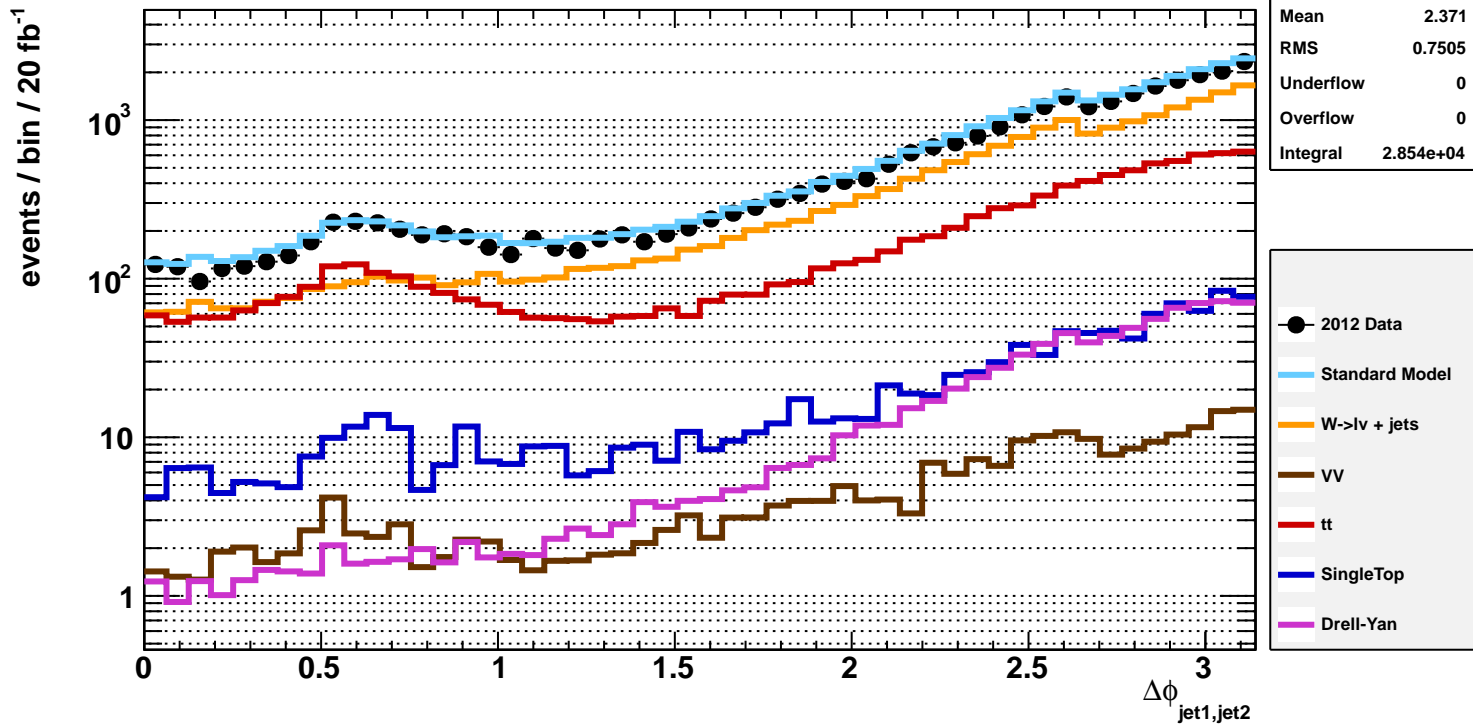


xcak5JetPFPat_ge4Pt	
Entries	10947
Mean	69.66
RMS	18.56
Underflow	0
Overflow	0
Integral	1.095e+04

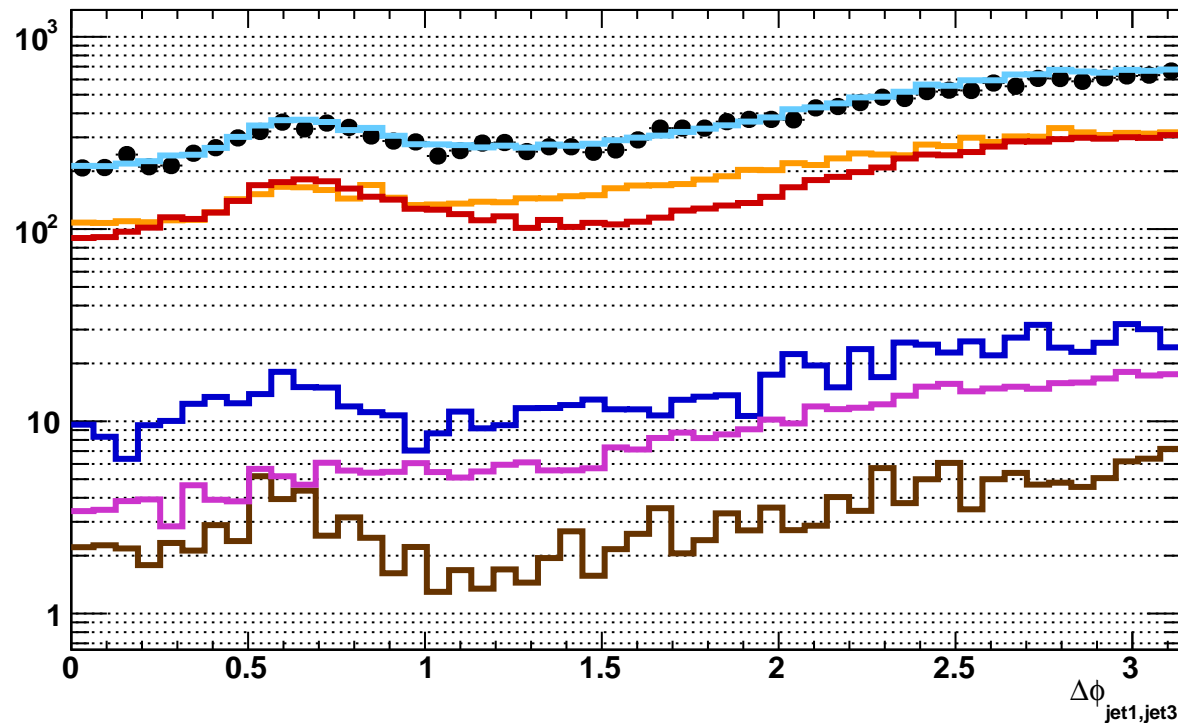




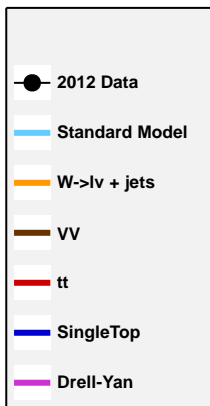




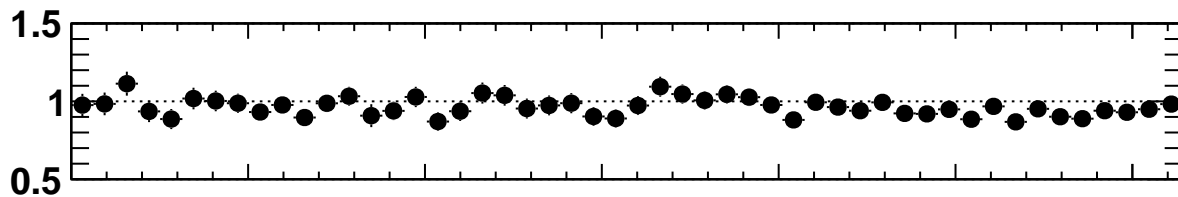
events / bin / 20 fb<sup>-1</sup>

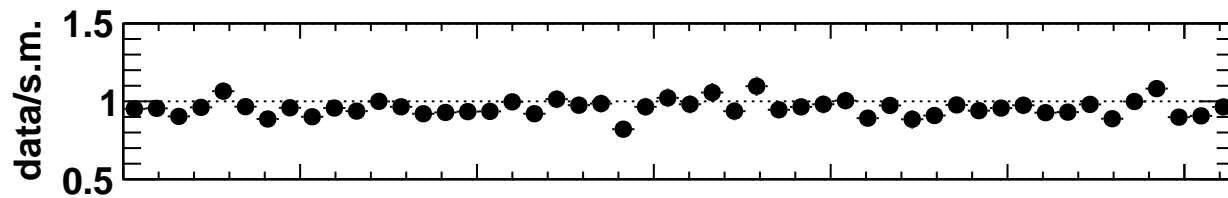
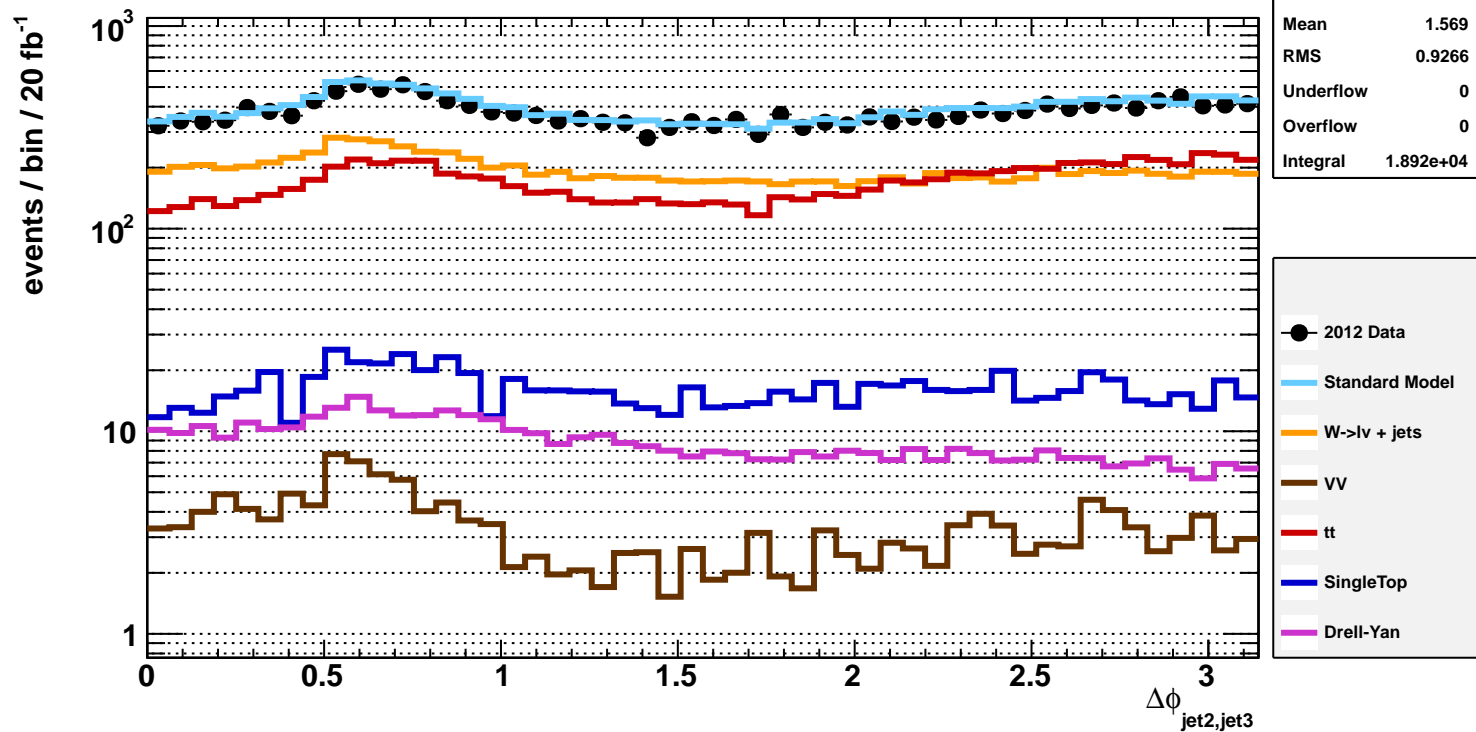


xcak5JetPFPatdphi13	
Entries	18925
Mean	1.86
RMS	0.9088
Underflow	0
Overflow	0
Integral	1.892e+04



data/s.m.





```

r: jetPtSelector          xcak5JetPFPat; pT[index[1]]>=100.0 GeV
s: value                  375.00<=xcak5JetPFSumEtPat
t: multiplicity           2 <= xcak5JetPFIIndicesPat

u: multiplicity           0 <= xcak5JetPFIIndicesOtherPat <= 0
v: multiplicity           0 <= xcak5JetPFIIndicesWithOddMuonPat <= 0
w: uniquelyMatchedNonisoMuons xcak5JetPFPat
x: multiplicity           0 <= electronIndicesPF <= 0
y: multiplicity           0 <= photonIndicesPat <= 0

z: multiplicity           0 <= electronIndicesUnmatchedPF <= 0
A: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
B: deadEcalFilter         xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
C: multiplicity           1 <= muonIndicesPF <= 1
D: pt                     30.00<=muonP4PF[i[0]].pt; muonIndicesPF

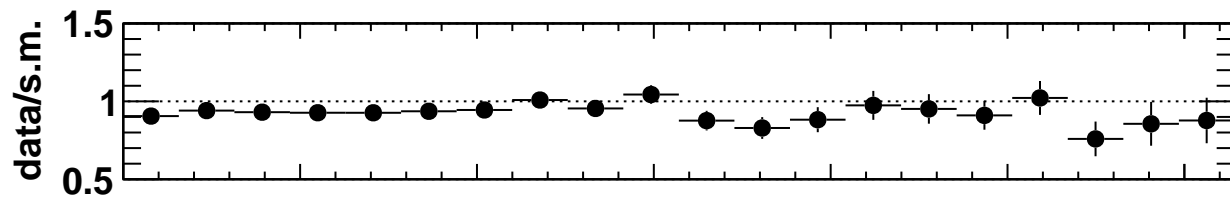
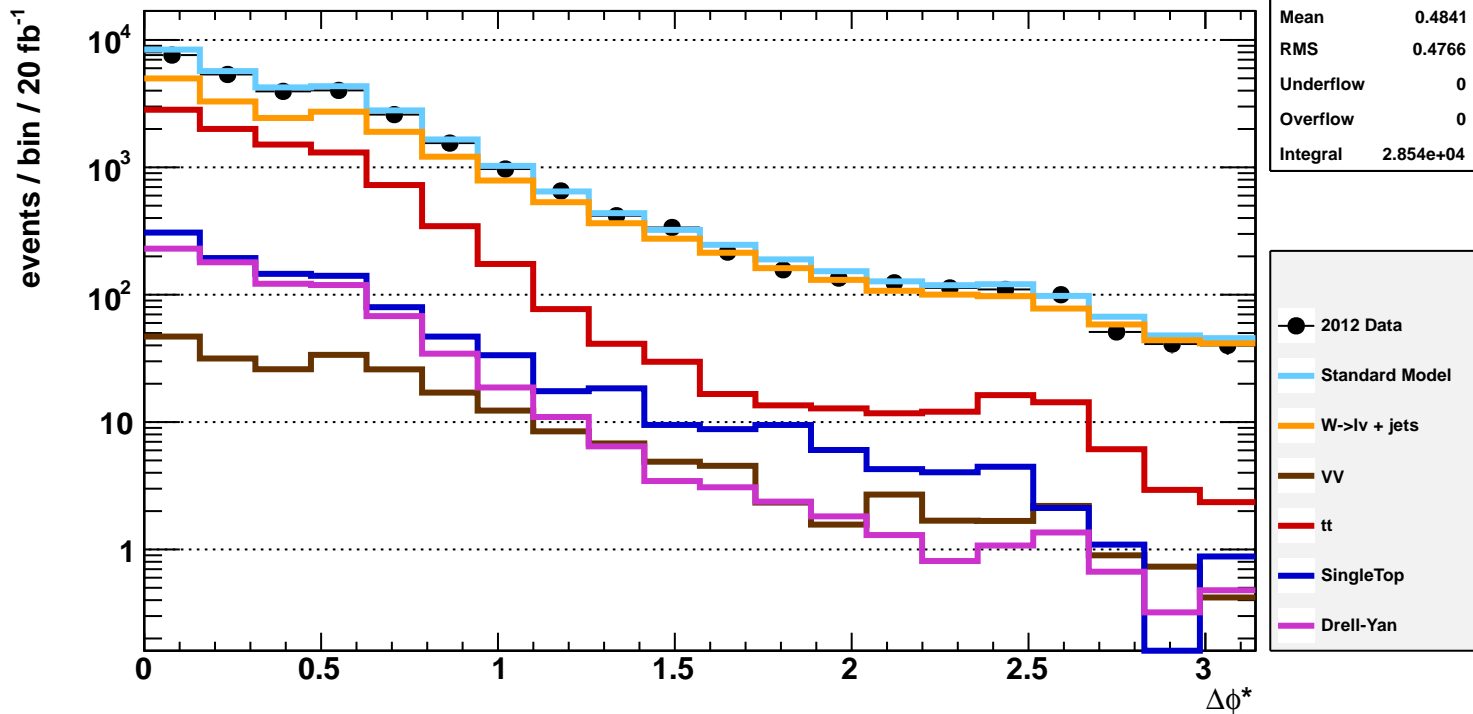
E: eta                    -2.10<=muonP4PF[i[0]].eta<=2.10; muonIndicesPF
F: value                  30.00<=muonMtPFFmetP4TypeIPF<=125.00
G: value                  xcak5JetPFFMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPF<=1.25
H: value                  PFRecHitSumPt<=30.00

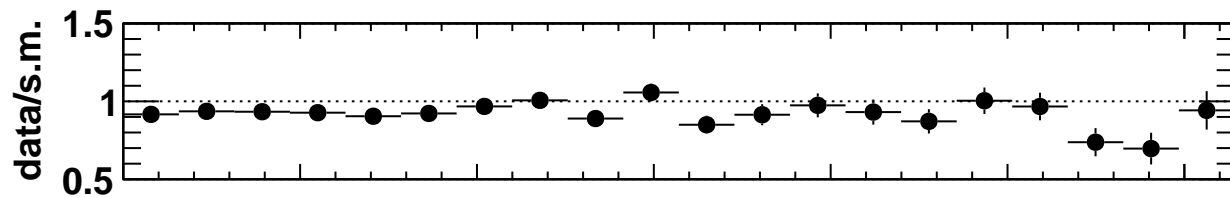
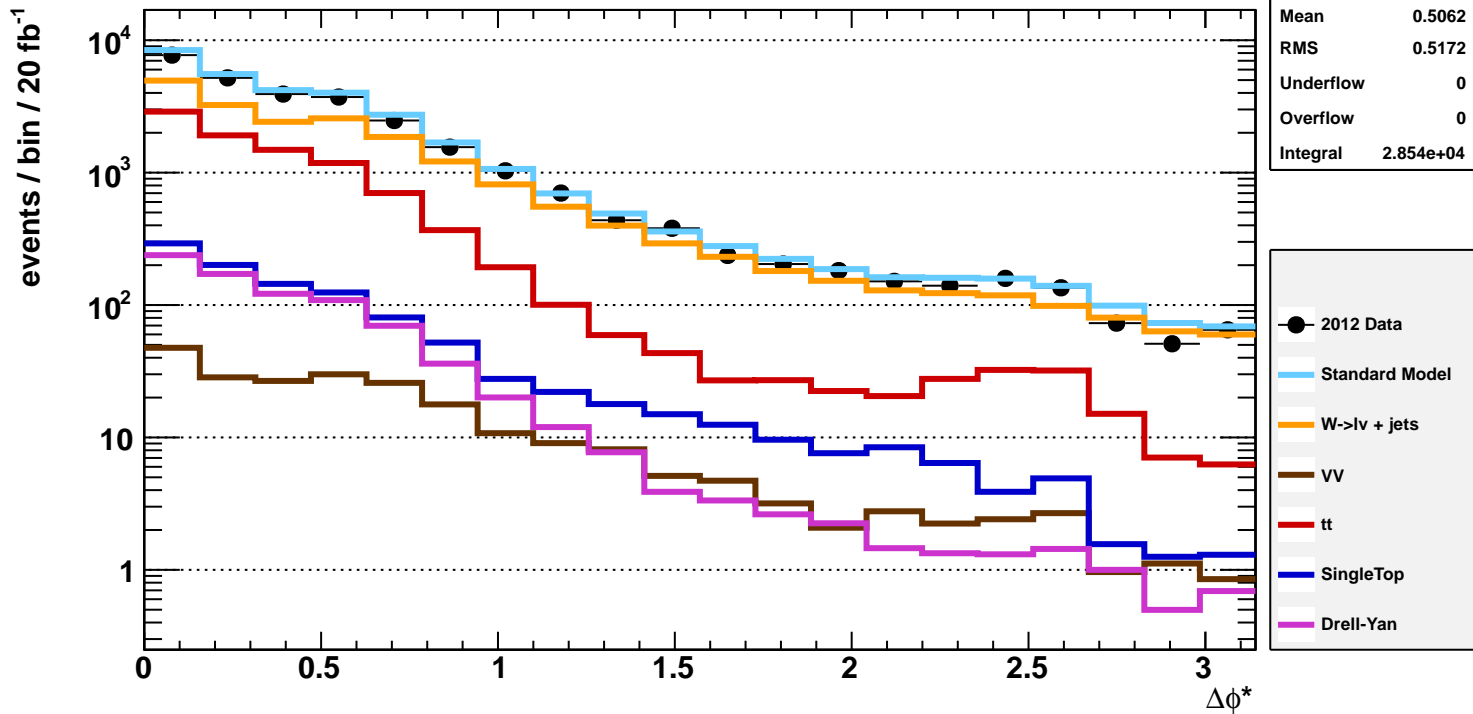
```

[ jetSumPlots1 ]

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
r:	360314	1.9629(8)e+6	8.688(6)e+5	5.216(7)e+4	7.754(4)e+5	1.637(2)e+5	1.027(2)e+5	0.1836(3)
s:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
t:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
u:	136642	9.389(4)e+5	3.105(2)e+5	2.280(5)e+4	4.908(3)e+5	7.75(2)e+4	3.733(5)e+4	0.1455(4)
v:	131249	9.308(4)e+5	3.082(2)e+5	2.275(5)e+4	4.862(3)e+5	7.69(2)e+4	3.678(4)e+4	0.1410(4)
w:	130855	9.292(4)e+5	3.079(2)e+5	2.274(5)e+4	4.850(3)e+5	7.68(2)e+4	3.672(4)e+4	0.1408(4)
x:	128978	7.816(4)e+5	2.276(2)e+5	2.177(4)e+4	4.370(3)e+5	7.21(2)e+4	2.313(4)e+4	0.1650(5)
y:	128348	7.745(4)e+5	2.231(2)e+5	2.166(4)e+4	4.353(3)e+5	7.19(2)e+4	2.254(4)e+4	0.1657(5)
z:	128322	7.740(4)e+5	2.230(2)e+5	2.165(4)e+4	4.351(3)e+5	7.18(2)e+4	2.252(4)e+4	0.1658(5)
A:	128313	7.740(4)e+5	2.229(2)e+5	2.165(4)e+4	4.350(3)e+5	7.18(2)e+4	2.251(4)e+4	0.1658(5)
B:	62869	2.458(2)e+5	9.95(1)e+4	5.78(2)e+3	1.120(1)e+5	1.912(8)e+4	9.45(2)e+3	0.256(1)
C:	55351	6.85(1)e+4	4.236(8)e+4	487(7)	2.084(6)e+4	2.31(3)e+3	2.52(1)e+3	0.808(4)
D:	50894	5.452(9)e+4	3.383(7)e+4	408(6)	1.648(5)e+4	1.78(3)e+3	2011(9)	0.934(4)
E:	50891	5.187(9)e+4	3.175(7)e+4	384(6)	1.617(5)e+4	1.75(3)e+3	1814(8)	0.981(5)
F:	36430	3.735(8)e+4	2.316(6)e+4	274(5)	1.163(4)e+4	1.27(2)e+3	1027(6)	0.975(5)
G:	29820	3.088(7)e+4	1.962(5)e+4	233(5)	9.18(4)e+3	1.04(2)e+3	808(5)	0.966(6)
H:	28544	3.079(7)e+4	1.956(5)e+4	232(5)	9.15(4)e+3	1.03(2)e+3	806(5)	0.927(6)

[ jetSumPlots1 ]





```

s: value 375.00<=xcak5JetPFSumEtPat
t: multiplicity 2 <= xcak5JetPFIIndicesPat

u: multiplicity 0 <= xcak5JetPFIIndicesOtherPat <= 0
v: multiplicity 0 <= xcak5JetPFIIndicesWithOddMuonPat <= 0
w: uniquelyMatchedNonisoMuons xcak5JetPFPat
x: multiplicity 0 <= electronIndicesPF <= 0
y: multiplicity 0 <= photonIndicesPat <= 0

z: multiplicity 0 <= electronIndicesUnmatchedPF <= 0
A: multiplicity 0 <= photonIndicesUnmatchedPat <= 0
B: deadEcalFilter xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
C: multiplicity 1 <= muonIndicesPF <= 1
D: pt 30.00<=muonP4PF[i[0]].pt; muonIndicesPF

E: eta -2.10<=muonP4PF[i[0]].eta<=2.10; muonIndicesPF
F: value 30.00<=muonMtPFFmetP4TypeIPF<=125.00
G: value xcak5JetPFFmthighPtPatOvermetP4TypeIPFPlusmuonIndicesPF<=1.25
H: value PFRchHitSumPt<=30.00

```

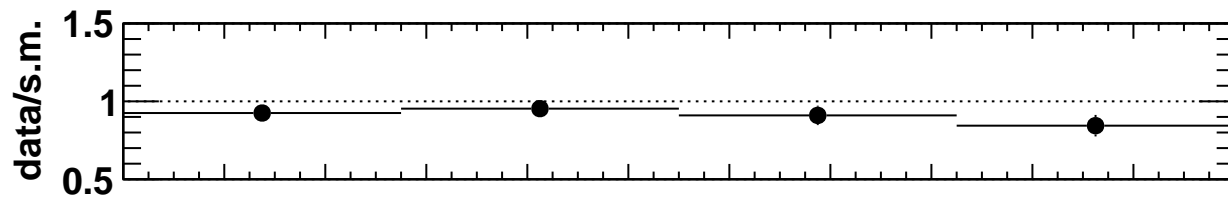
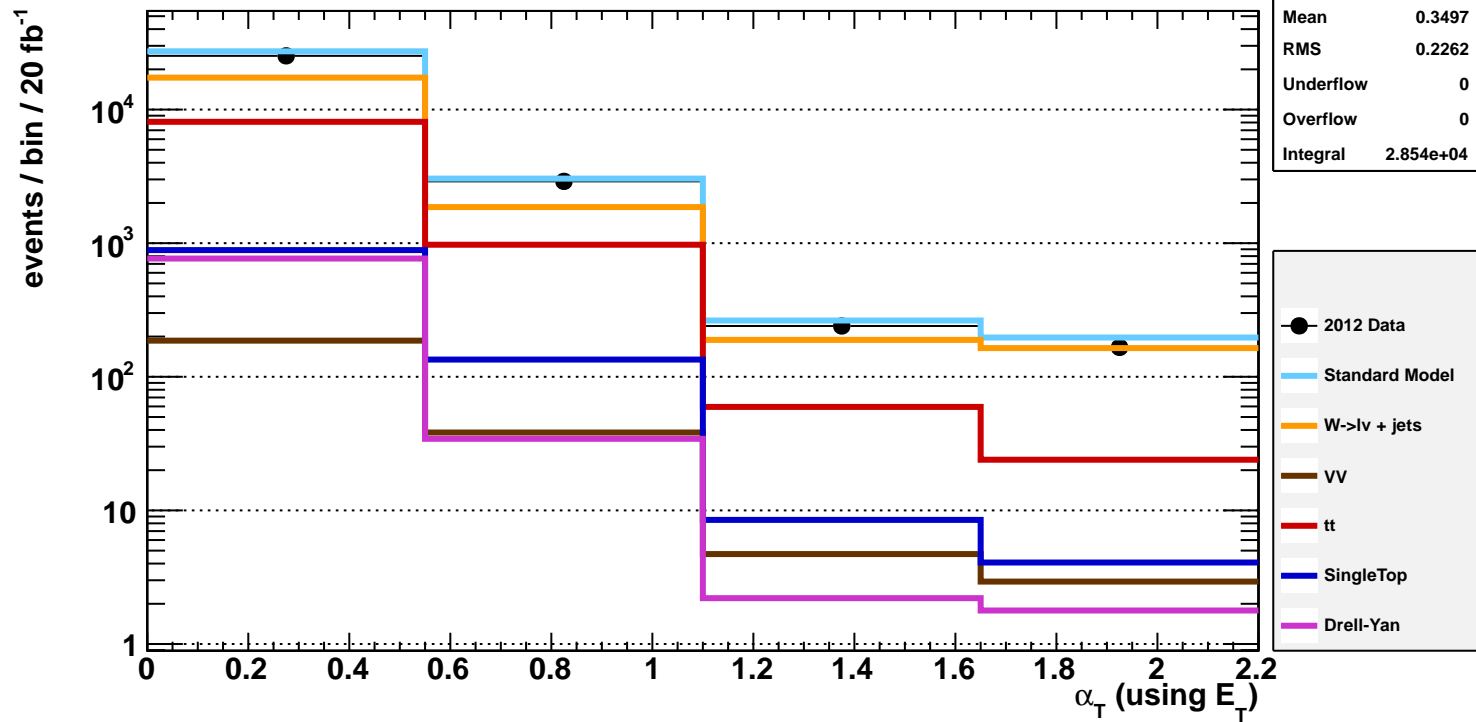
[ jetSumPlots1 ]

[ kinematicPlots1 ]

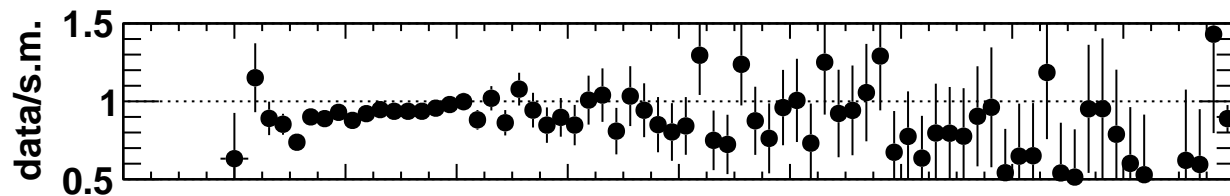
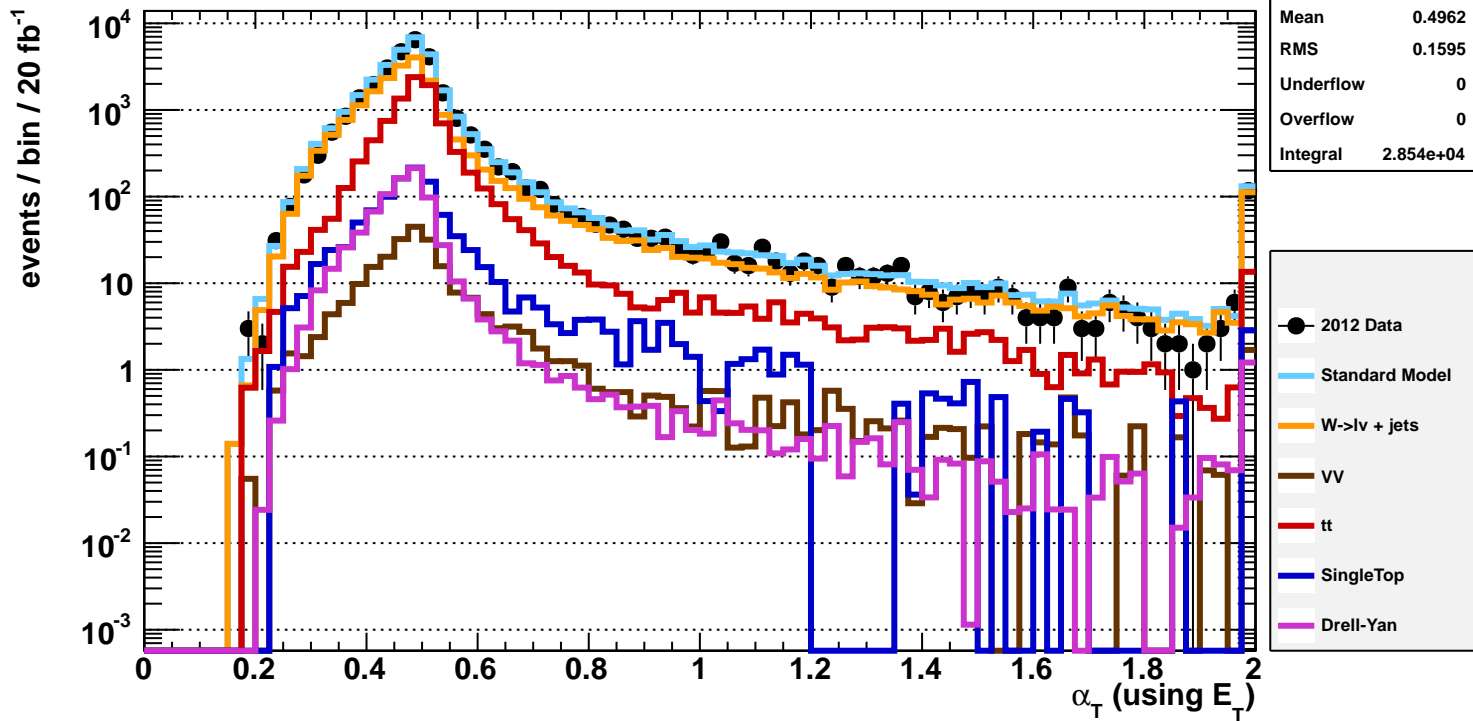
	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
s:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
t:	139289	9.641(4)e+5	3.164(2)e+5	2.325(5)e+4	5.062(3)e+5	7.99(2)e+4	3.839(5)e+4	0.1445(4)
u:	136642	9.389(4)e+5	3.105(2)e+5	2.280(5)e+4	4.908(3)e+5	7.75(2)e+4	3.733(5)e+4	0.1455(4)
v:	131249	9.308(4)e+5	3.082(2)e+5	2.275(5)e+4	4.862(3)e+5	7.69(2)e+4	3.678(4)e+4	0.1410(4)
w:	130855	9.292(4)e+5	3.079(2)e+5	2.274(5)e+4	4.850(3)e+5	7.68(2)e+4	3.672(4)e+4	0.1408(4)
x:	128978	7.816(4)e+5	2.276(2)e+5	2.177(4)e+4	4.370(3)e+5	7.21(2)e+4	2.313(4)e+4	0.1650(5)
y:	128348	7.745(4)e+5	2.231(2)e+5	2.166(4)e+4	4.353(3)e+5	7.19(2)e+4	2.254(4)e+4	0.1657(5)
z:	128322	7.740(4)e+5	2.230(2)e+5	2.165(4)e+4	4.351(3)e+5	7.18(2)e+4	2.252(4)e+4	0.1658(5)
A:	128313	7.740(4)e+5	2.229(2)e+5	2.165(4)e+4	4.350(3)e+5	7.18(2)e+4	2.251(4)e+4	0.1658(5)
B:	62869	2.458(2)e+5	9.95(1)e+4	5.78(2)e+3	1.120(1)e+5	1.912(8)e+4	9.45(2)e+3	0.256(1)
C:	55351	6.85(1)e+4	4.236(8)e+4	487(7)	2.084(6)e+4	2.31(3)e+3	2.52(1)e+3	0.808(4)
D:	50894	5.452(9)e+4	3.383(7)e+4	408(6)	1.648(5)e+4	1.78(3)e+3	2011(9)	0.934(4)
E:	50891	5.187(9)e+4	3.175(7)e+4	384(6)	1.617(5)e+4	1.75(3)e+3	1814(8)	0.981(5)
F:	36430	3.735(8)e+4	2.316(6)e+4	274(5)	1.163(4)e+4	1.27(2)e+3	1027(6)	0.975(5)
G:	29820	3.088(7)e+4	1.962(5)e+4	233(5)	9.18(4)e+3	1.04(2)e+3	808(5)	0.966(6)
H:	28544	3.079(7)e+4	1.956(5)e+4	232(5)	9.15(4)e+3	1.03(2)e+3	806(5)	0.927(6)

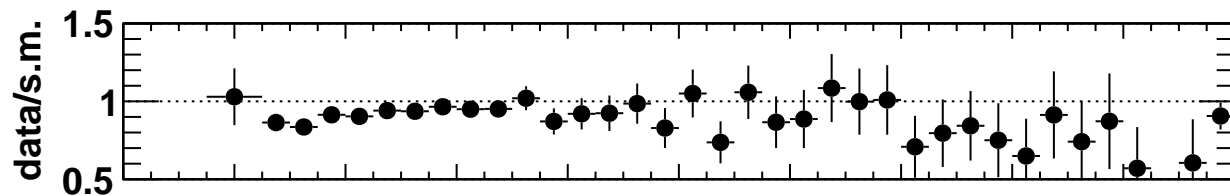
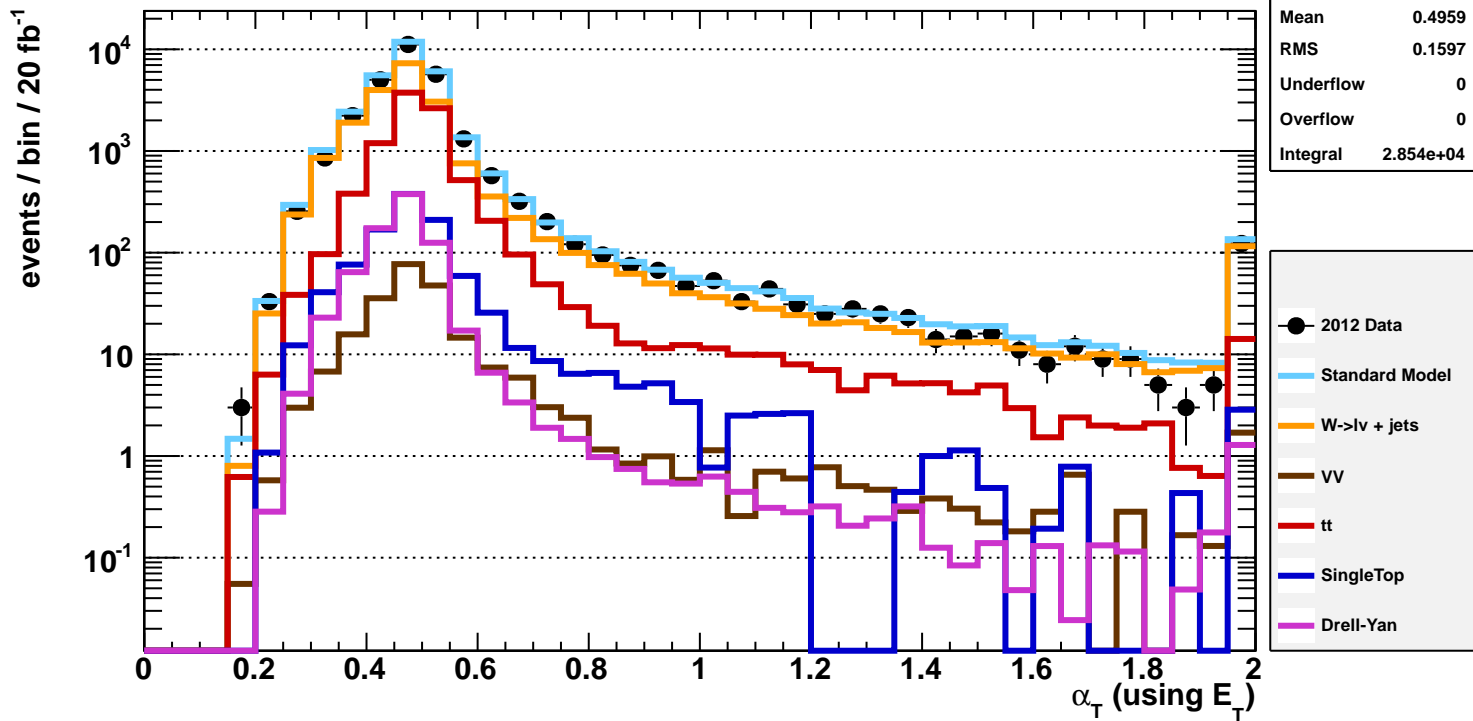
[ jetSumPlots1 ]

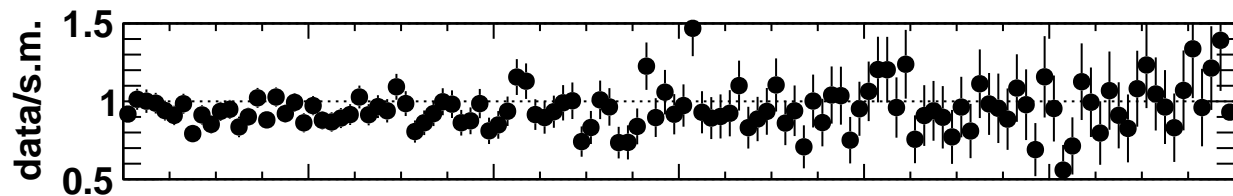
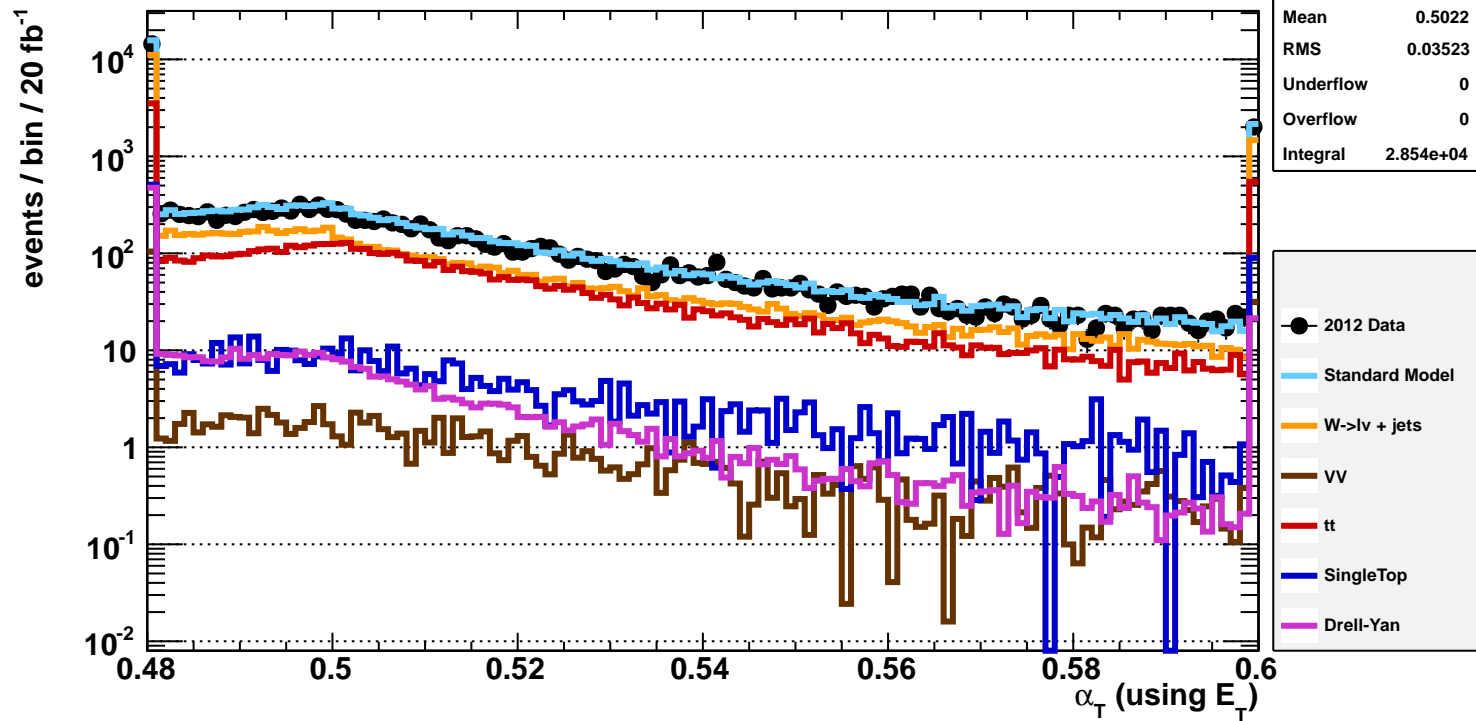
[ kinematicPlots1 ]

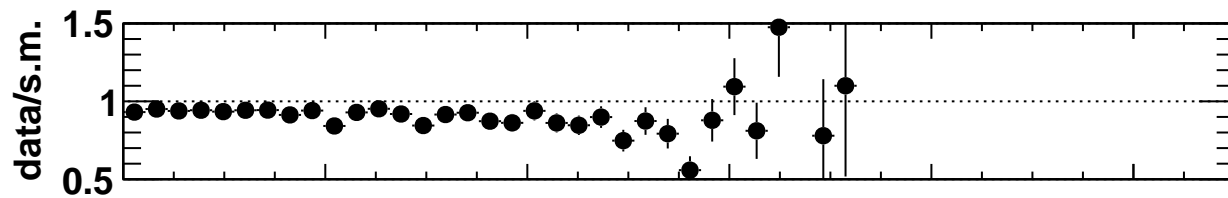
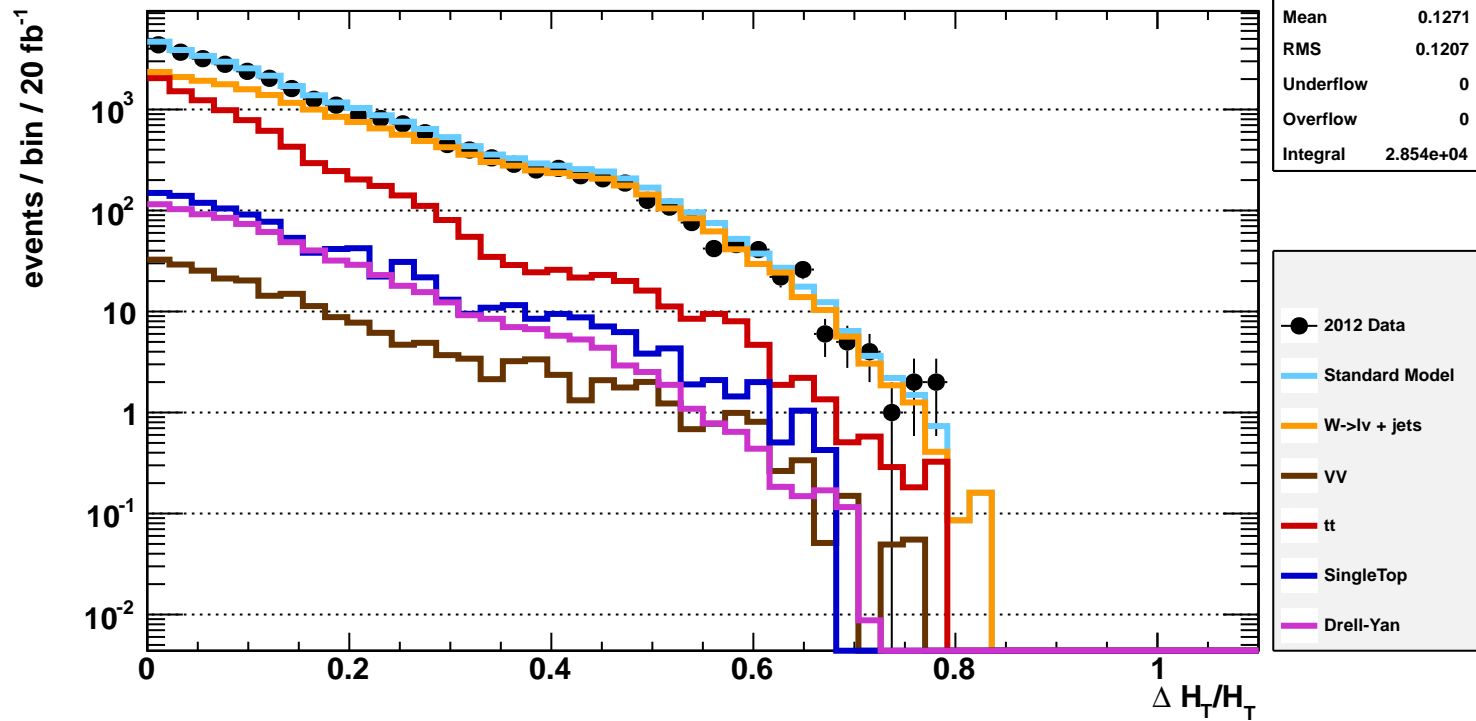


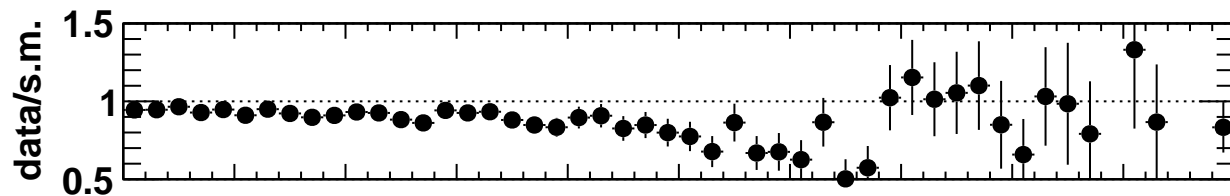
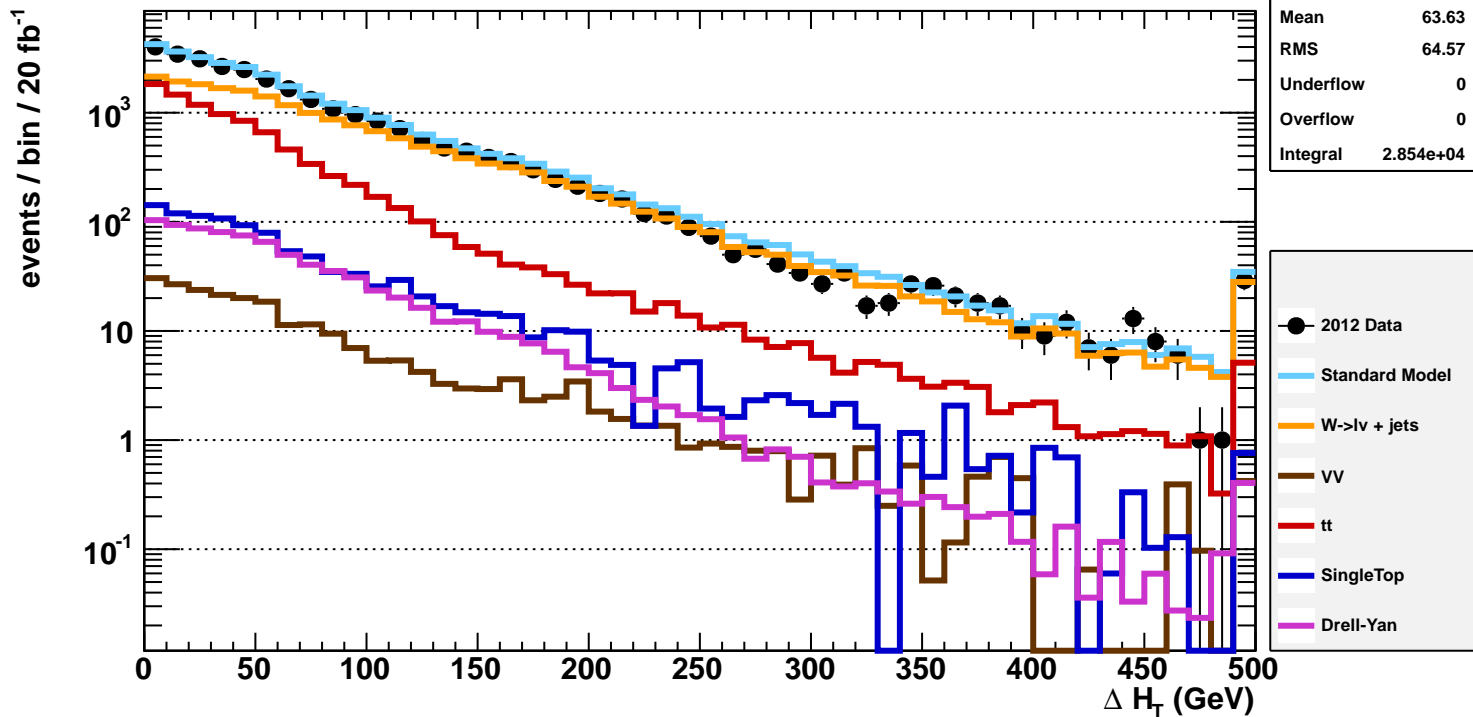


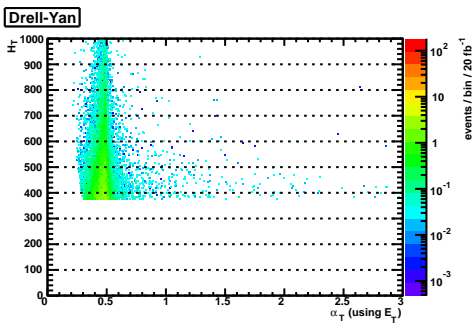
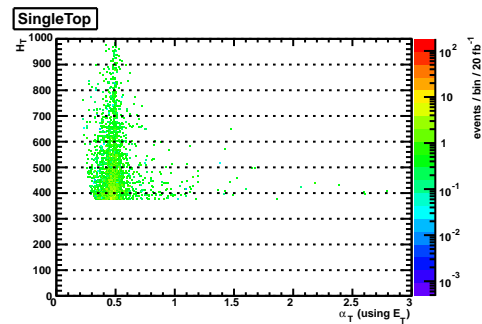
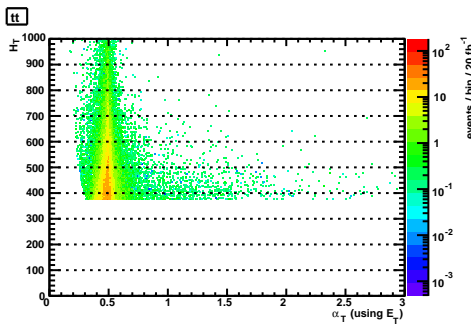
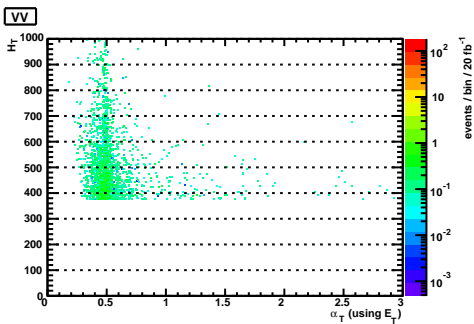
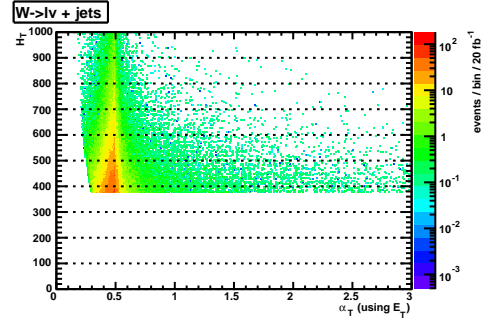
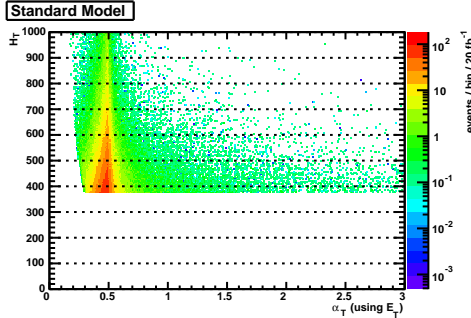
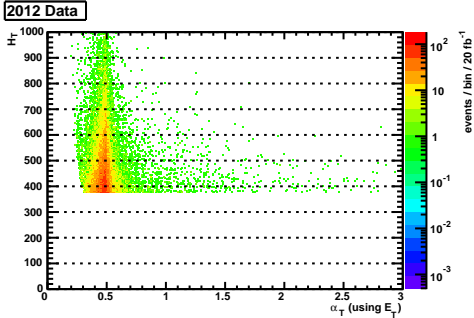


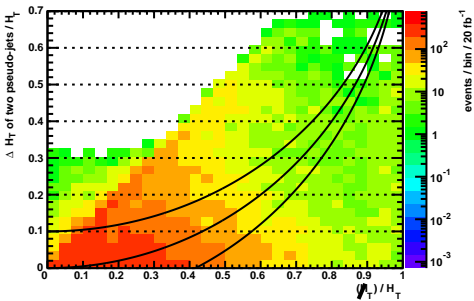
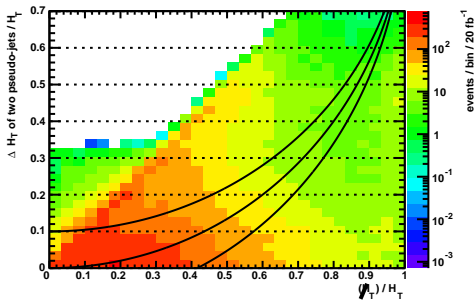
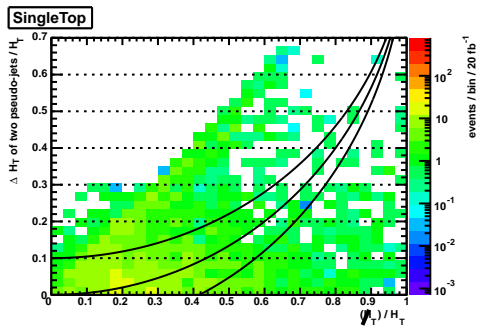
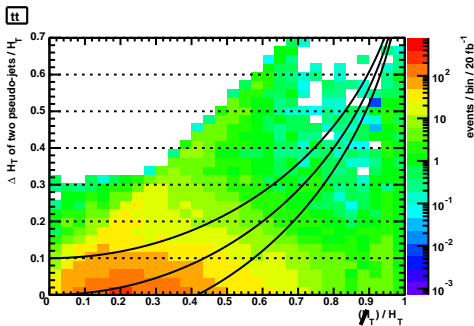
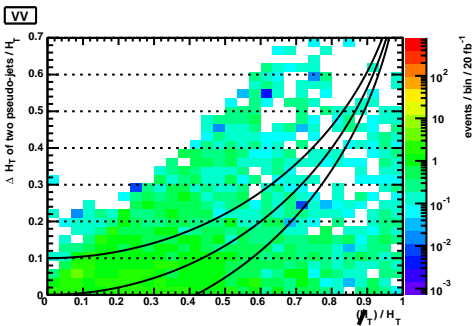
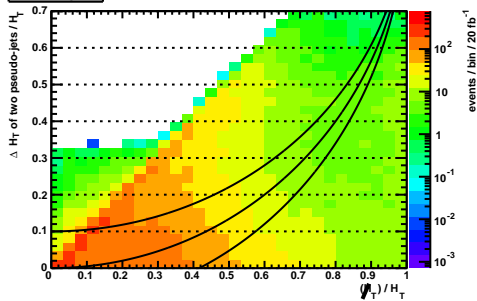
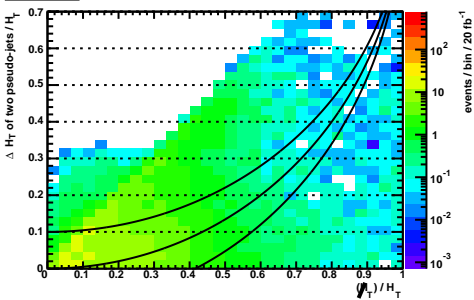


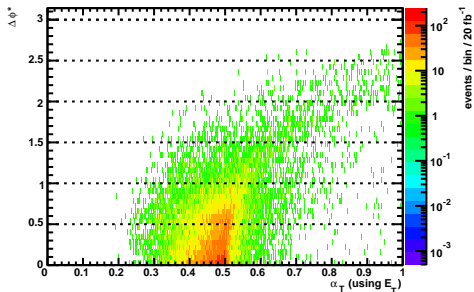
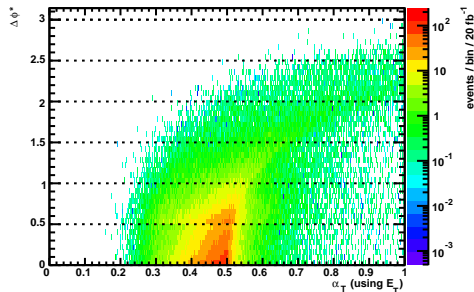
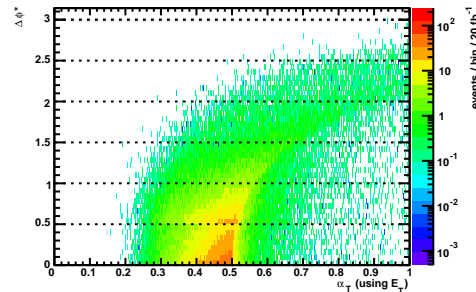
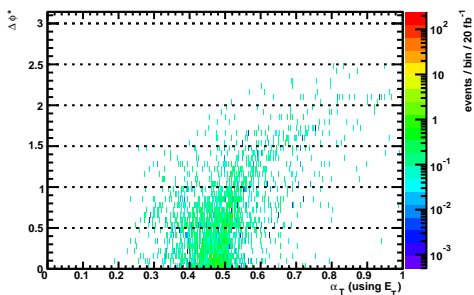
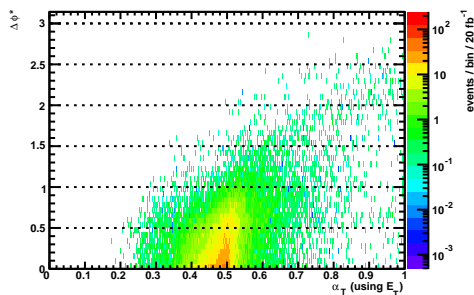
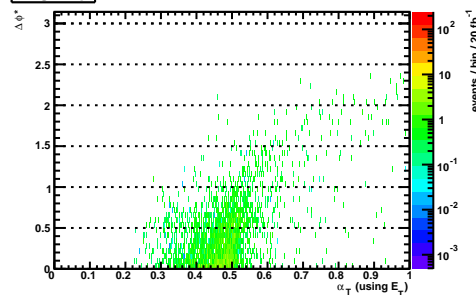
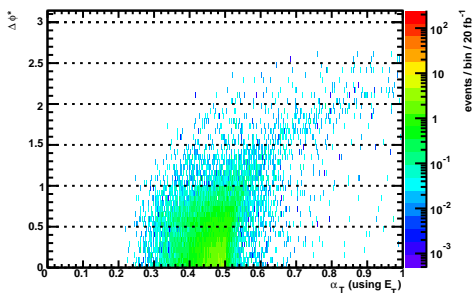




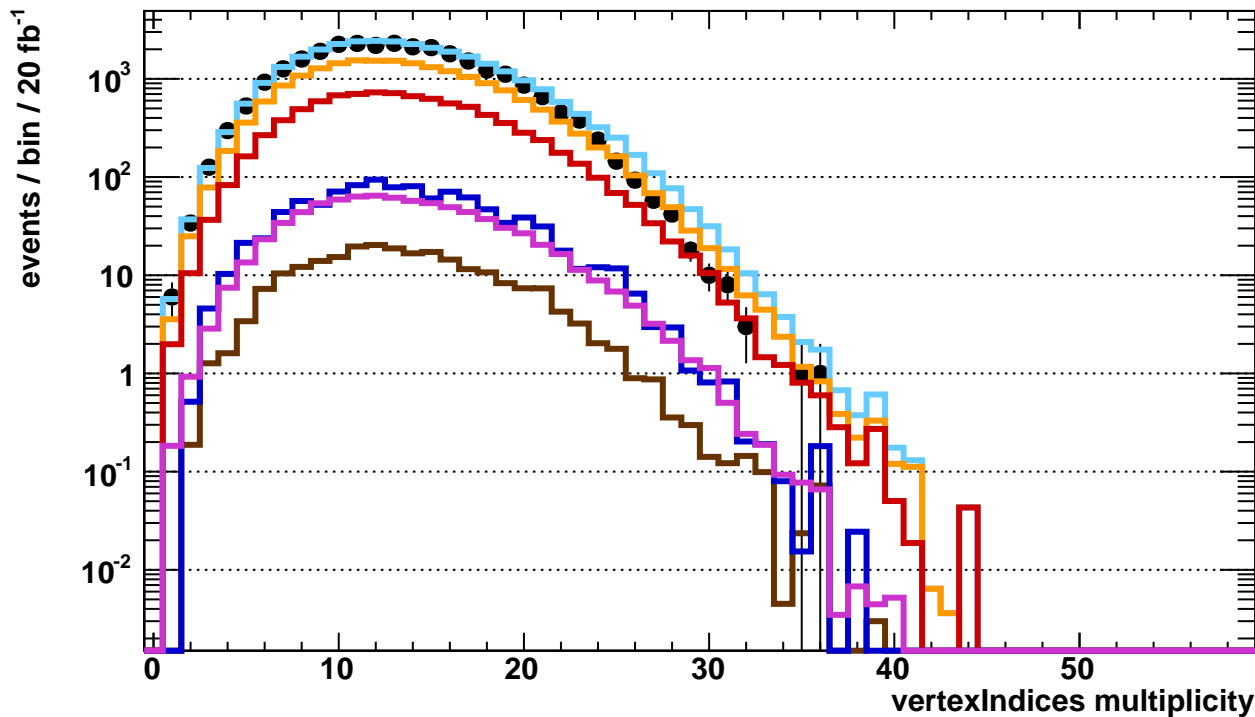




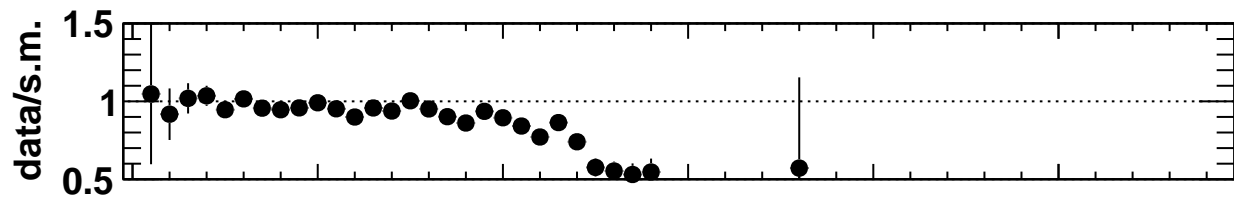
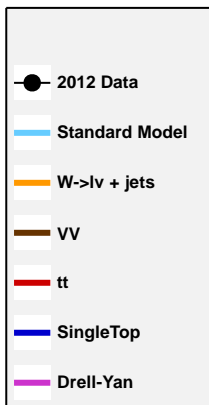
**2012 Data****Standard Model****W->lv + jets****Drell-Yan**

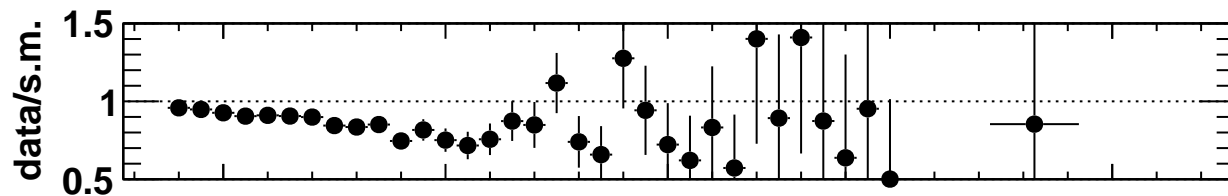
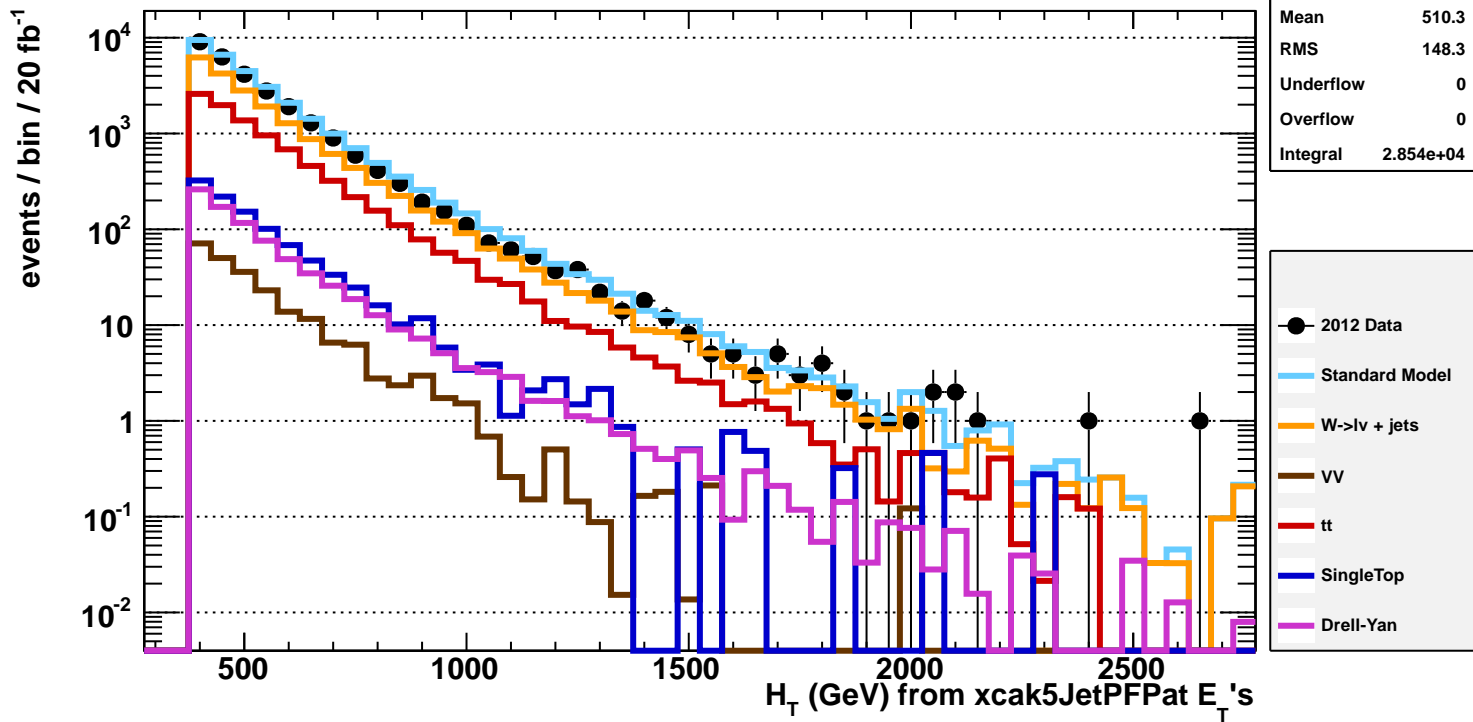
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

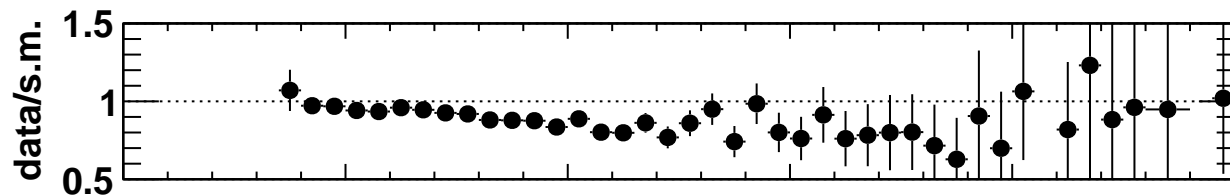
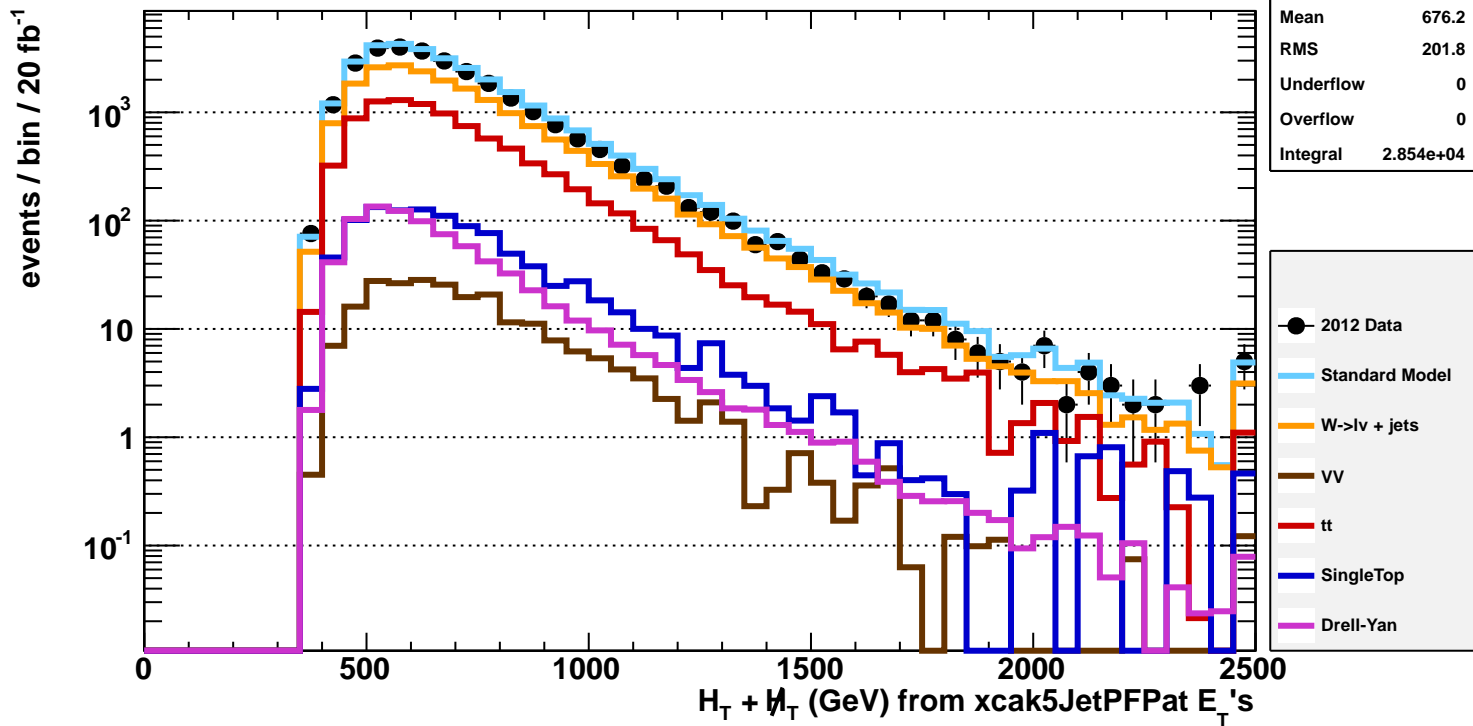


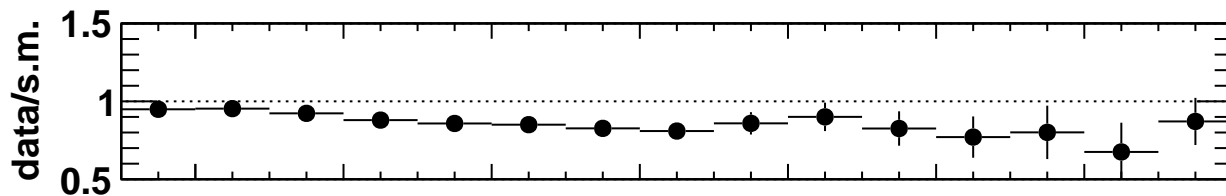
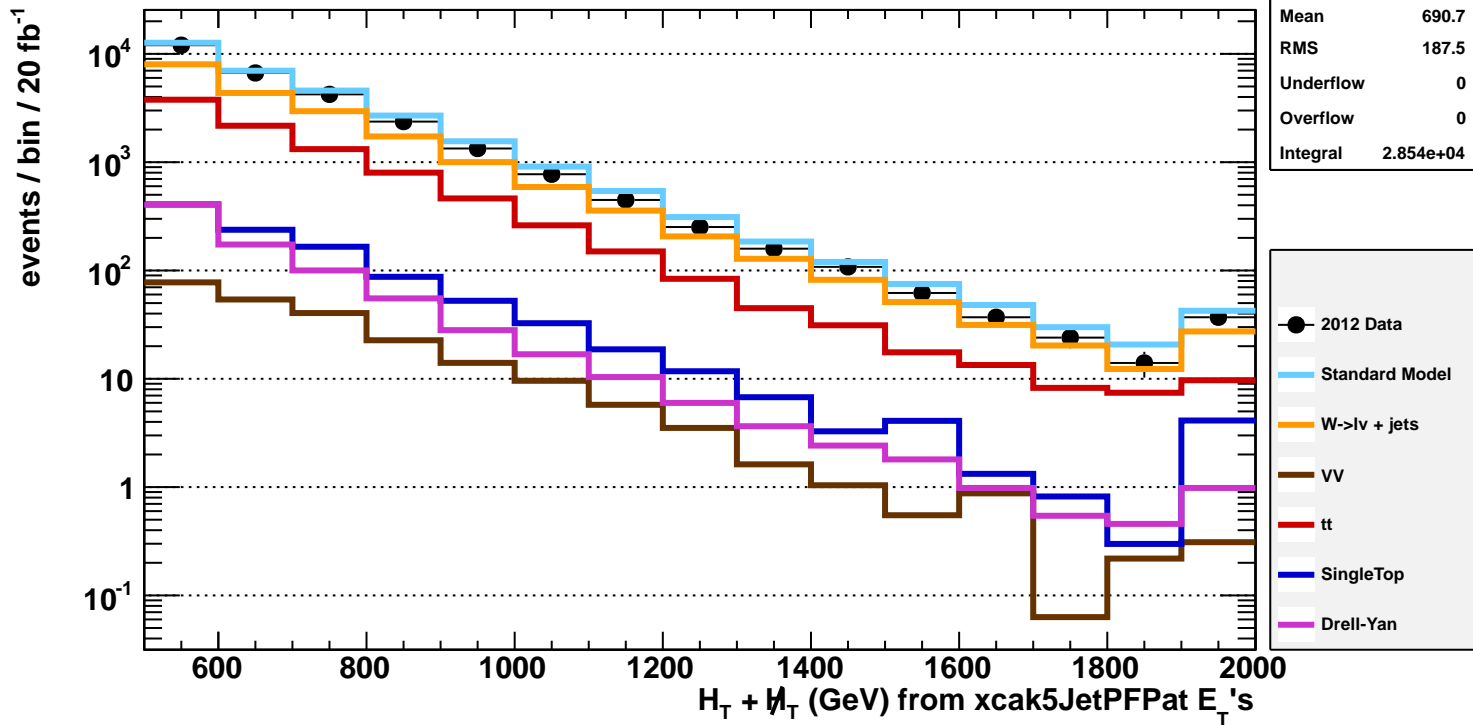


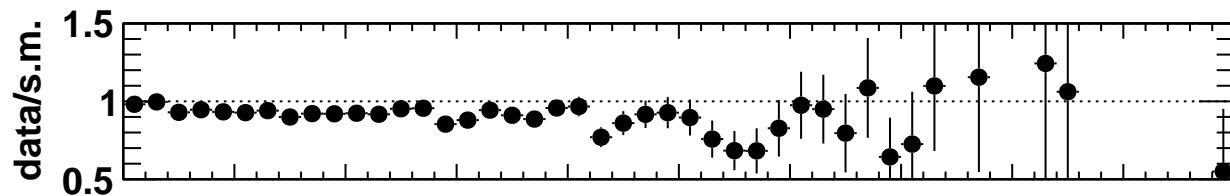
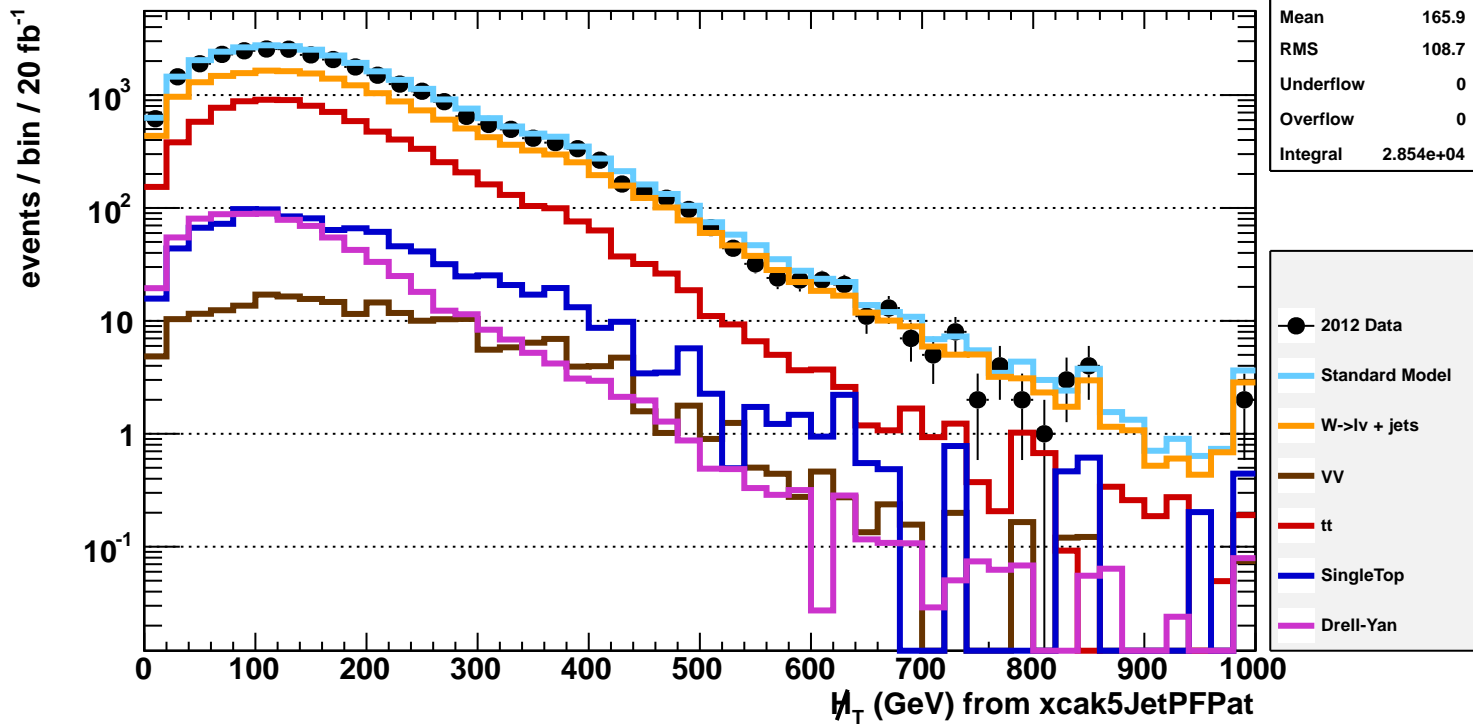
vertexIndicesMultiplicity	
Entries	28544
Mean	13.2
RMS	4.758
Underflow	0
Overflow	0
Integral	2.854e+04

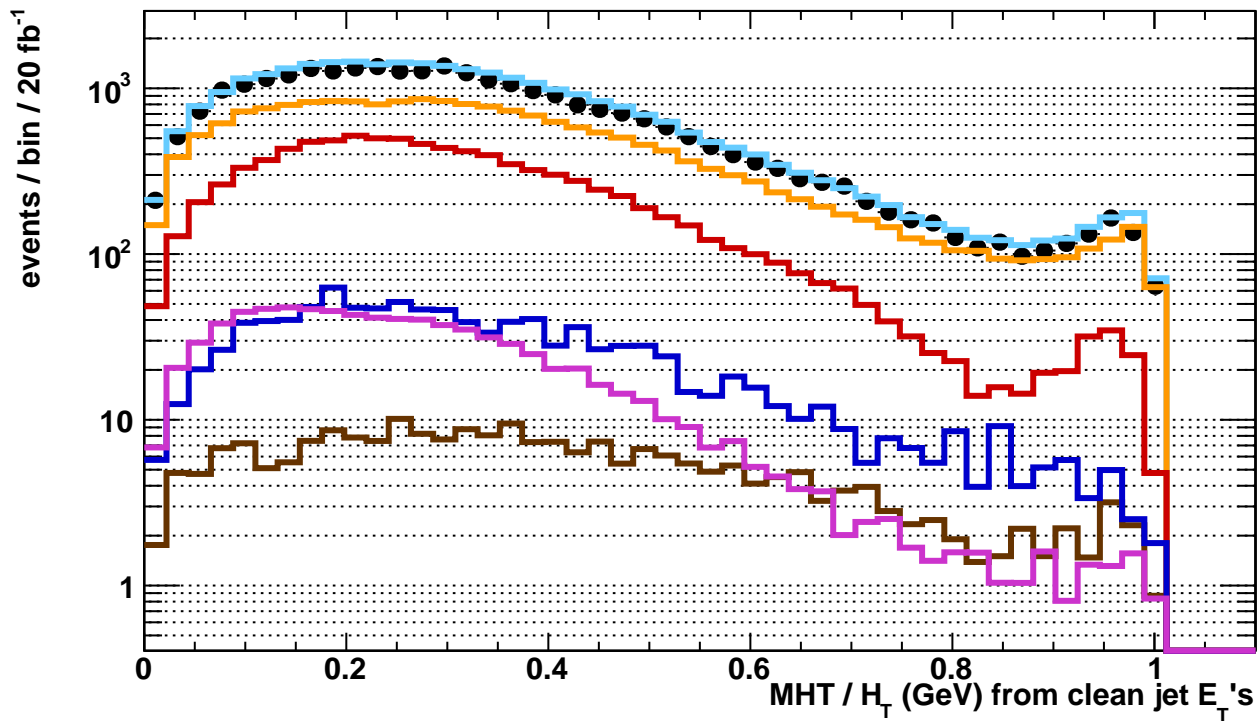




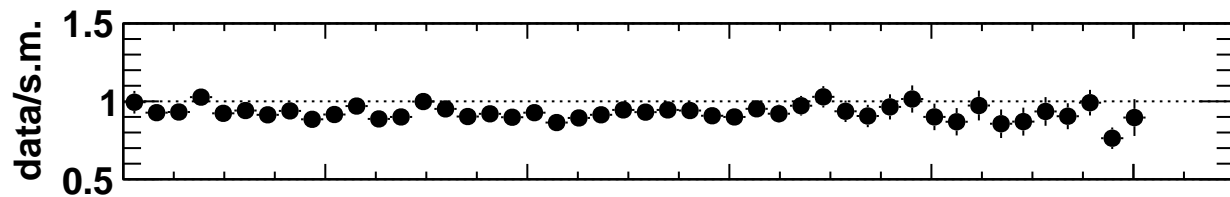
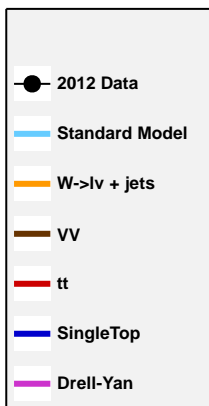


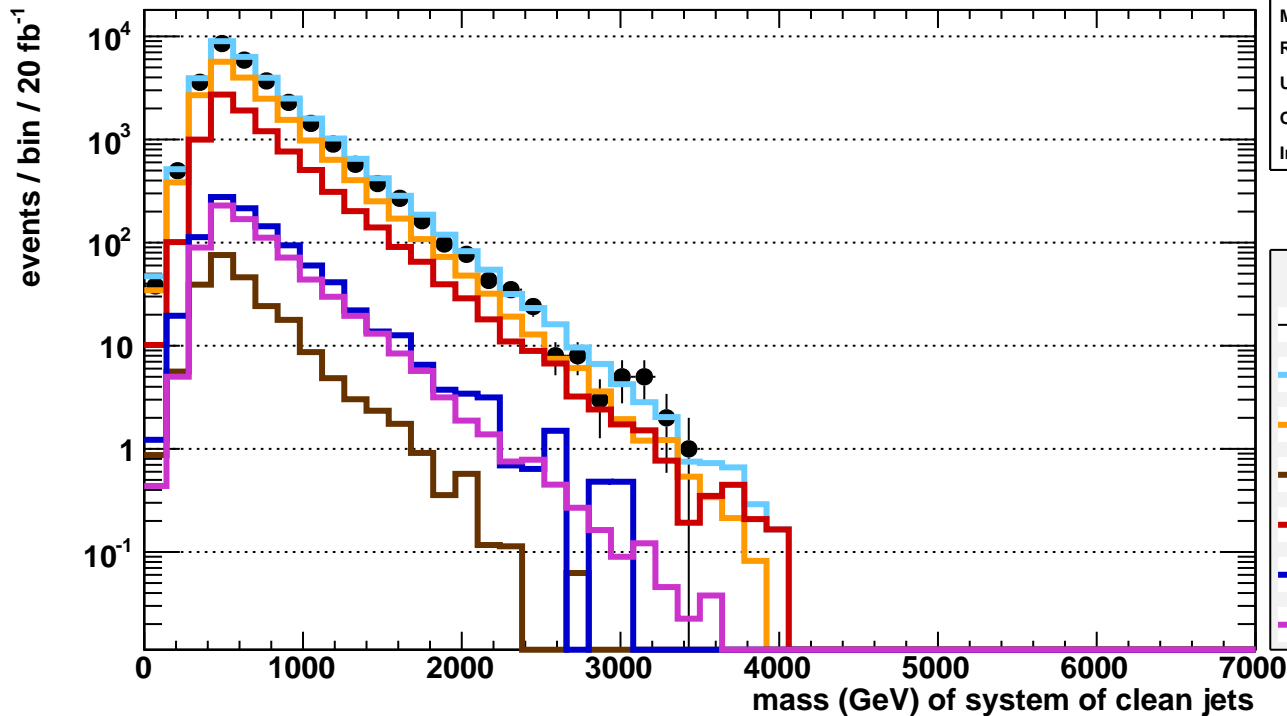




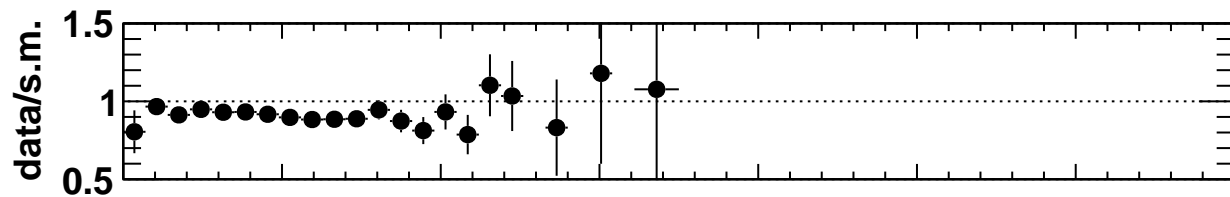


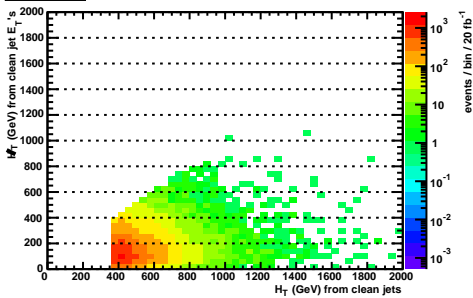
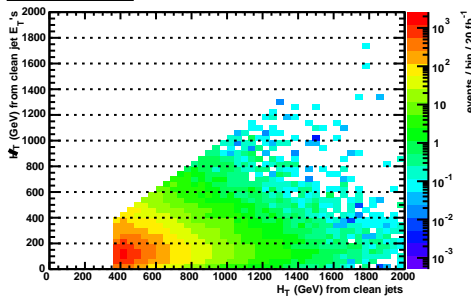
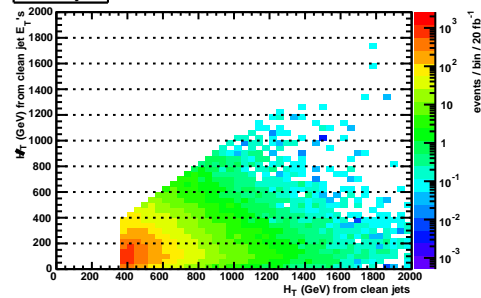
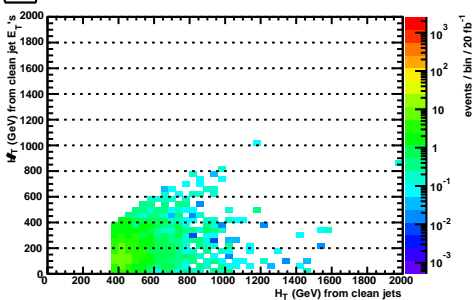
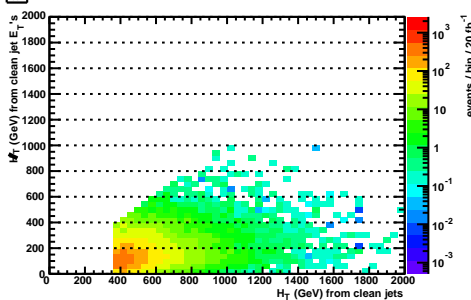
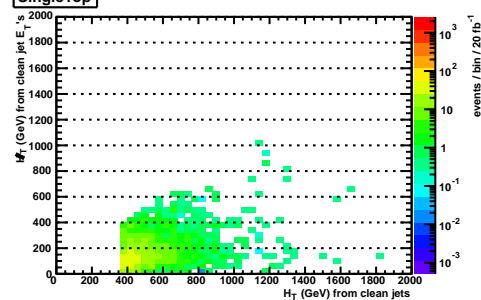
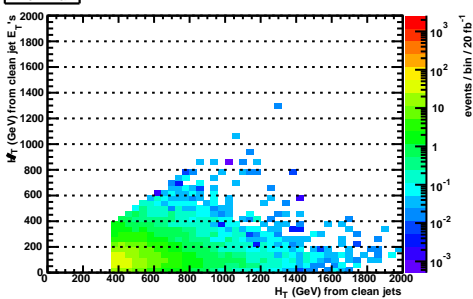
xcak5JetPFmHtOverHtPat	
Entries	28544
Mean	0.3337
RMS	0.2092
Underflow	0
Overflow	0
Integral	2.854e+04





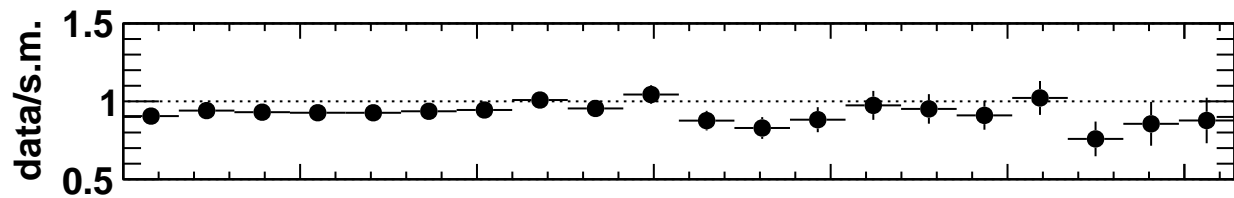
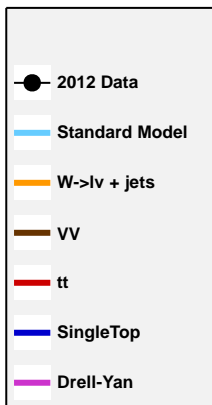
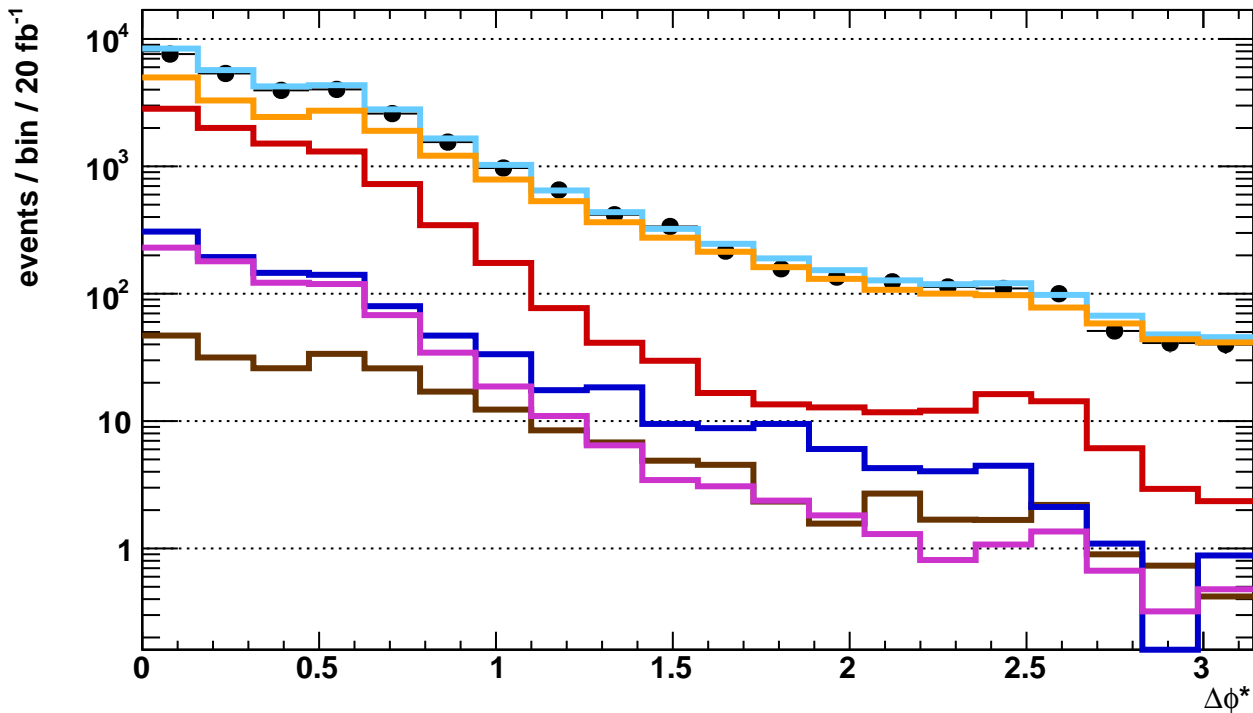
xcak5JetPFmPat	
Entries	28544
Mean	681.7
RMS	322
Underflow	0
Overflow	0
Integral	2.854e+04

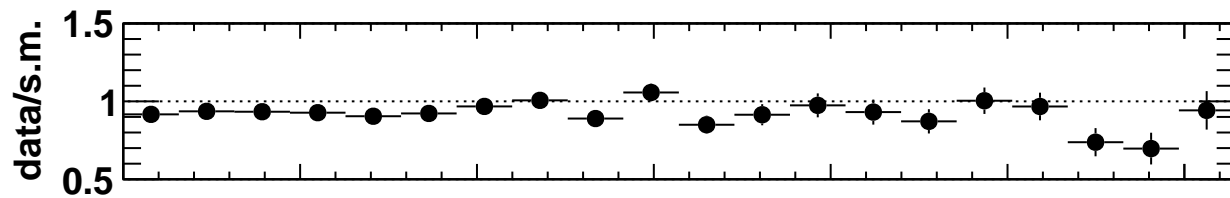
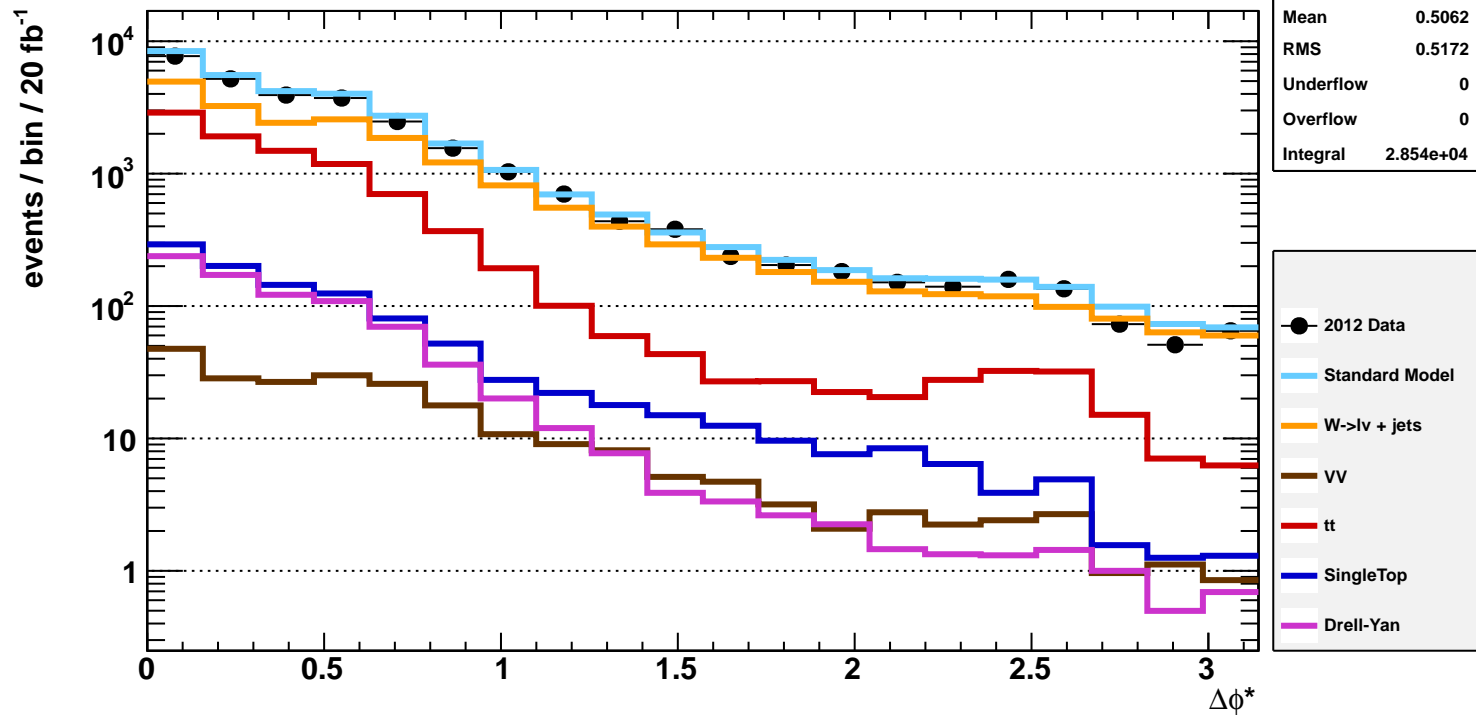


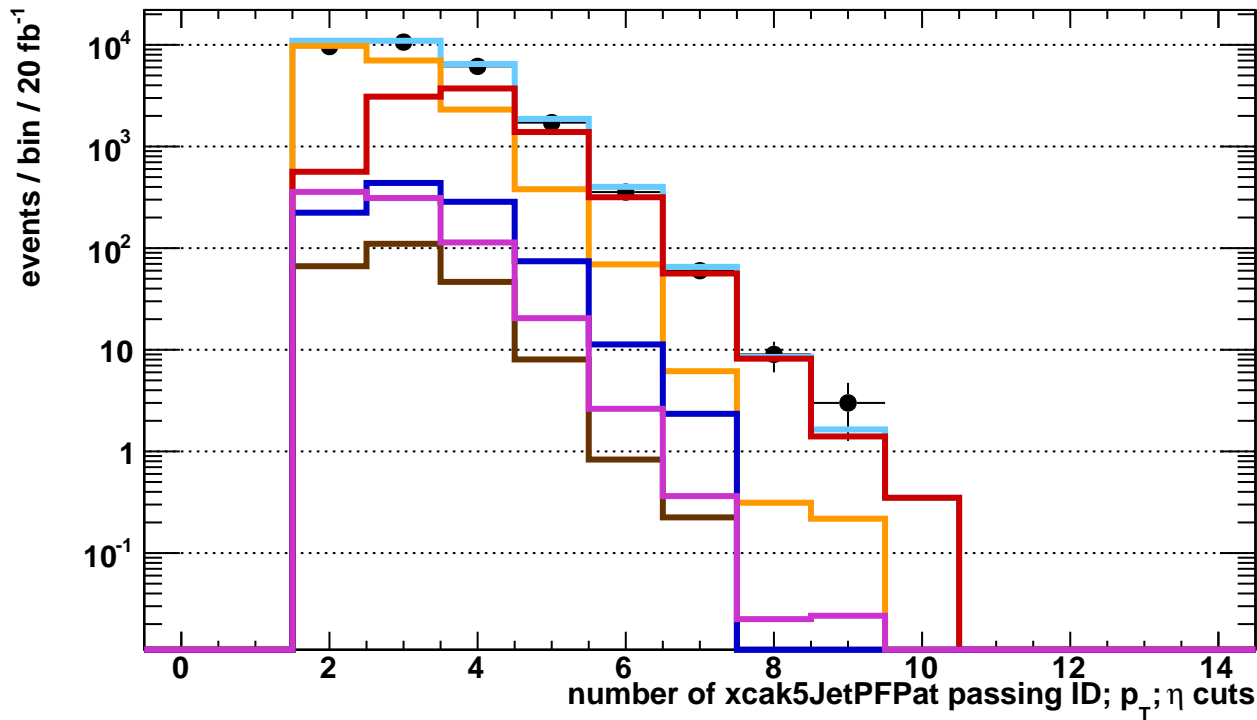
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**



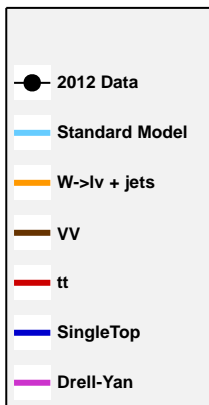
kcak5JetPFDeltaPhiStarlowPtPat	
Entries	28544
Mean	0.4841
RMS	0.4766
Underflow	0
Overflow	0
Integral	2.854e+04

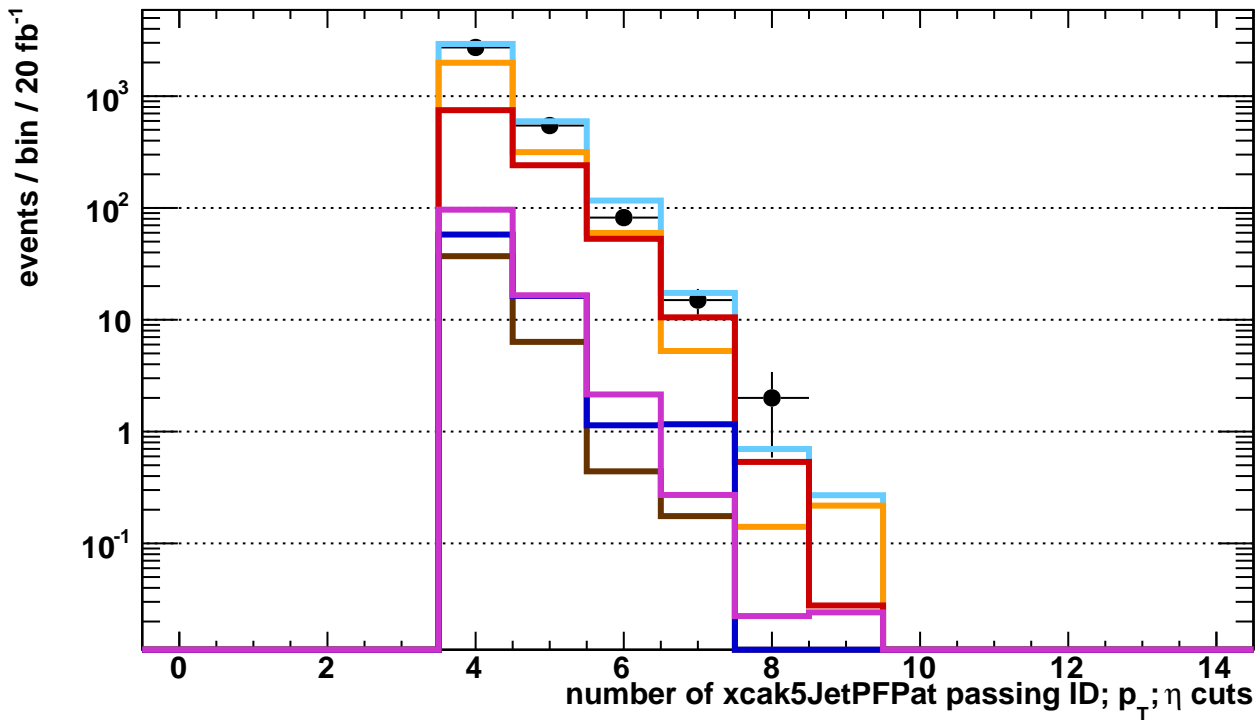




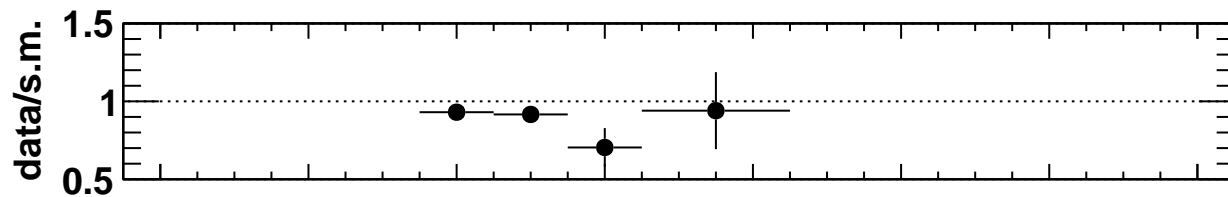
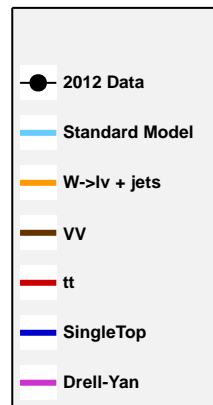


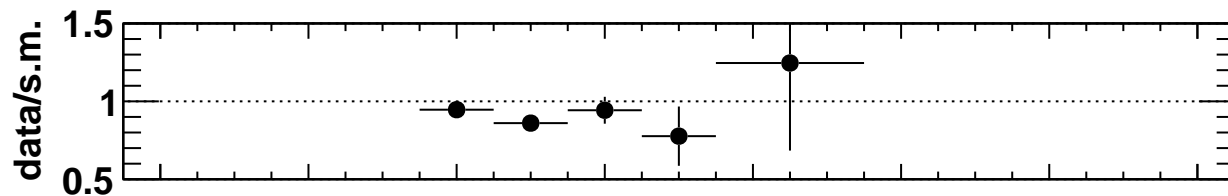
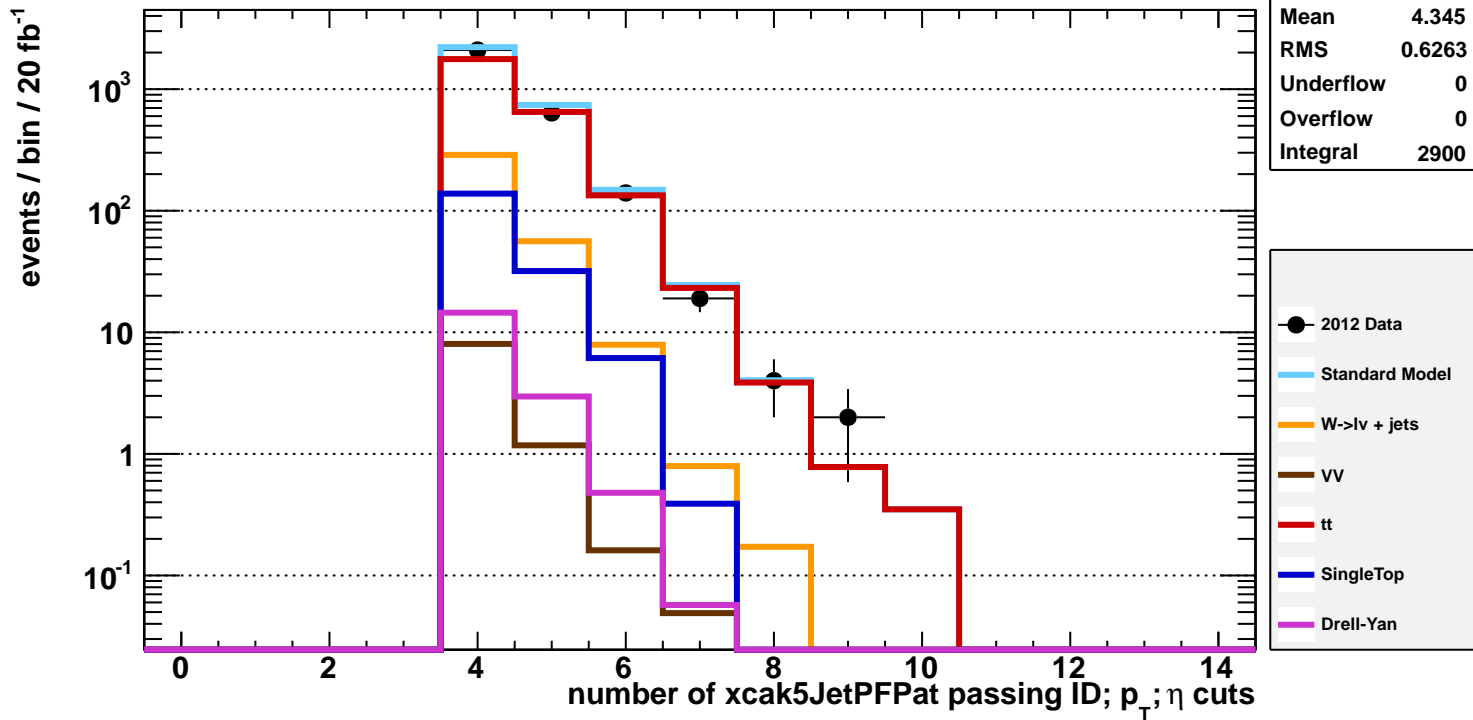
xcak5JetPFPIndicesPat	
Entries	28544
Mean	3.047
RMS	0.9737
Underflow	0
Overflow	0
Integral	2.854e+04

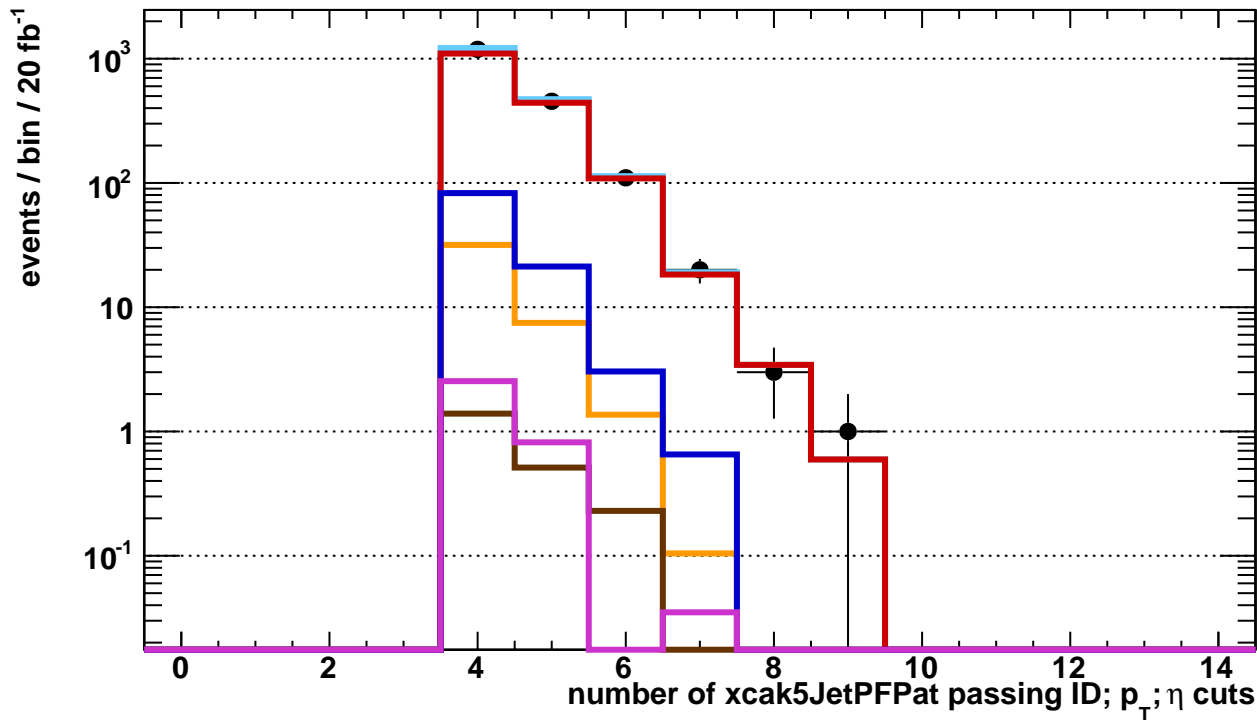




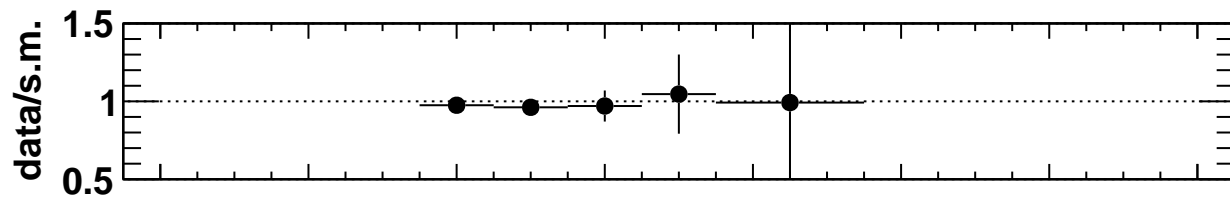
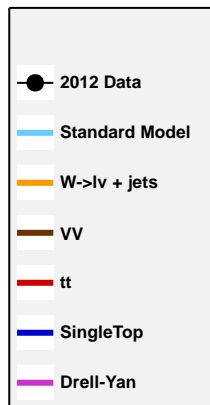
xcak5JetPFPIndicesPat_ge4j_eq0b	
Entries	3371
Mean	4.226
RMS	0.5075
Underflow	0
Overflow	0
Integral	3371

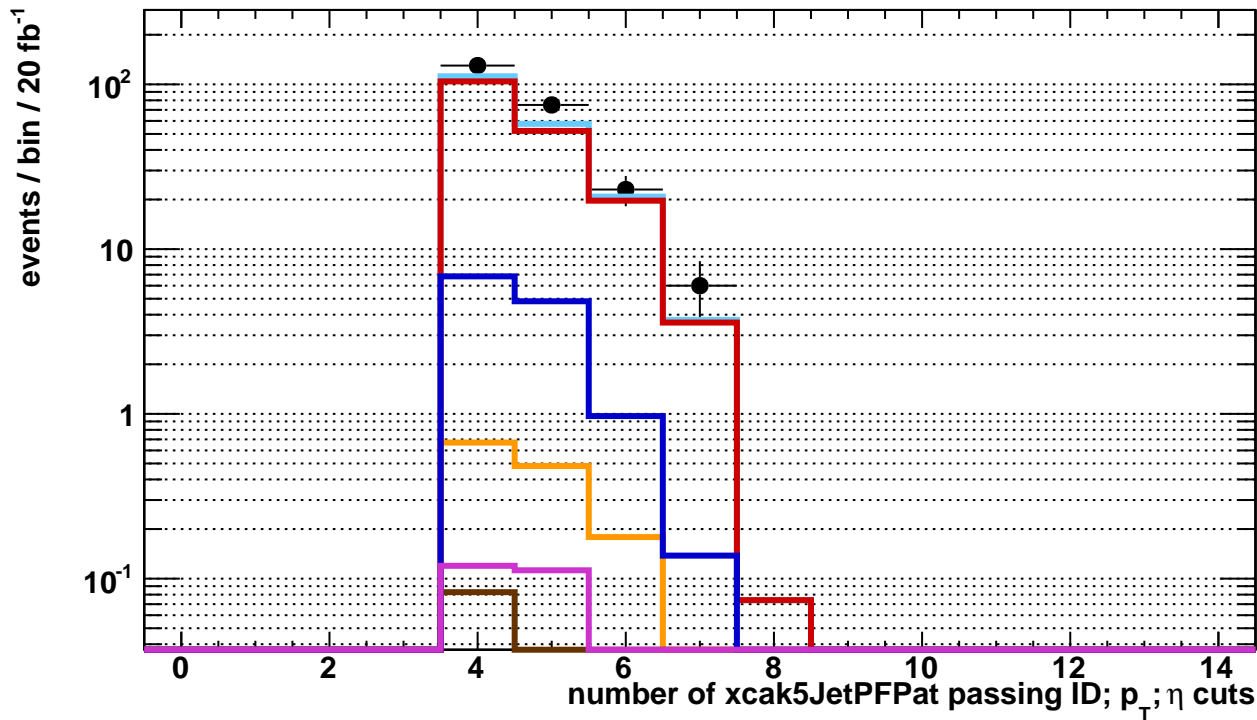




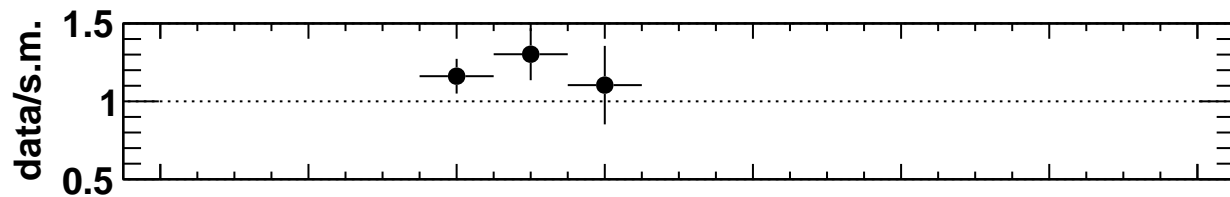


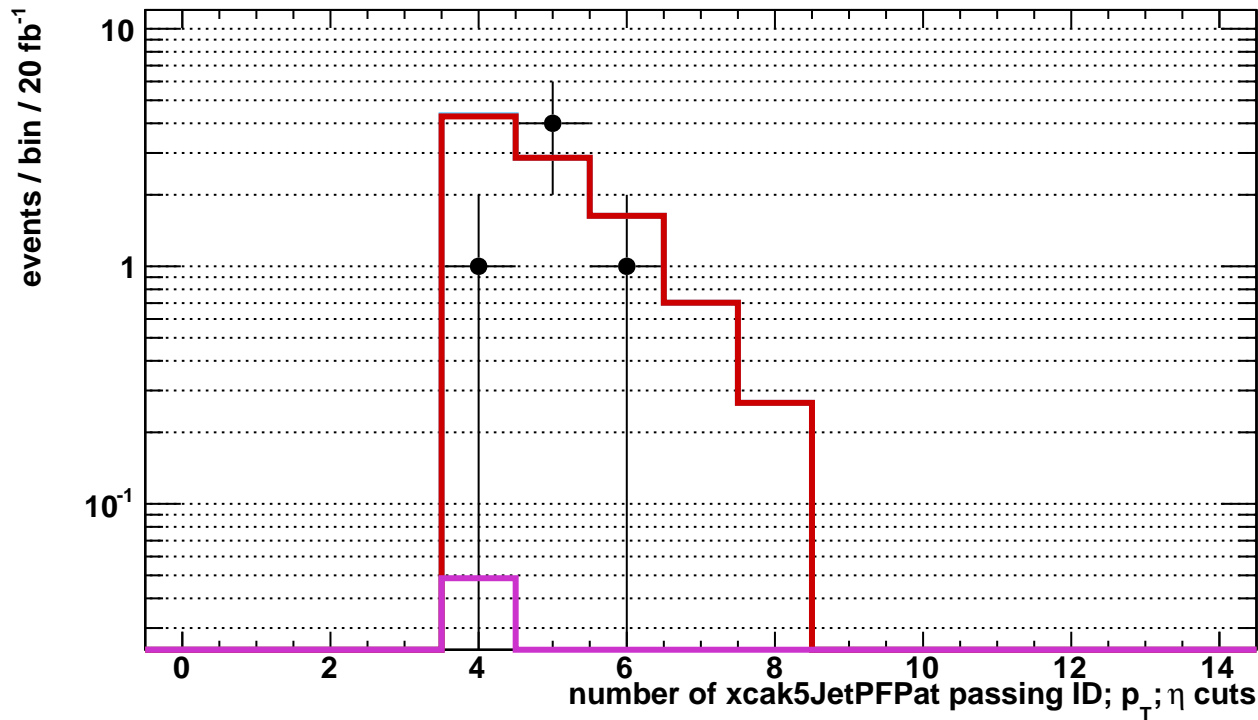
xcak5JetPFPIndicesPat_ge4j_eq2b	
Entries	1776
Mean	4.423
RMS	0.6834
Underflow	0
Overflow	0
Integral	1776



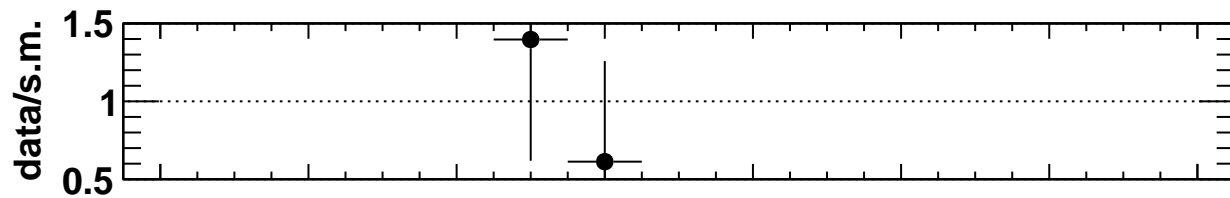
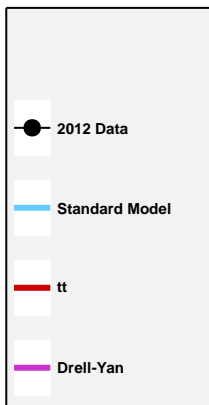


xcak5JetPFPIndicesPat_ge4j_eq3b	
Entries	234
Mean	4.594
RMS	0.7691
Underflow	0
Overflow	0
Integral	234

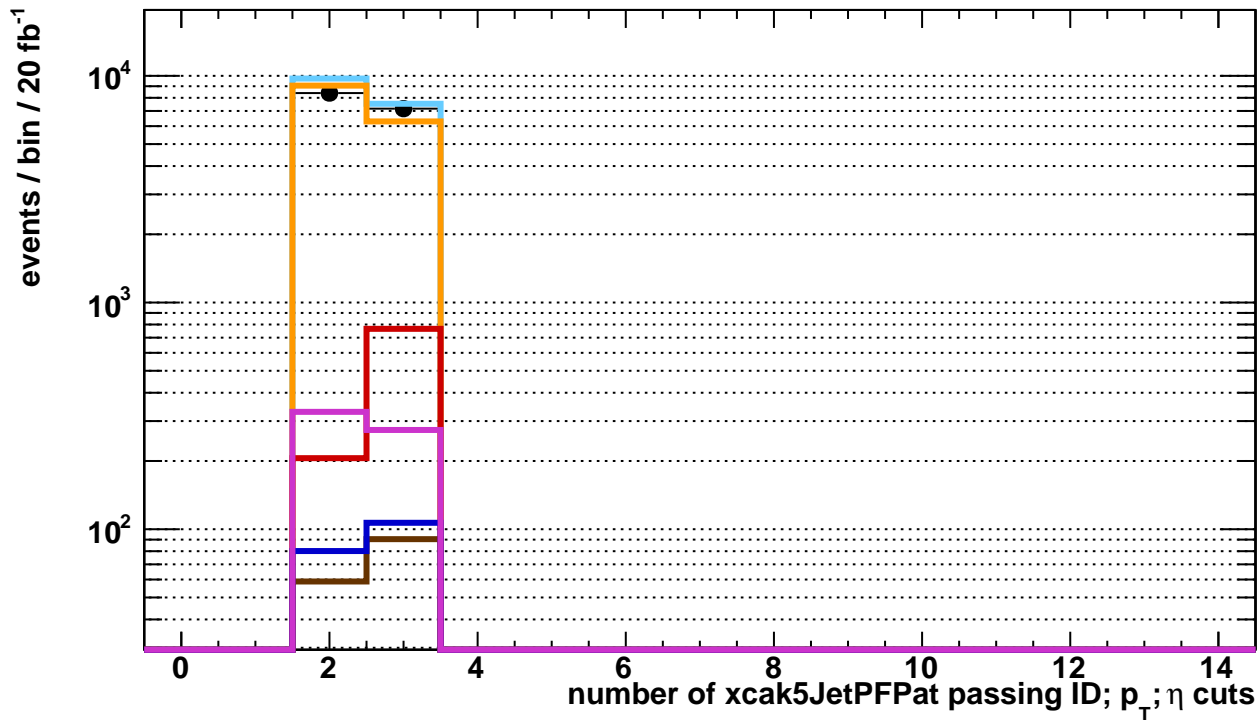




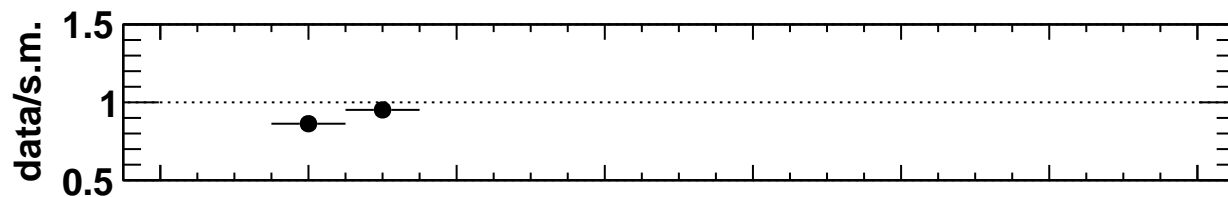
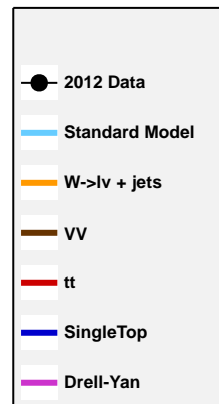
xcak5JetPFPIndicesPat_ge4j_ge4b	
Entries	6
Mean	5
RMS	0.5774
Underflow	0
Overflow	0
Integral	6



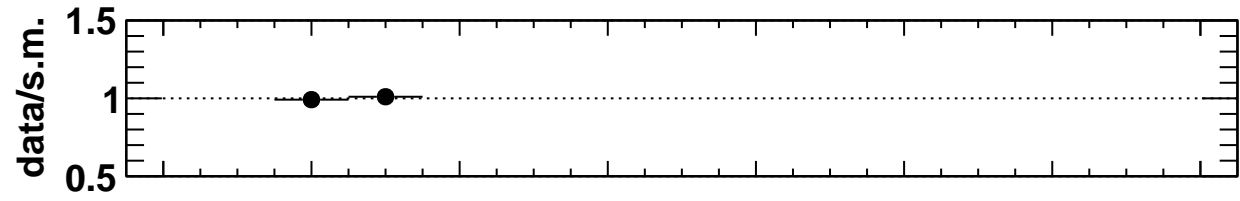
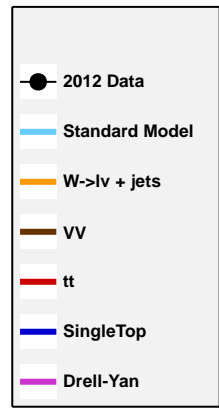
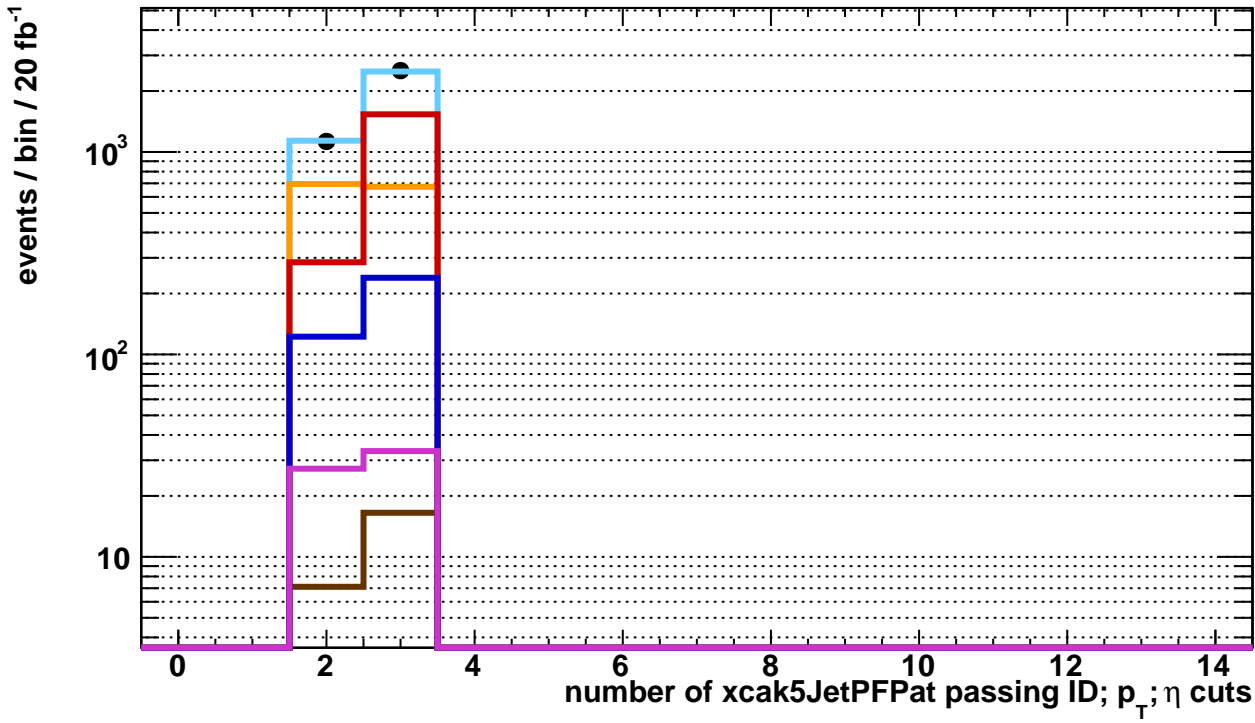




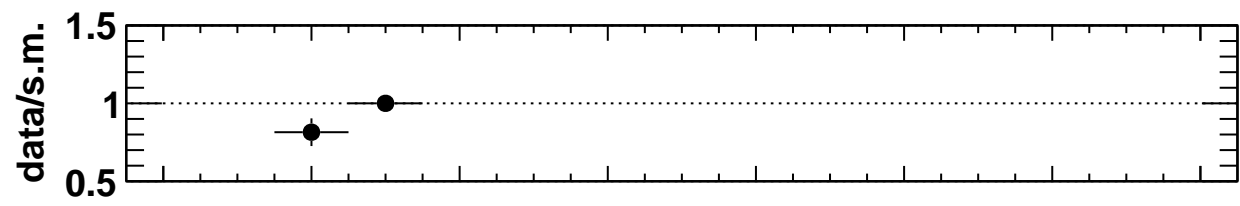
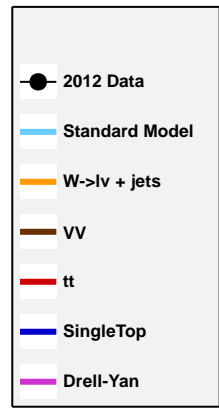
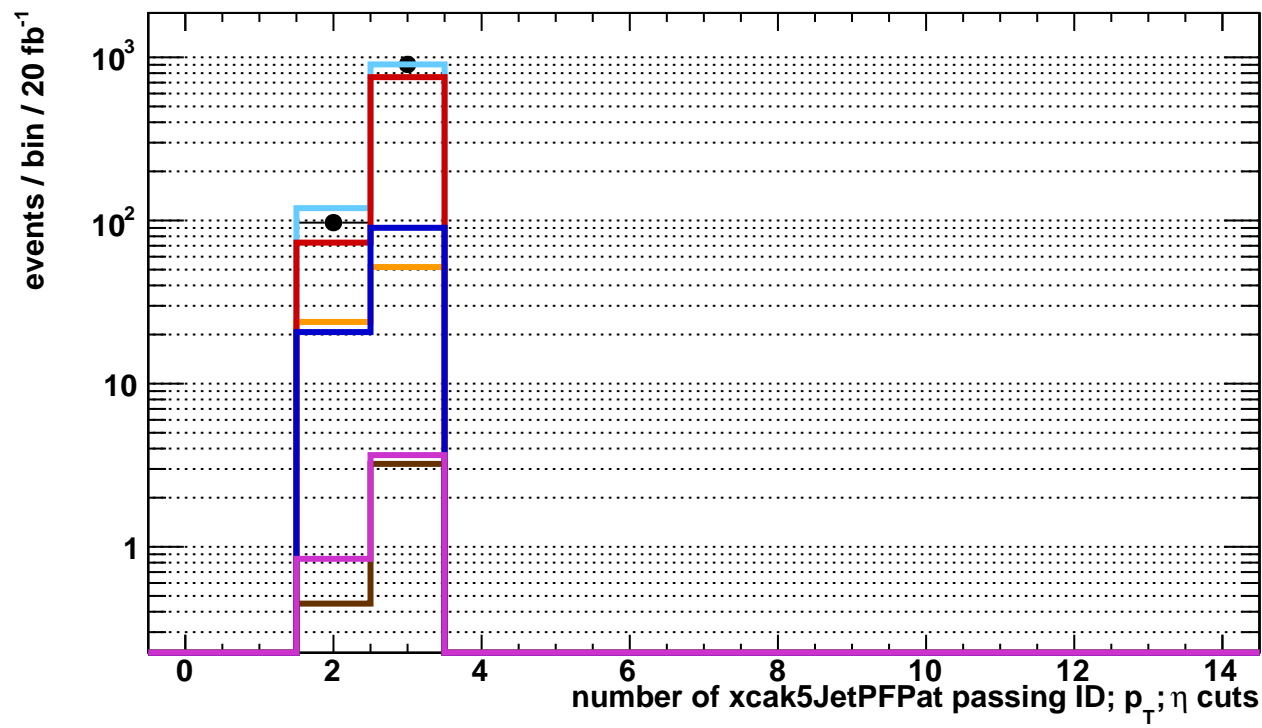
xcak5JetPFPIndicesPat_le3j_eq0b	
Entries	15561
Mean	2.461
RMS	0.4984
Underflow	0
Overflow	0
Integral	1.556e+04



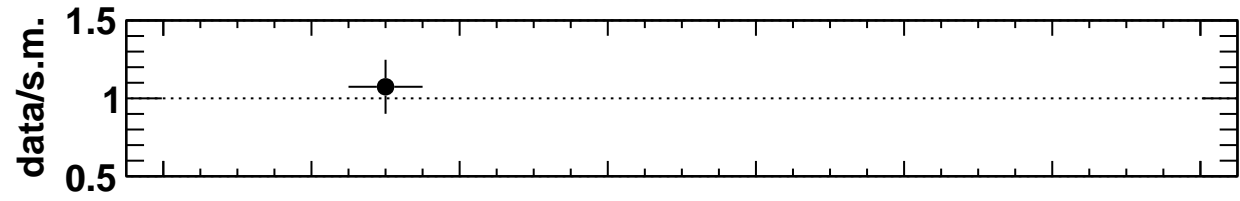
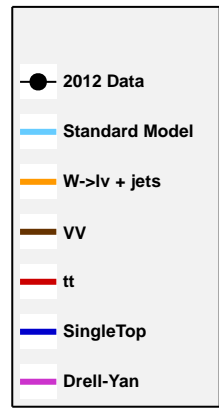
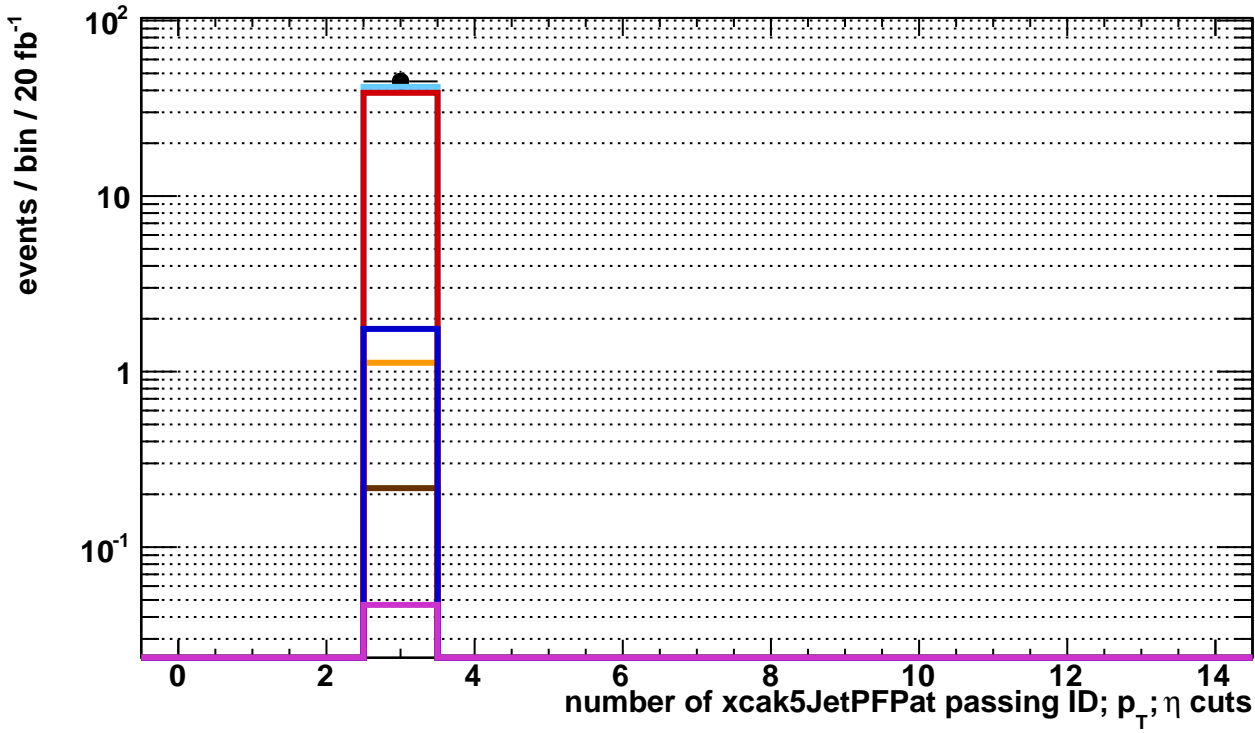
xcak5JetPFIIndicesPat_le3j_eq1b	
Entries	3649
Mean	2.691
RMS	0.462
Underflow	0
Overflow	0
Integral	3649

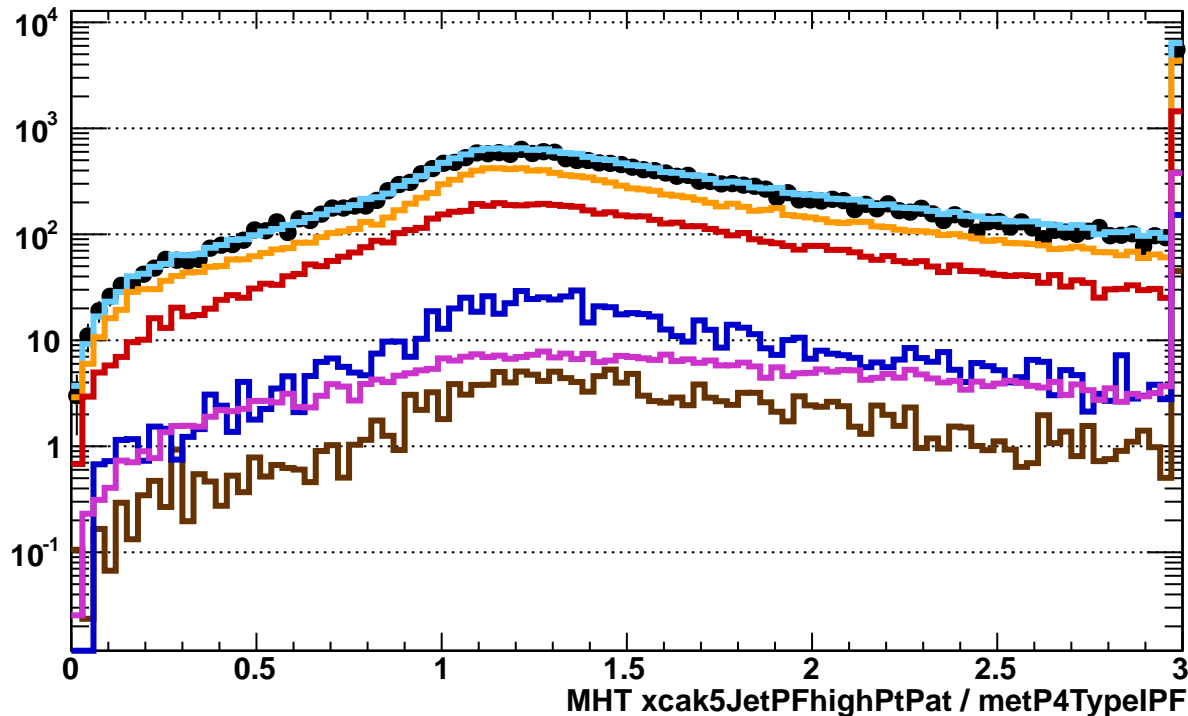


xcak5JetPFIIndicesPat_le3j_eq2b	
Entries	1002
Mean	2.903
RMS	0.2957
Underflow	0
Overflow	0
Integral	1002

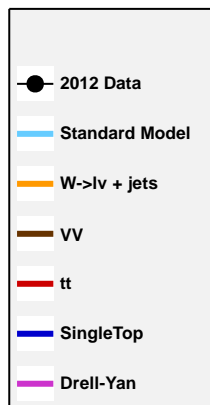


xcak5JetPFIIndicesPat_le3j_eq3b	
Entries	45
Mean	3
RMS	0
Underflow	0
Overflow	0
Integral	45

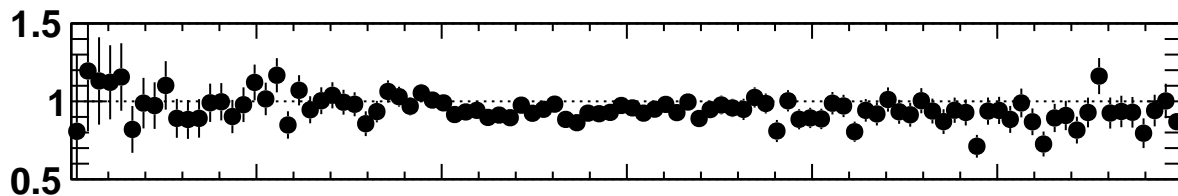


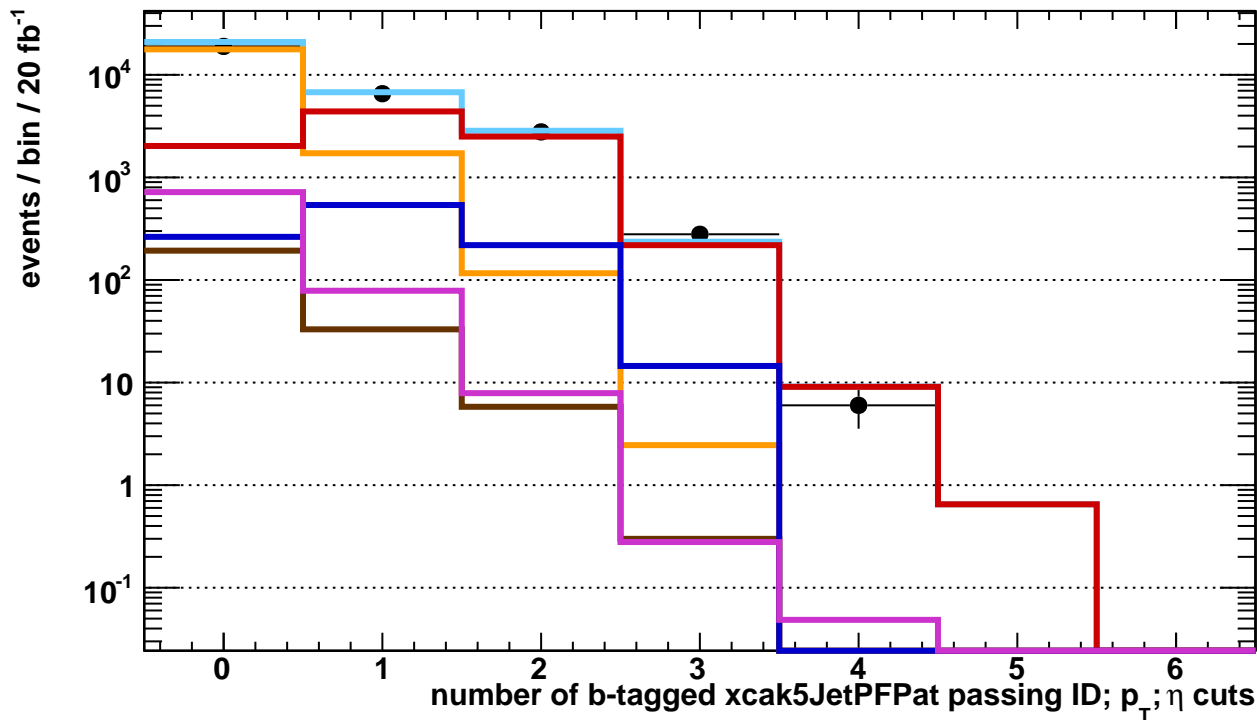
events / bin / 20 fb<sup>-1</sup>

xcak5JetPFhighPtPatOvermetP4TypePF	
Entries	28544
Mean	1.77
RMS	0.7983
Underflow	0
Overflow	0
Integral	2.854e+04

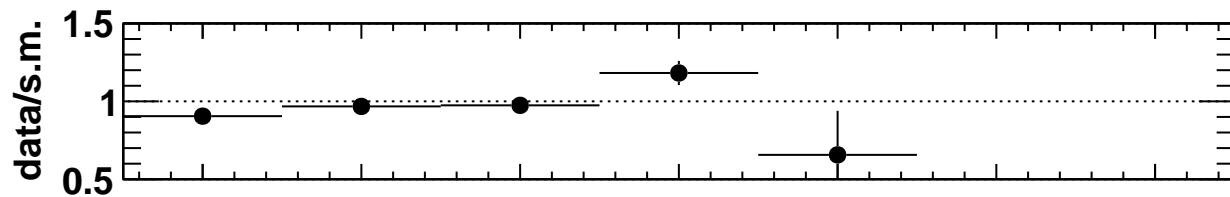
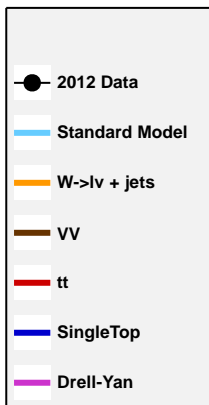


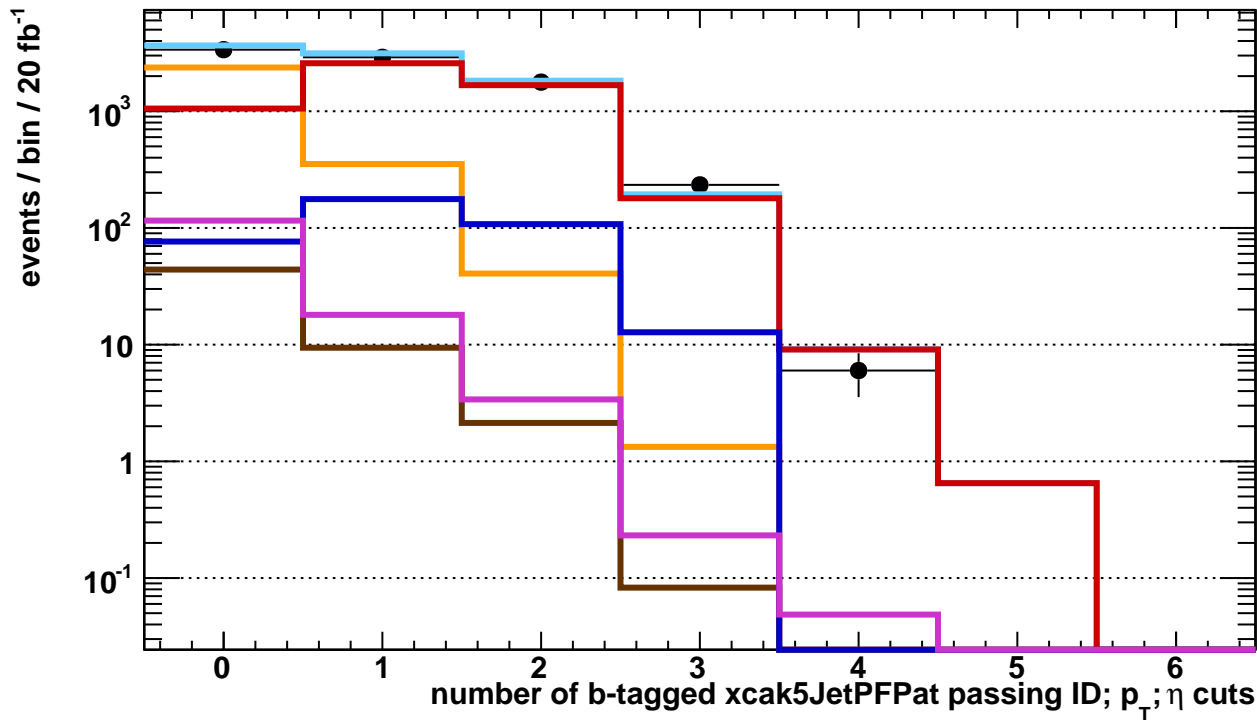
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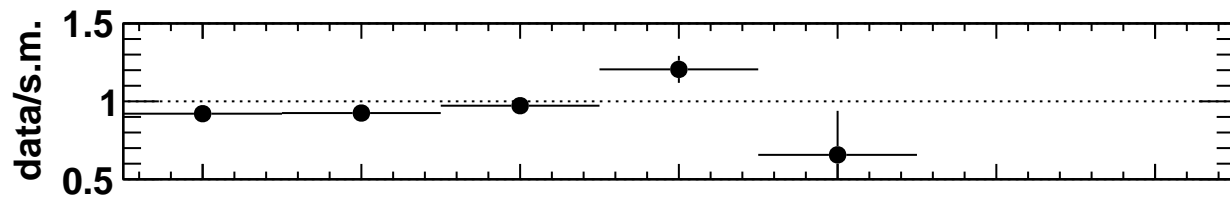


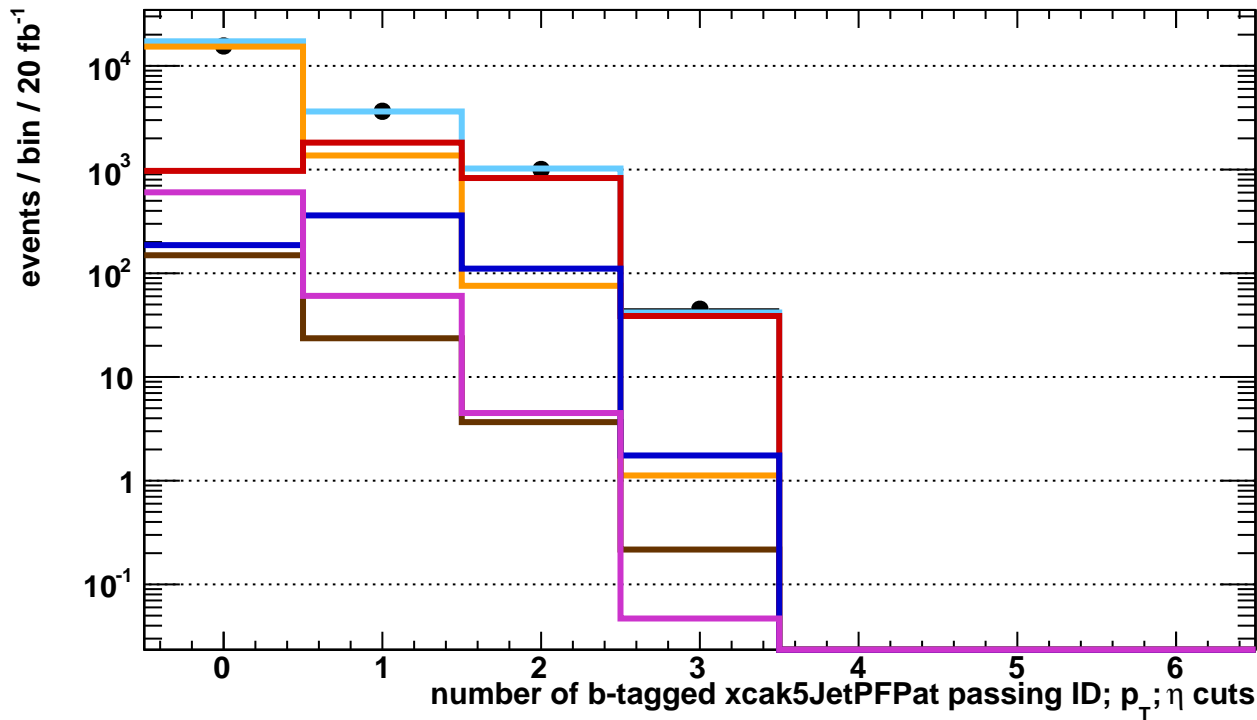
xcak5JetPFPIndicesBtagged2Pat	
Entries	28544
Mean	0.4542
RMS	0.7097
Underflow	0
Overflow	0
Integral	2.854e+04



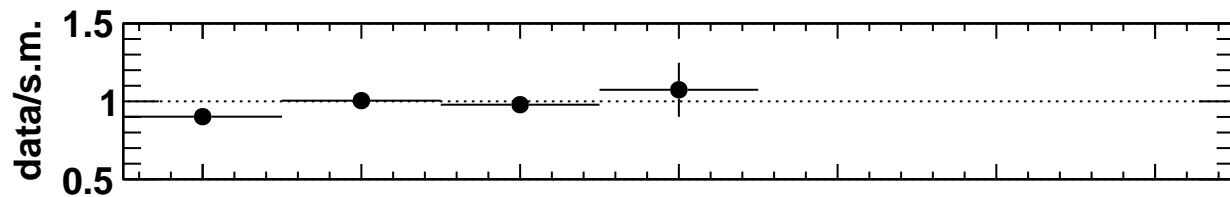
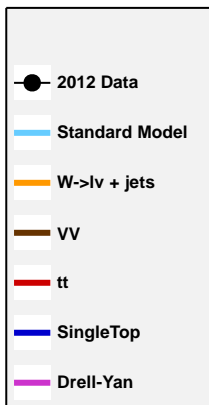


xcak5JetPFPIndicesBtagged2Pat_ge4J	
Entries	8287
Mean	0.8662
RMS	0.8501
Underflow	0
Overflow	0
Integral	8287

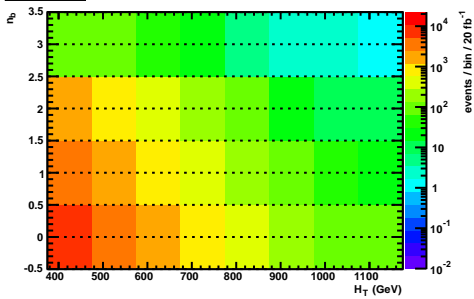
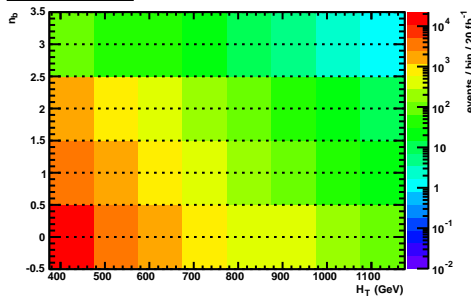
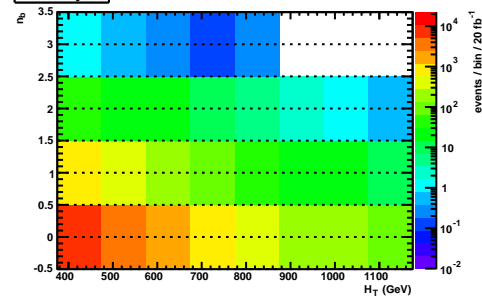
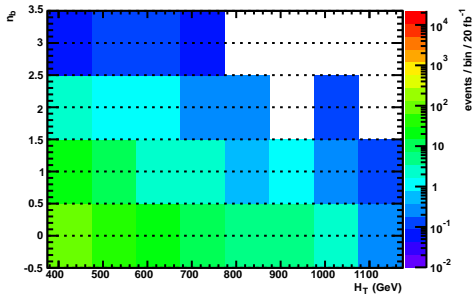
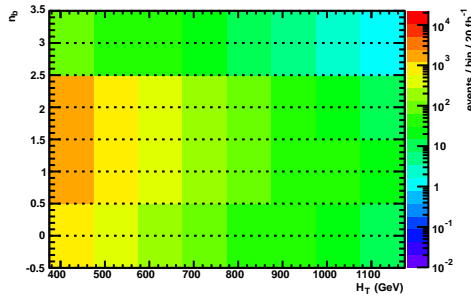
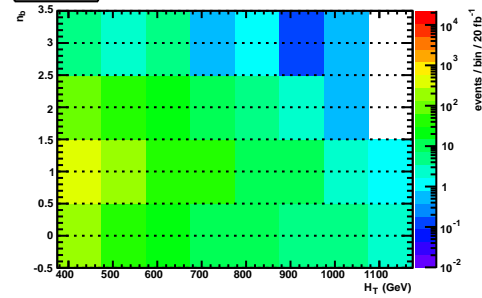
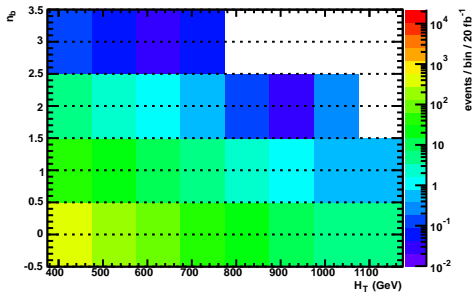


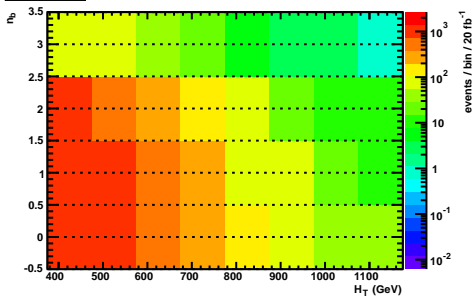
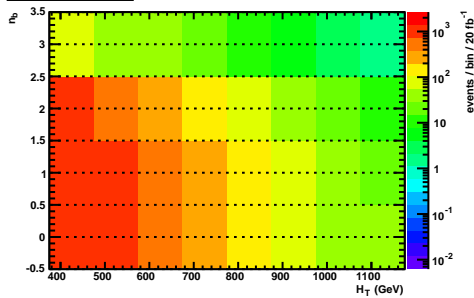
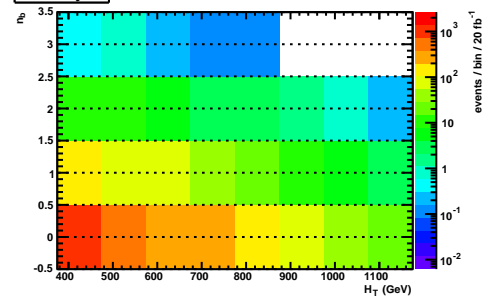
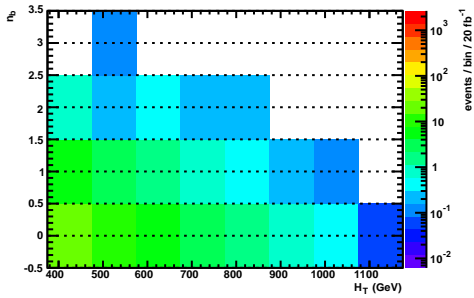
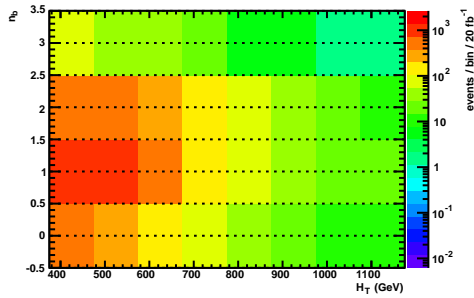
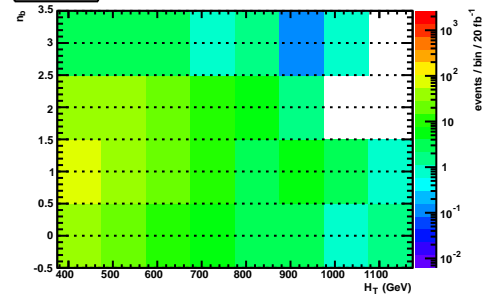
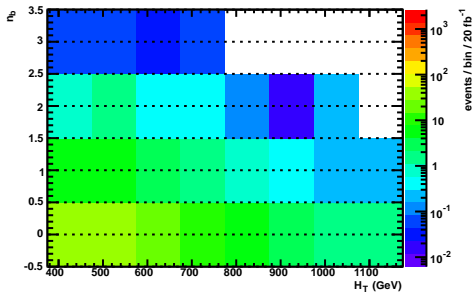


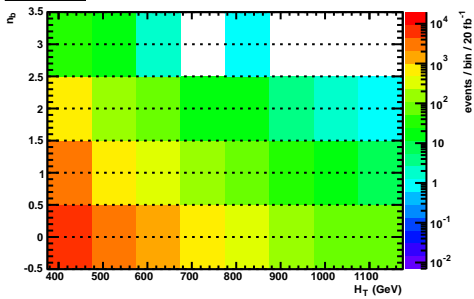
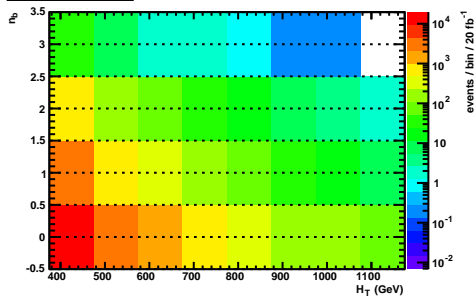
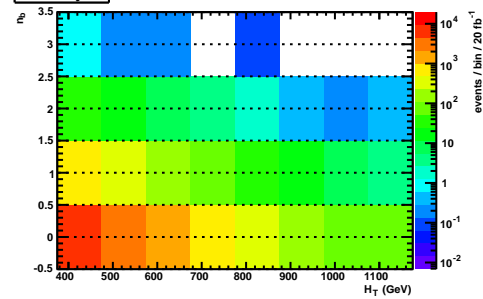
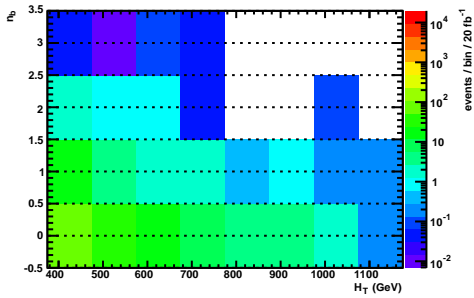
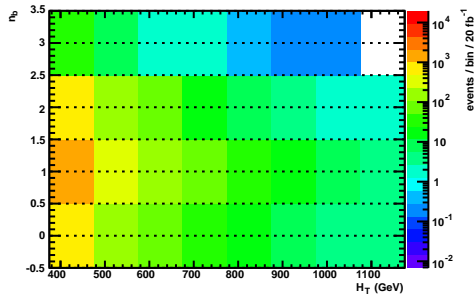
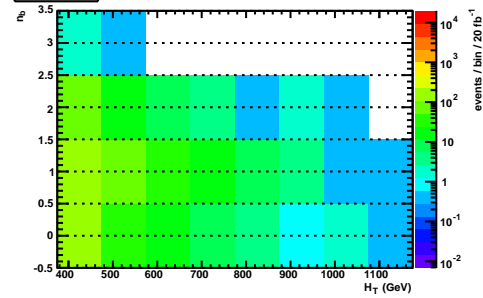
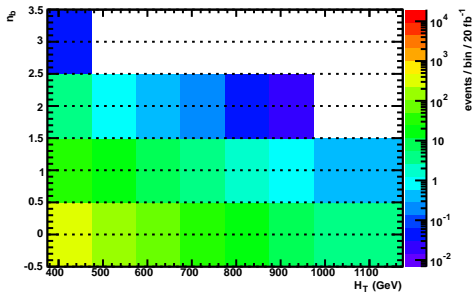
xcak5JetPFPIndicesBtagged2Pat_le3j	
Entries	20257
Mean	0.2857
RMS	0.5624
Underflow	0
Overflow	0
Integral	2.026e+04

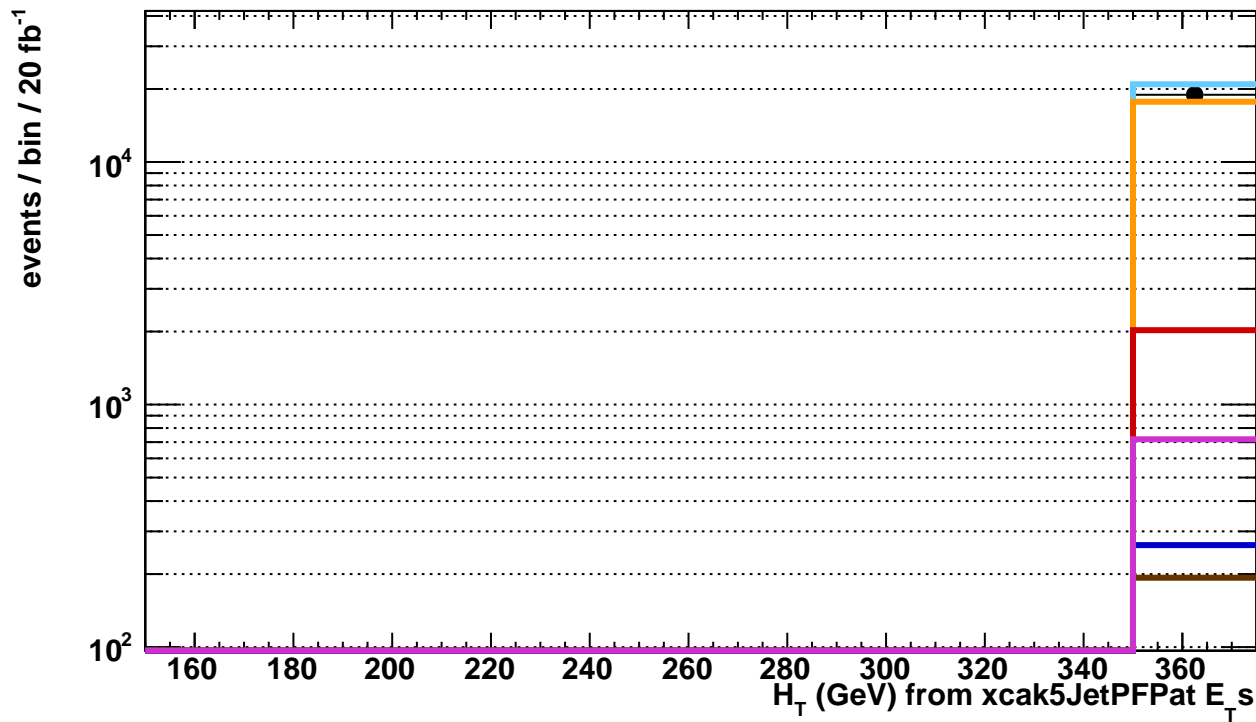




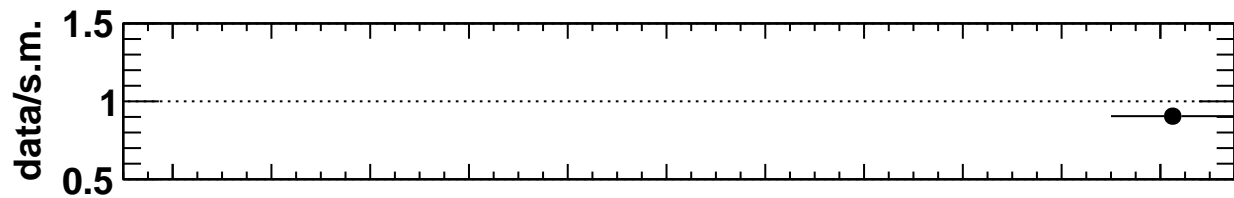
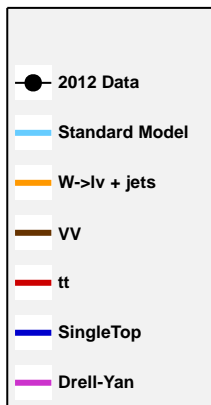
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

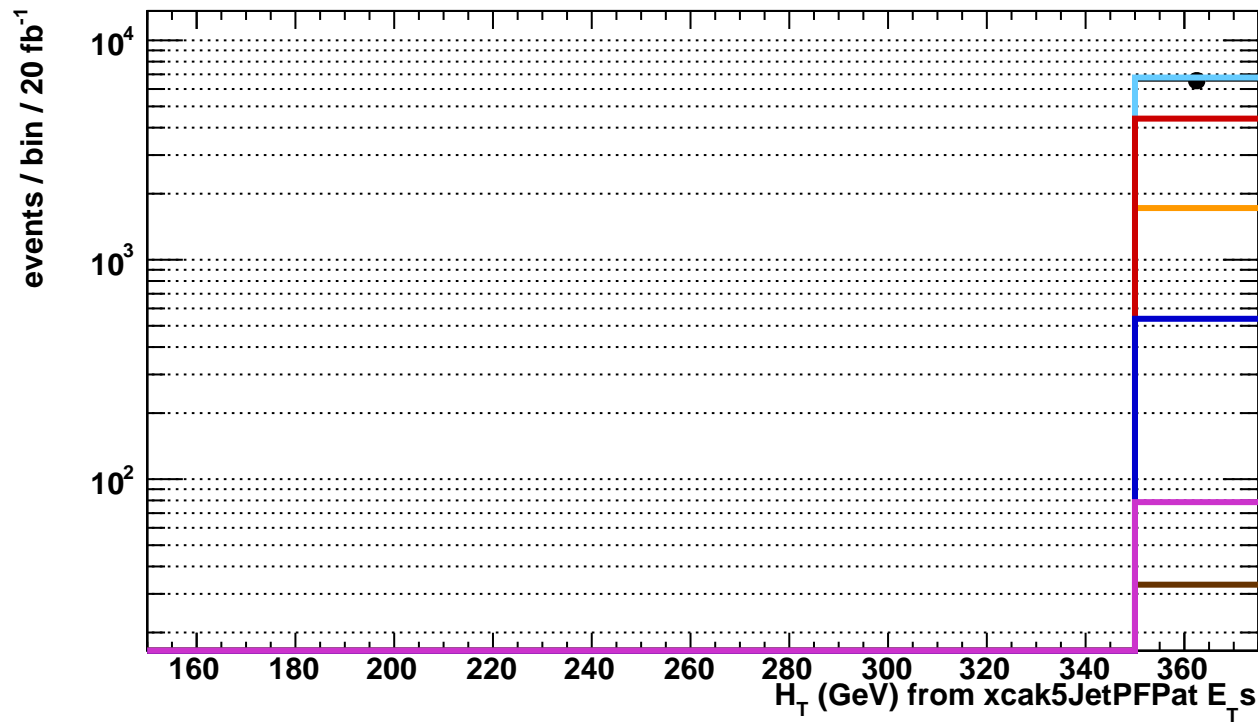
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

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

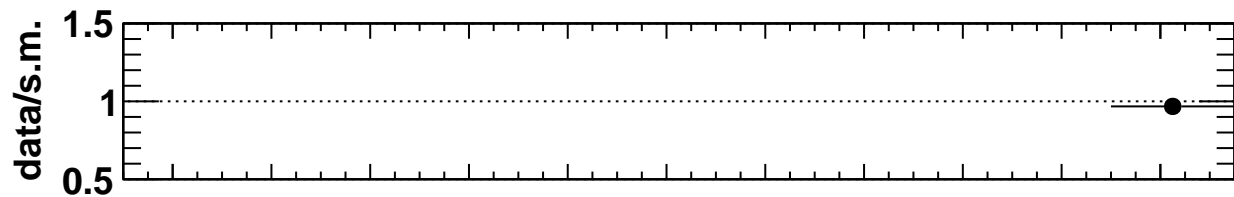
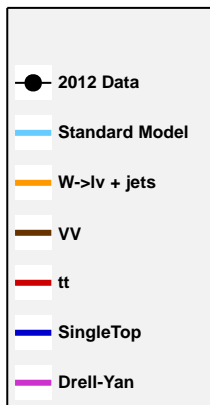


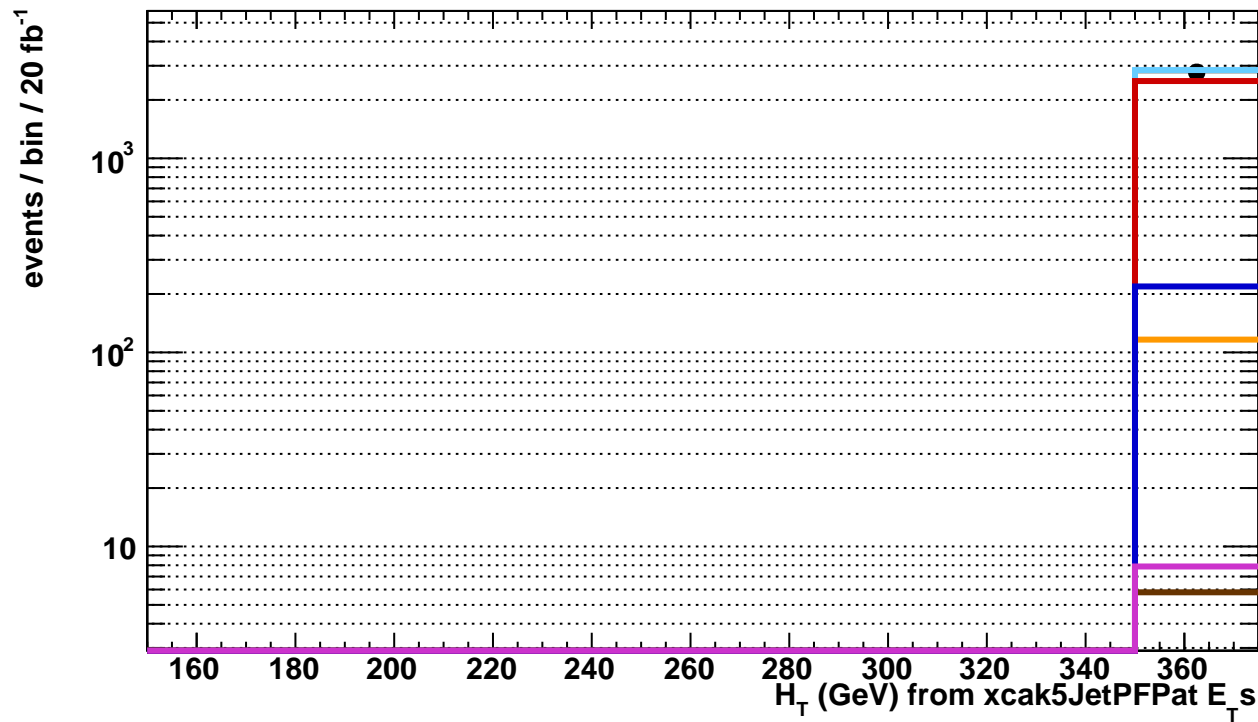
xcak5JetPFSumETPat_eq0b	
Entries	18932
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1.893e+04



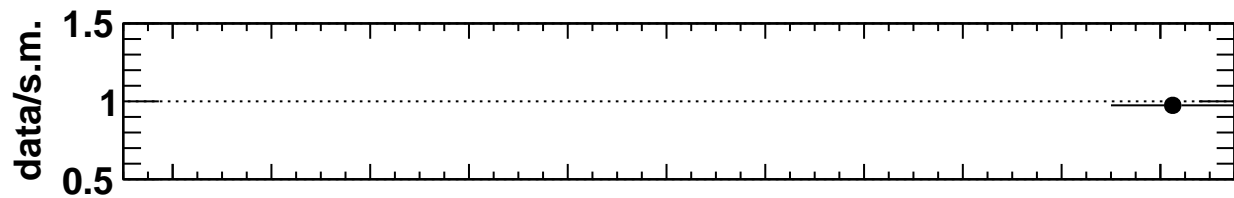
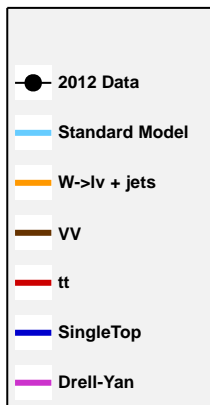


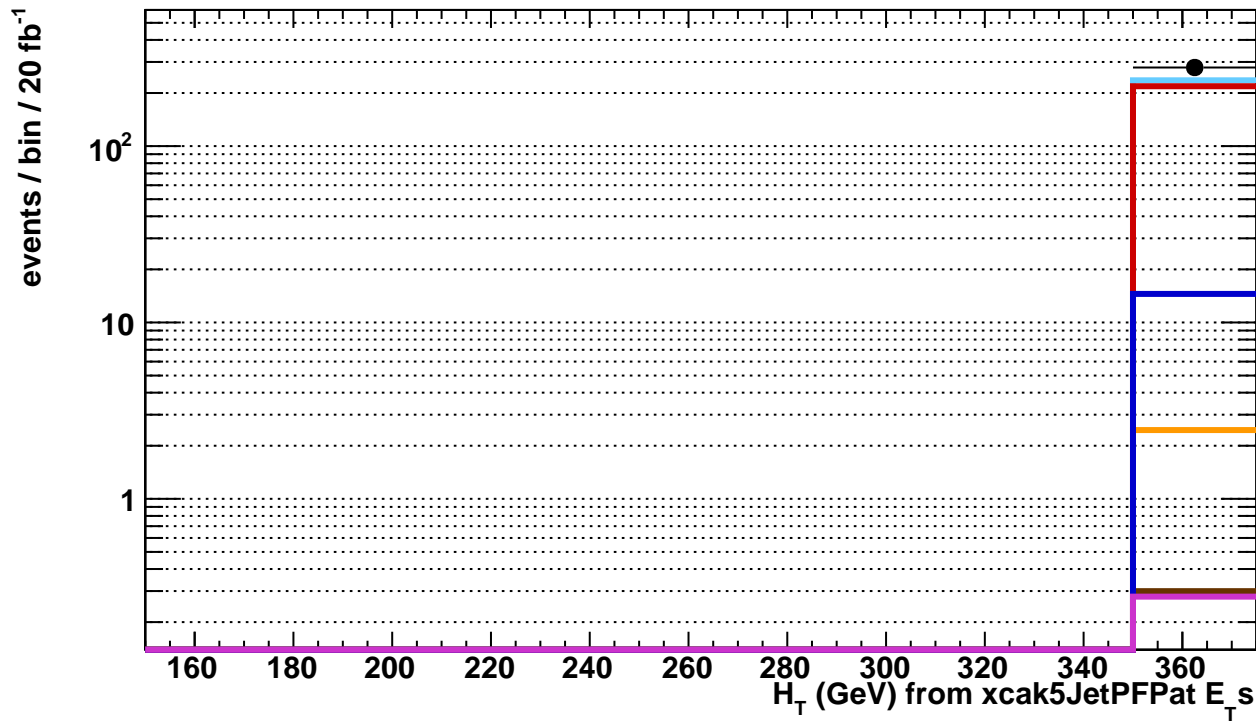
xcak5JetPFSumETPat_eq1b	
Entries	6549
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6549



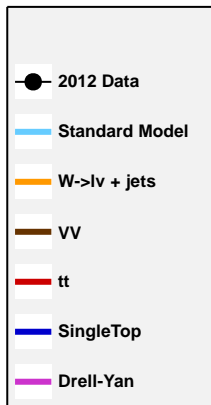


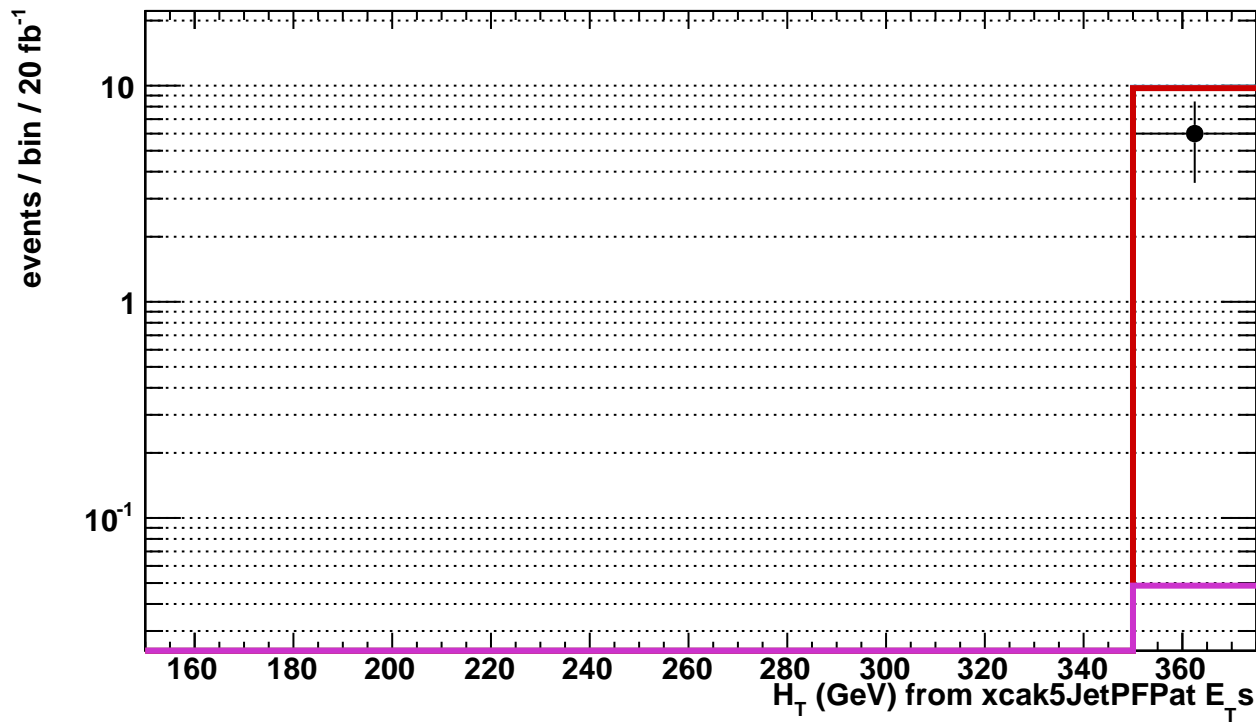
xcak5JetPFSumETPat_eq2b	
Entries	2778
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	2778



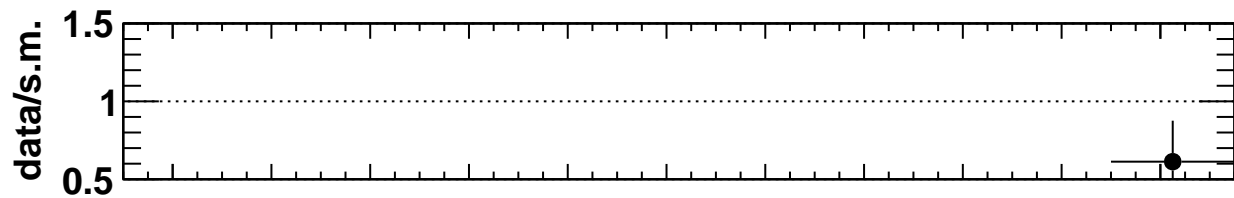
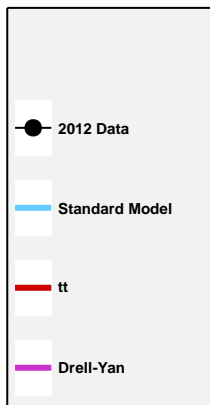


xcak5JetPFSumETPat_eq3b	
Entries	279
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	279

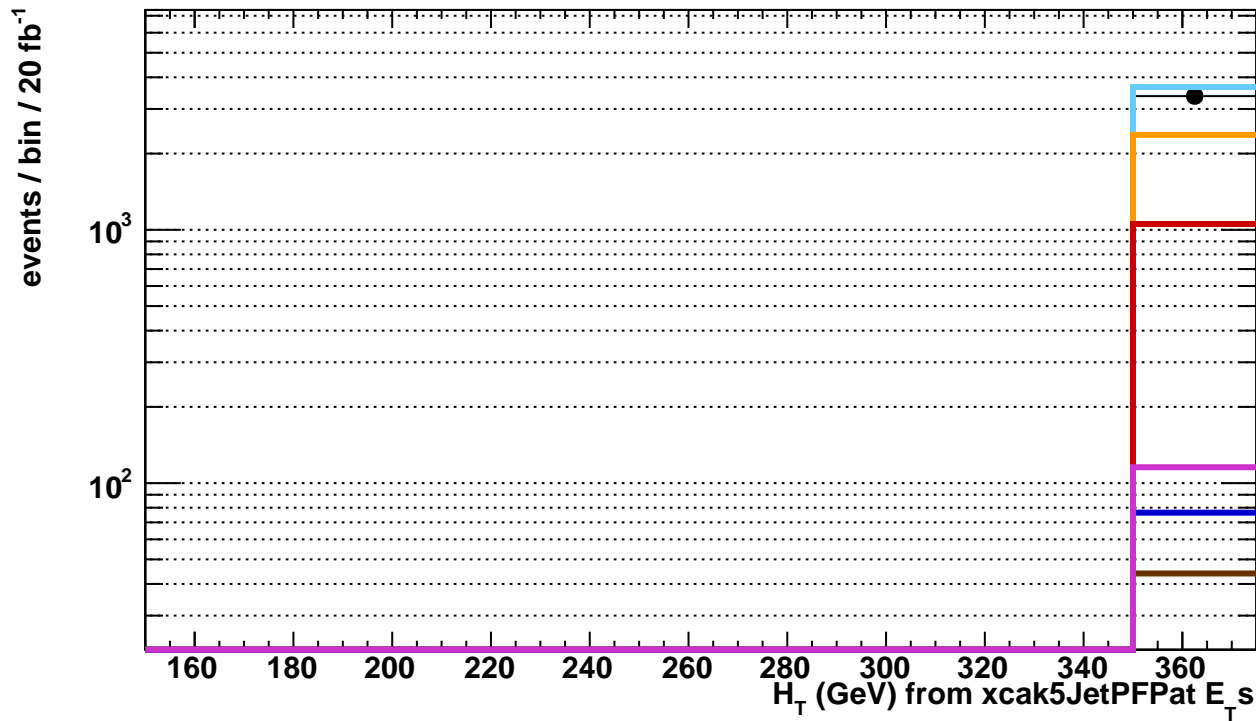




xcak5JetPFSumETPat_ge4b	
Entries	6
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6

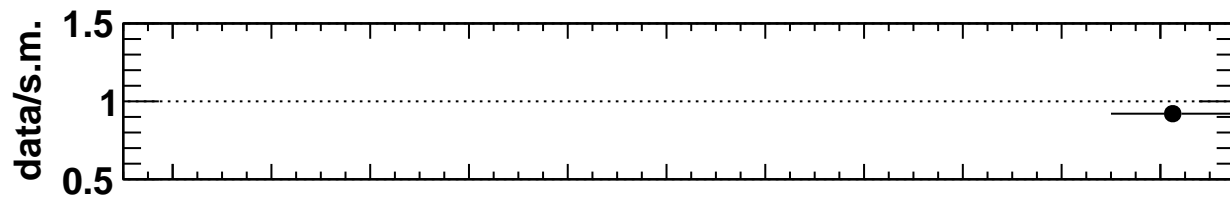
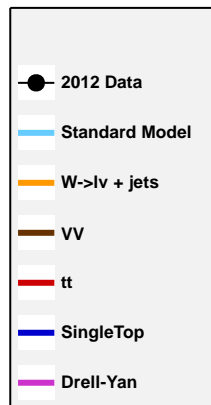


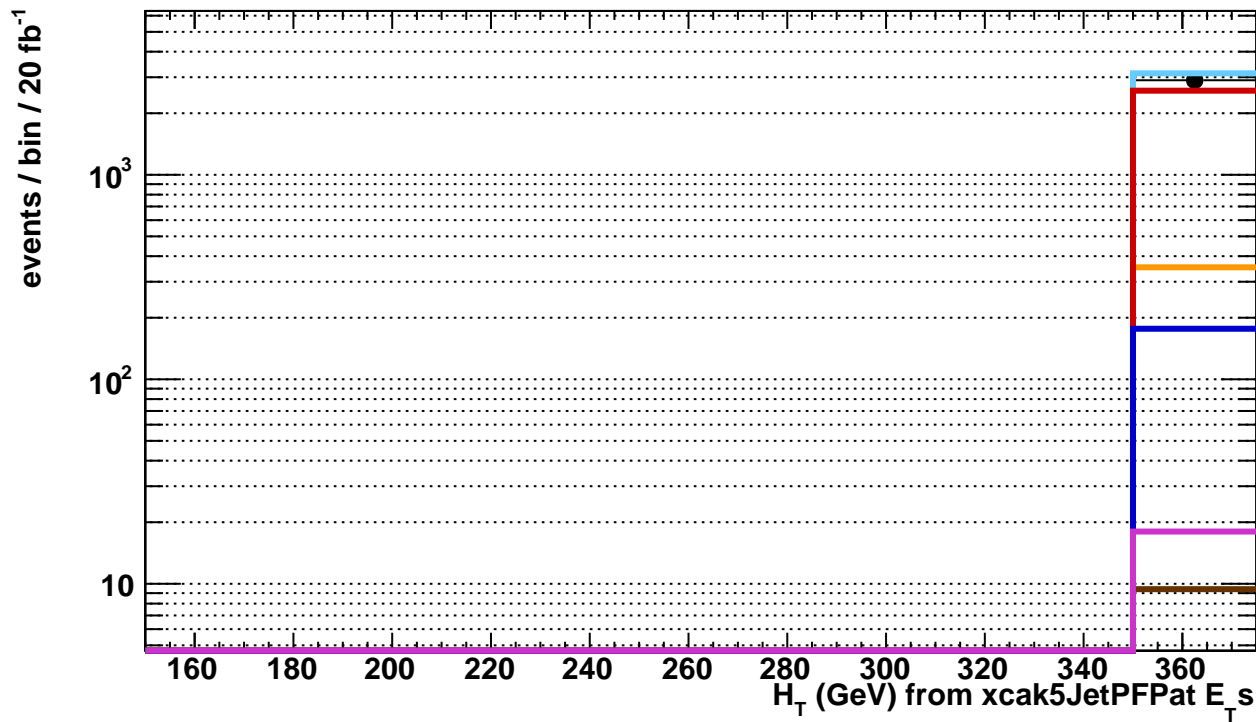




xcak5JetPFSumEtPat\_ge4j\_eq0b

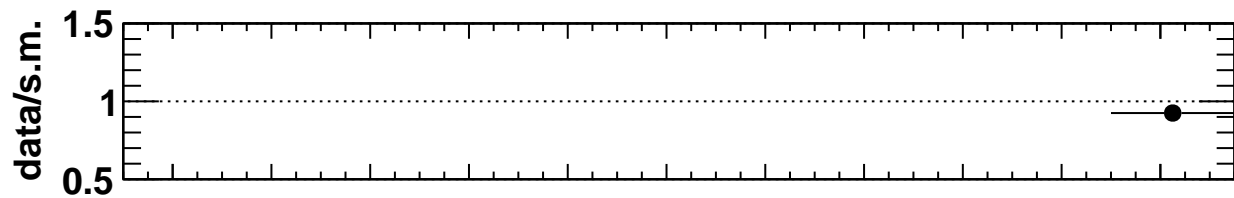
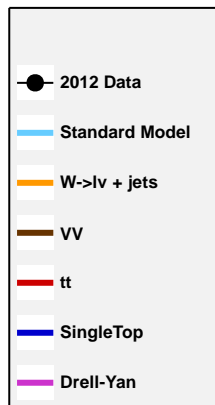
Entries	3371
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	3371

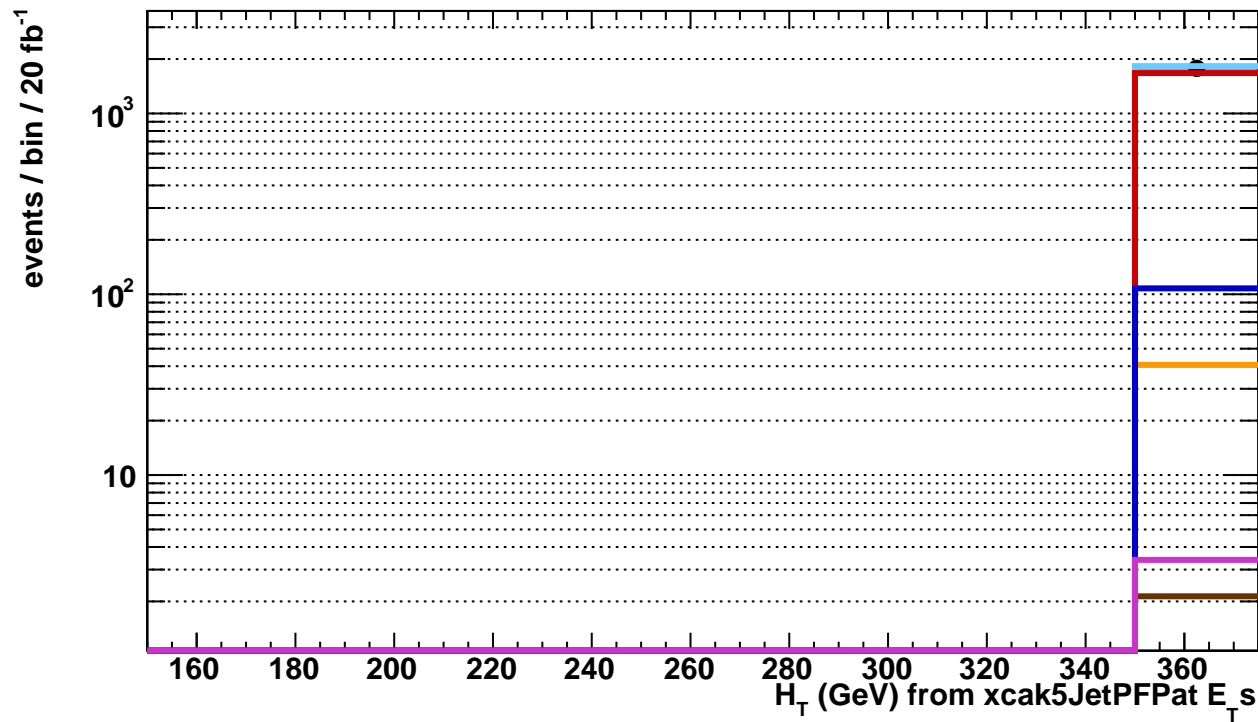




xcak5JetPFSumEtPat\_ge4j\_eq1b

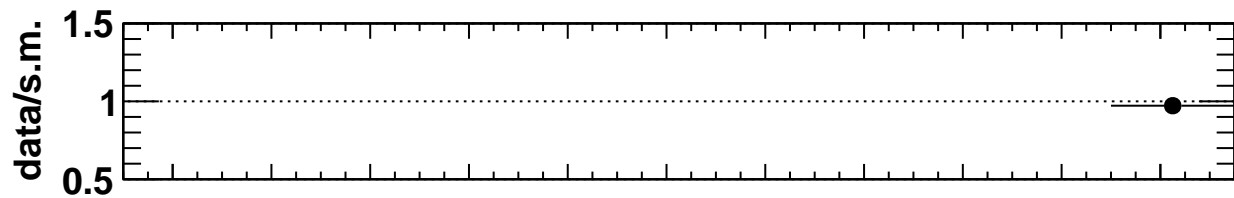
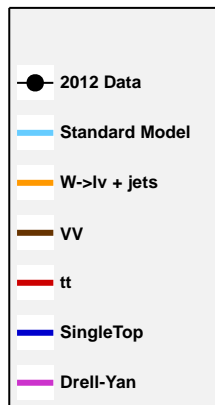
Entries	2900
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	2900





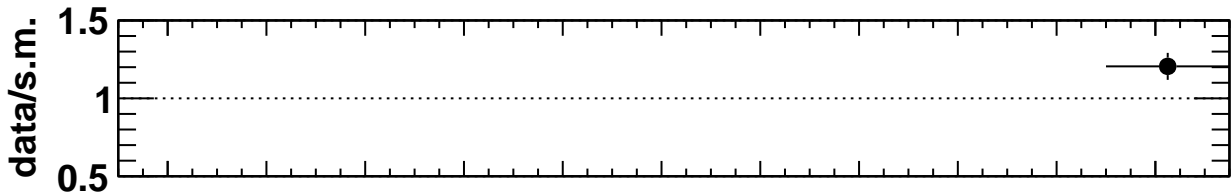
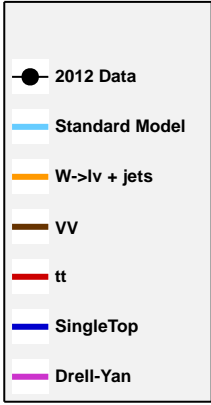
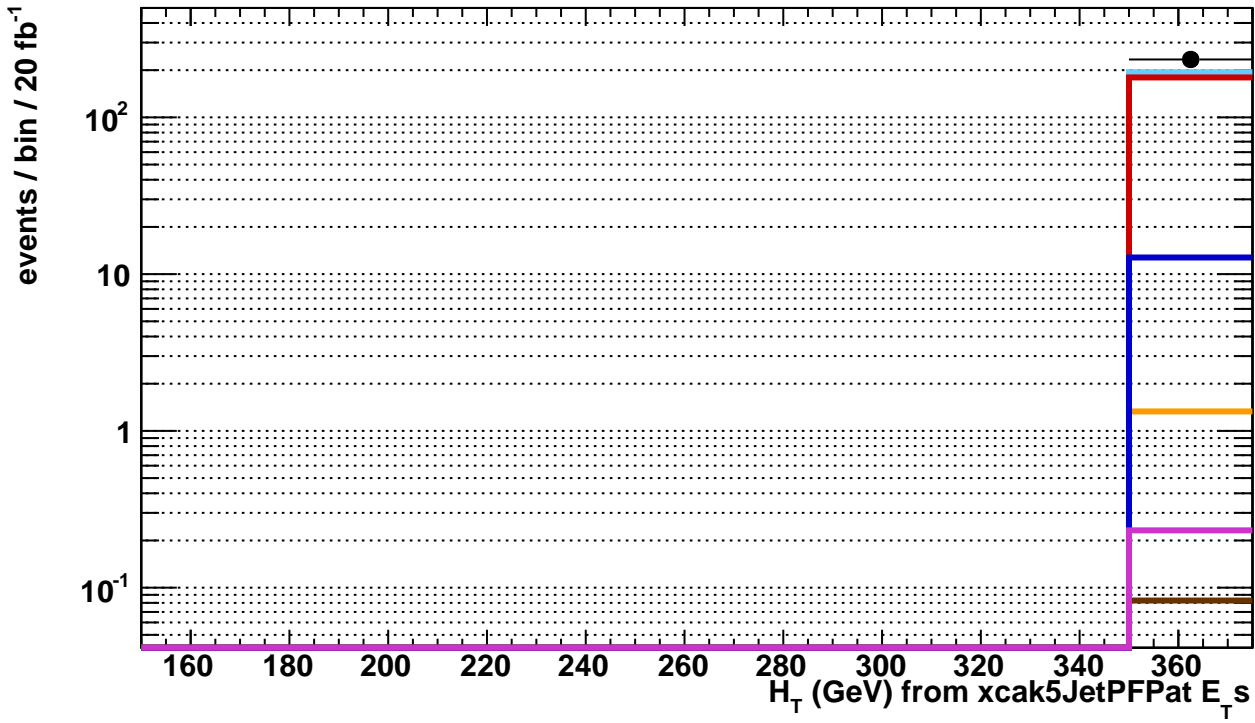
xcak5JetPFSumEtPat\_ge4j\_eq2b

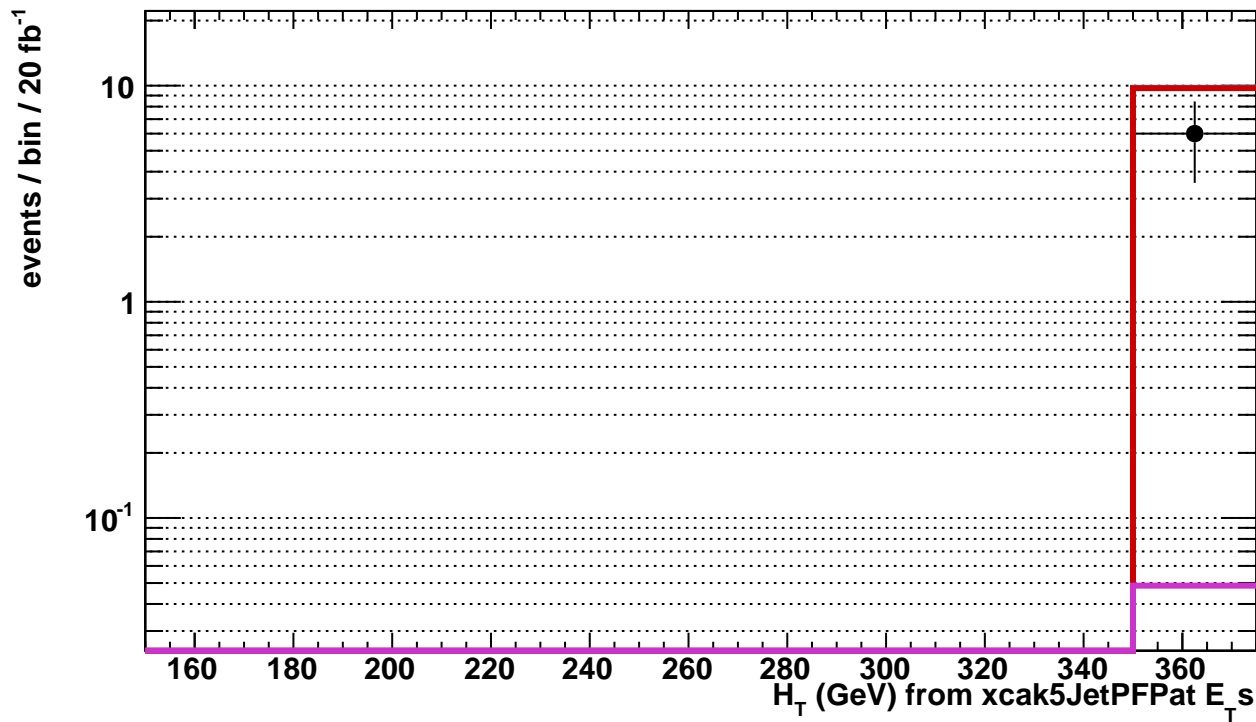
Entries	1776
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1776



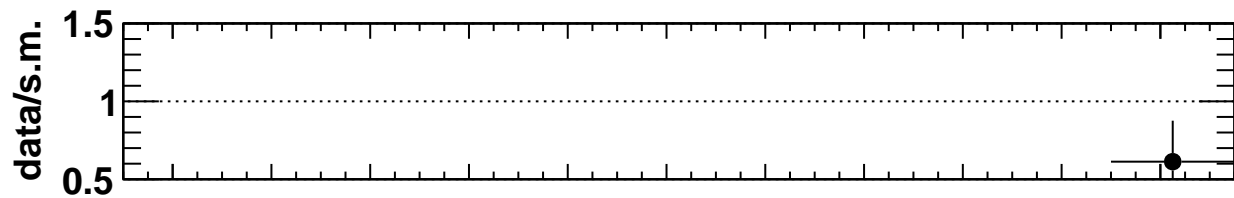
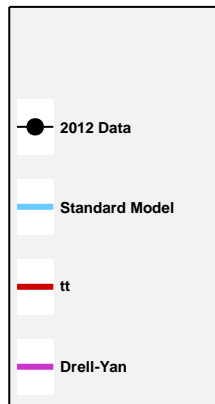
xcak5JetPFSumEtPat\_ge4j\_eq3b

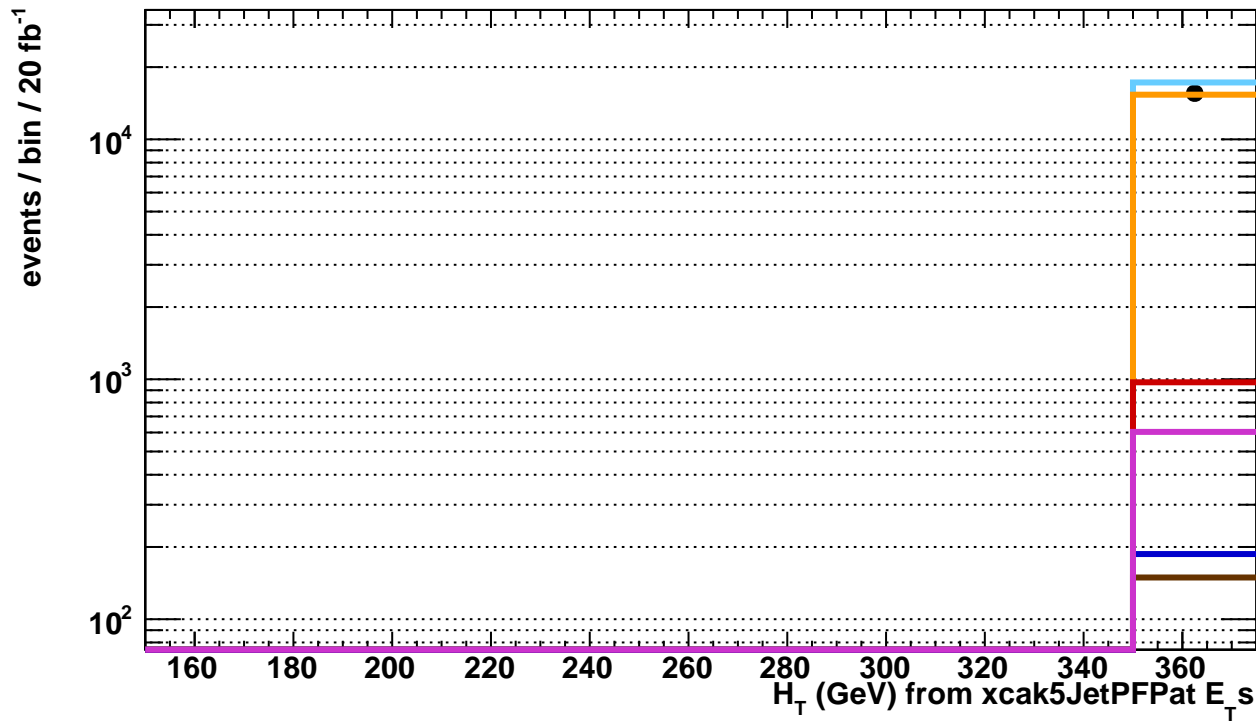
Entries	234
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	234



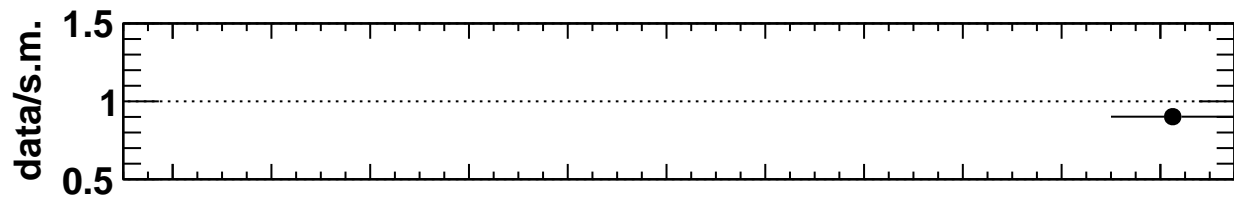
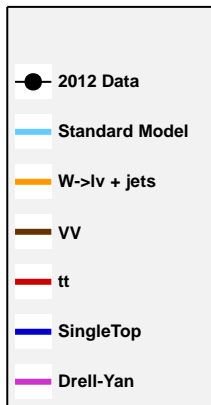


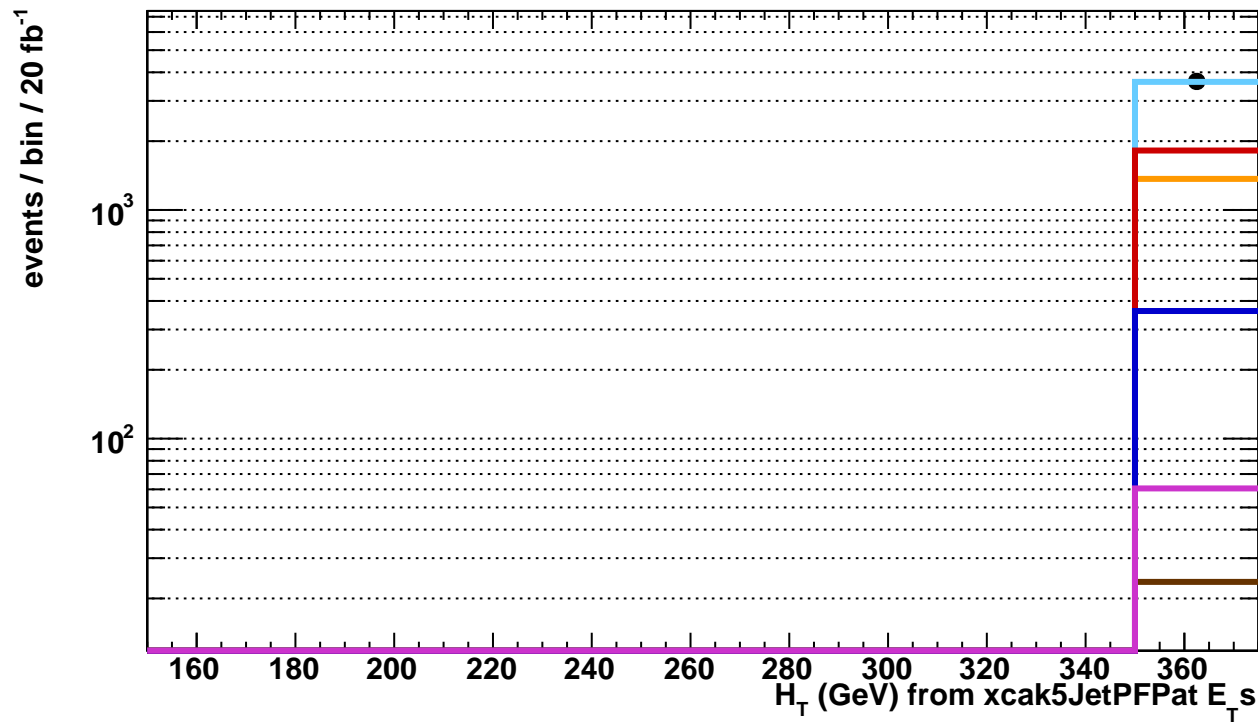
xcak5JetPFSumEtPat_ge4j_ge4b	
Entries	6
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6



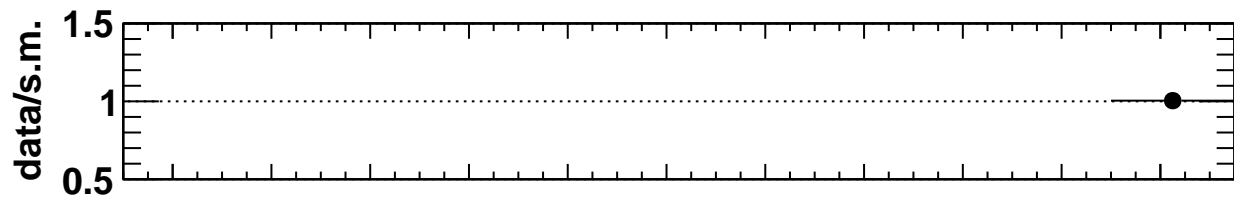
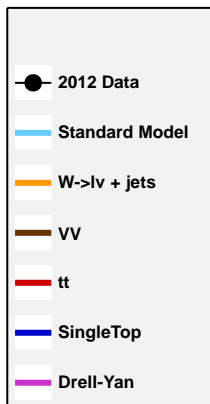


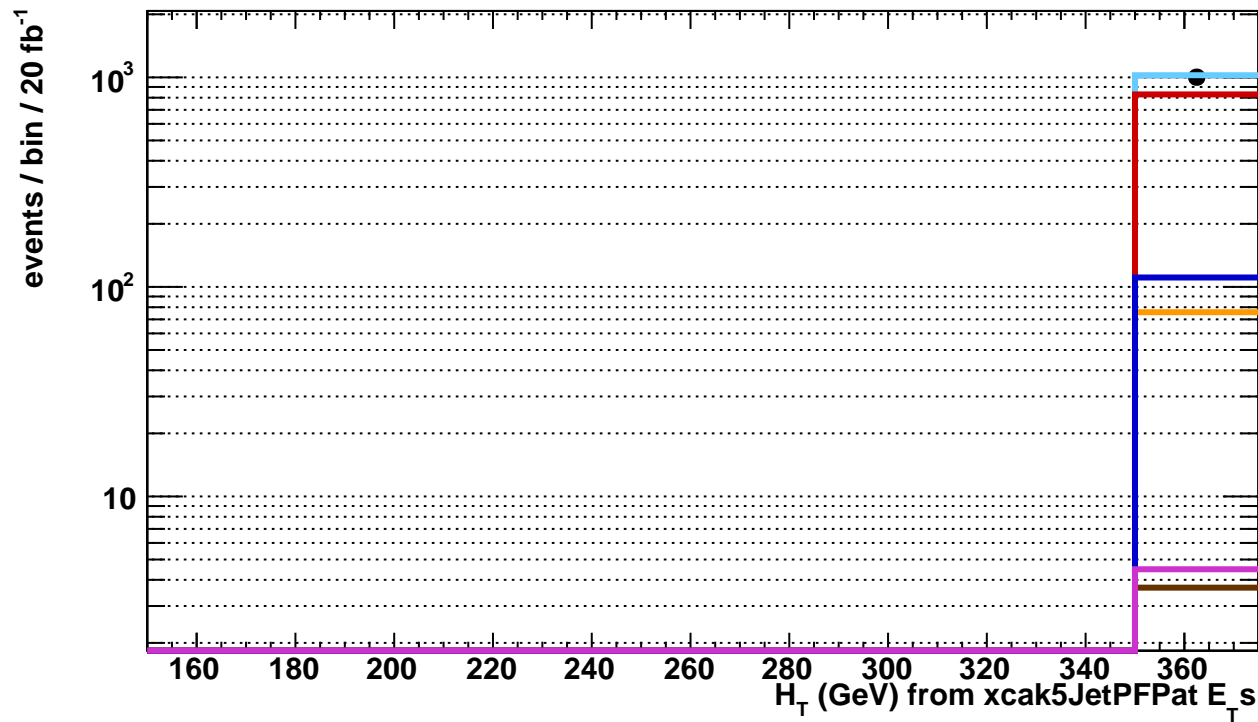
xcak5JetPFSumEtPat_le3j_eq0b	
Entries	15561
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1.556e+04



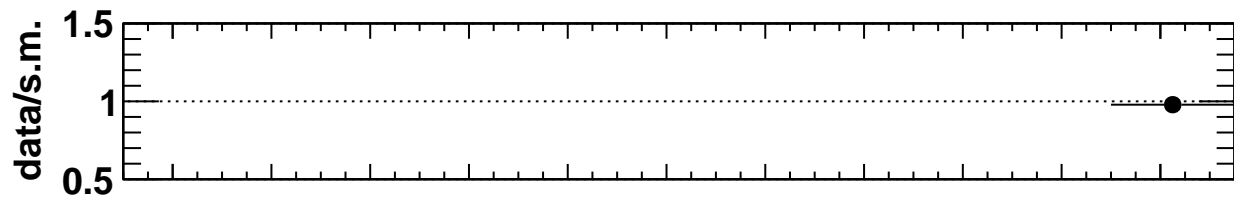
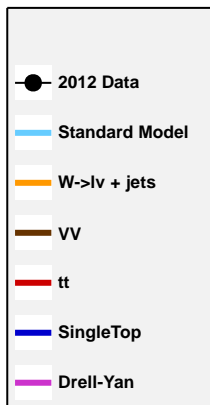


xcak5JetPFSumEtPat_le3j_eq1b	
Entries	3649
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	3649

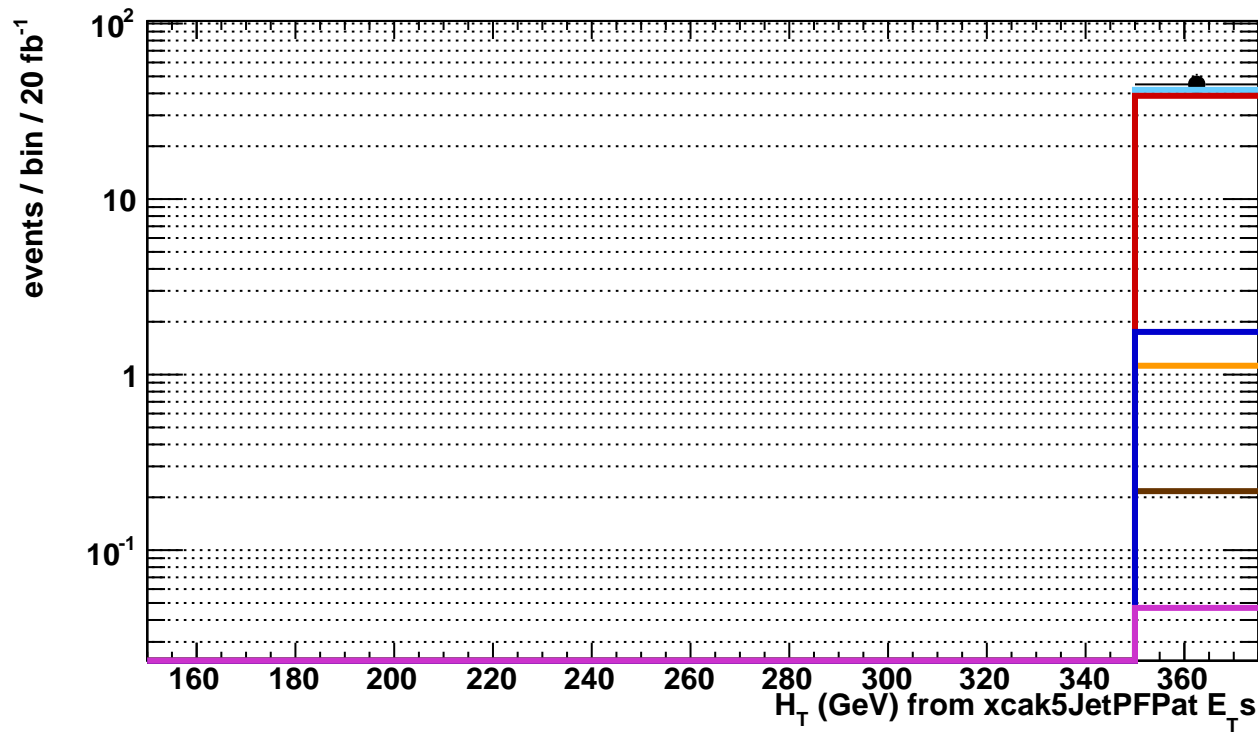




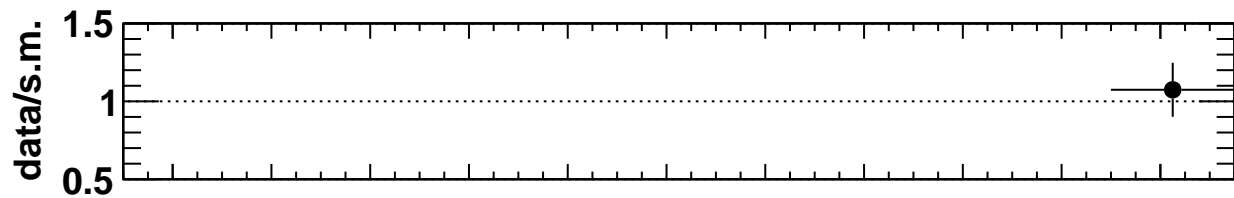
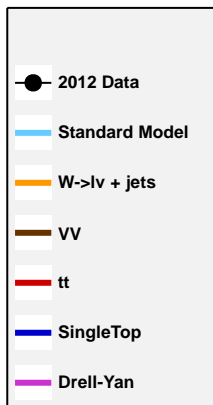
xcak5JetPFSumEtPat_le3j_eq2b	
Entries	1002
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1002

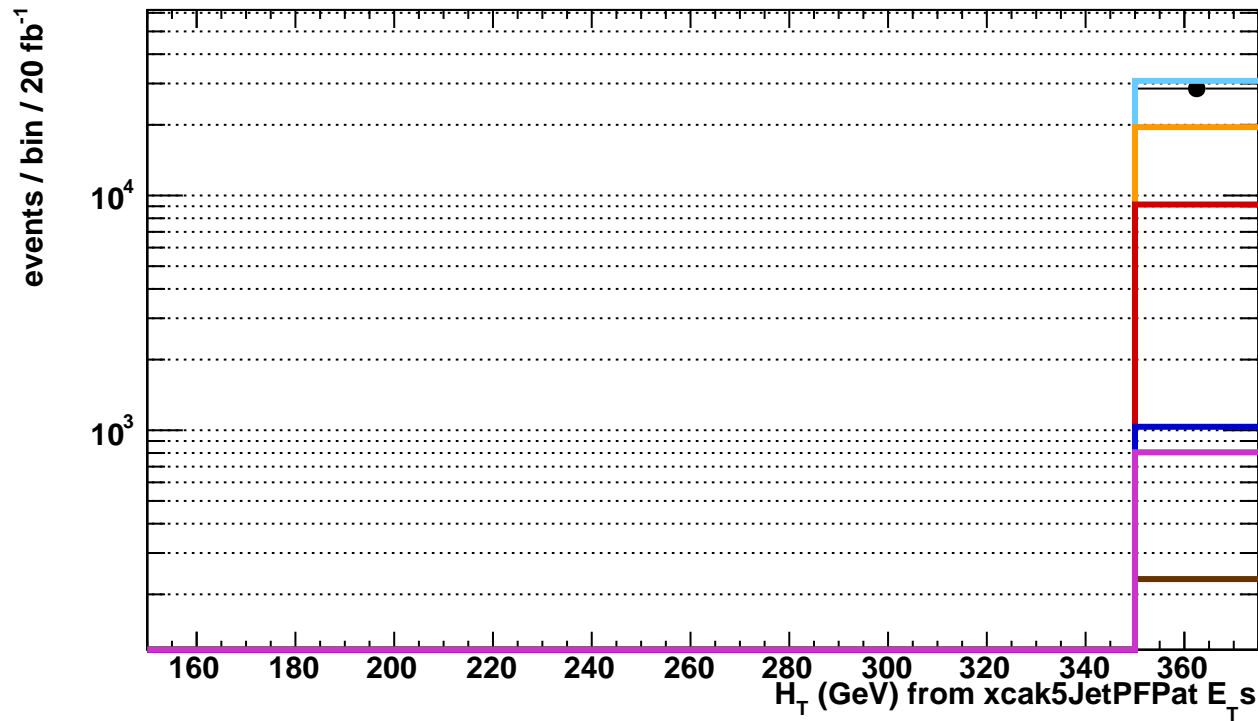




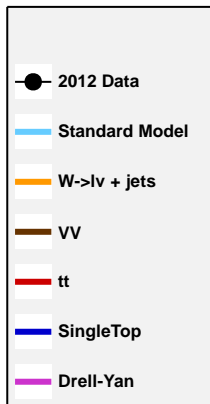


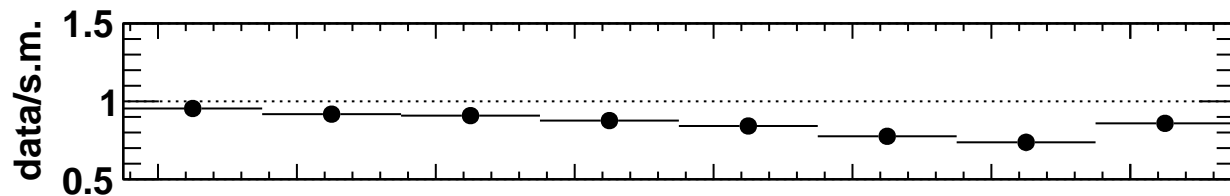
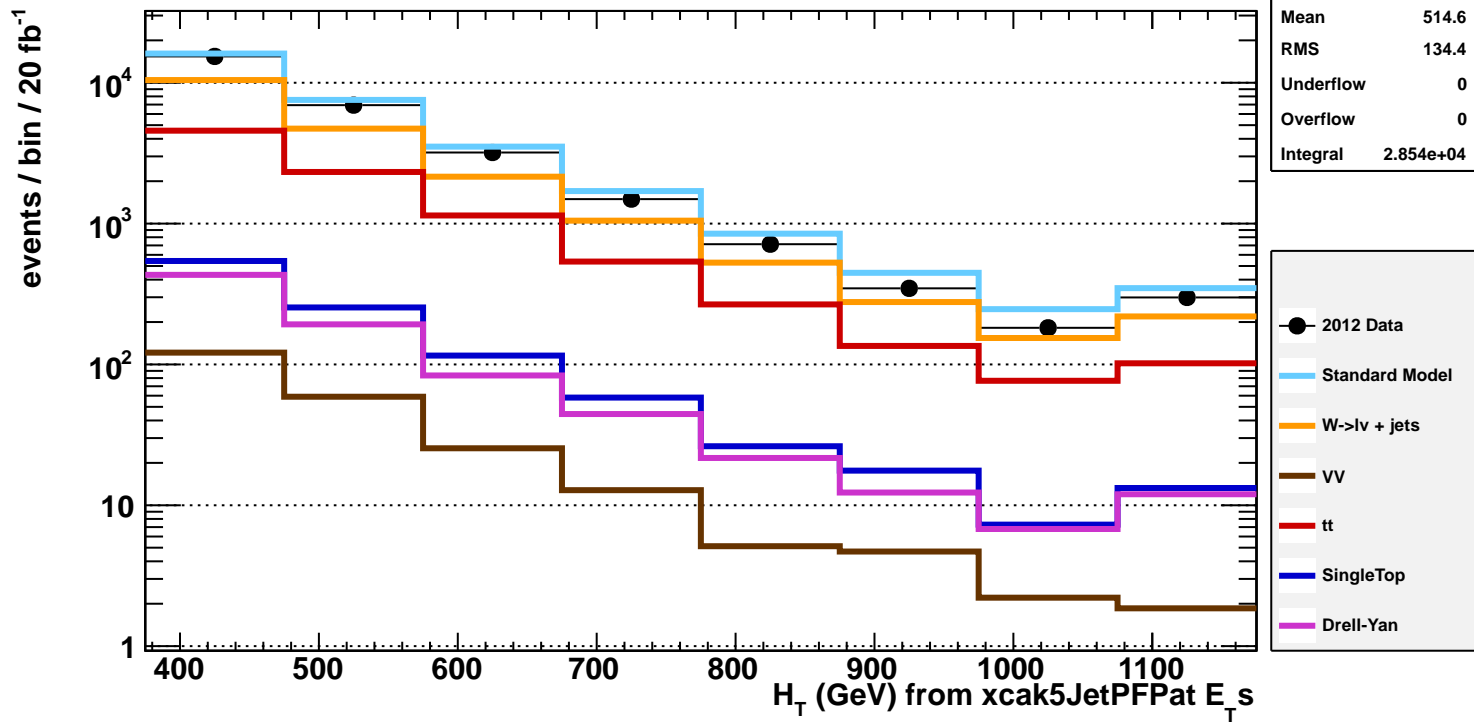
xcak5JetPFSumEtPat_le3j_eq3b	
Entries	45
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	45

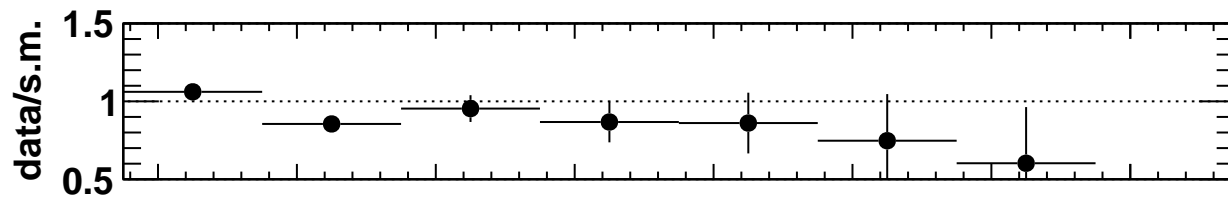
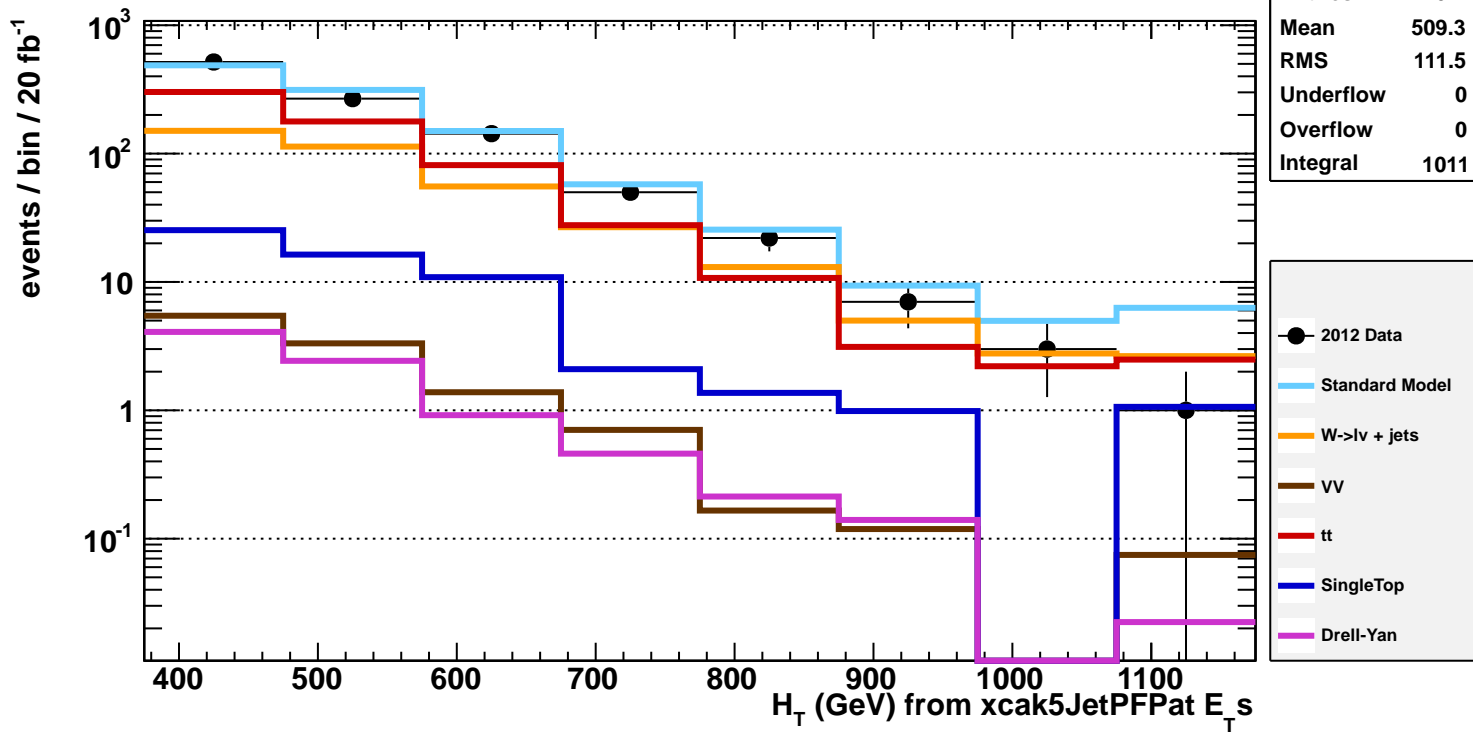




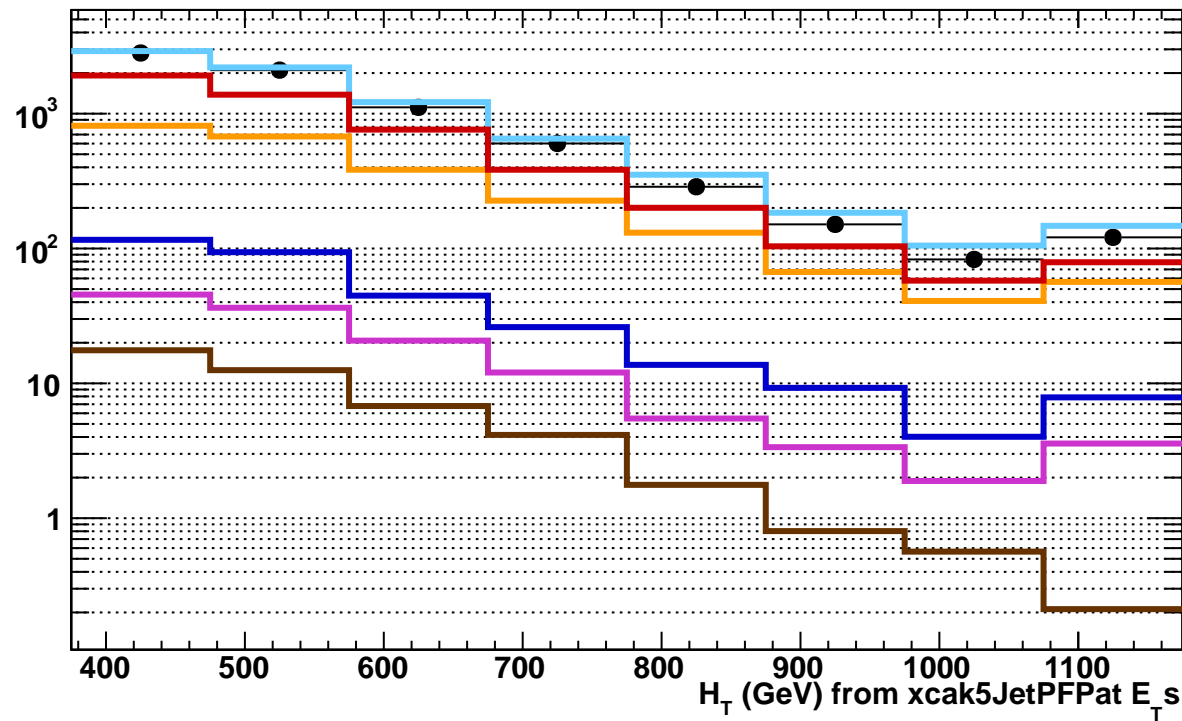
xcak5JetPFSumEtPat	
Entries	28544
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	2.854e+04



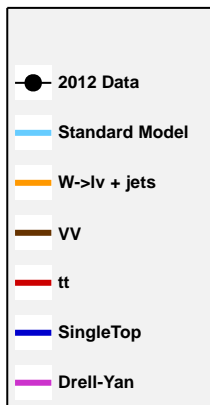




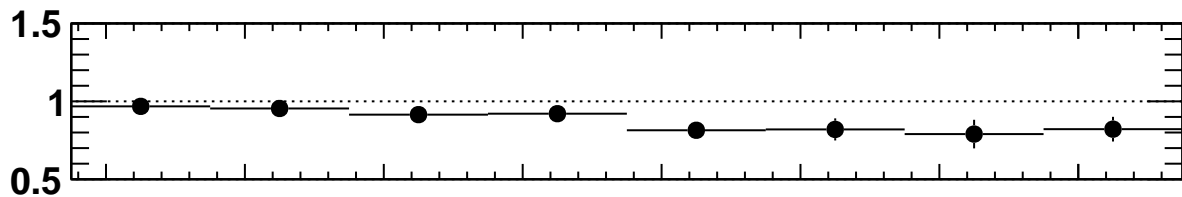
events / bin / 20 fb<sup>-1</sup>

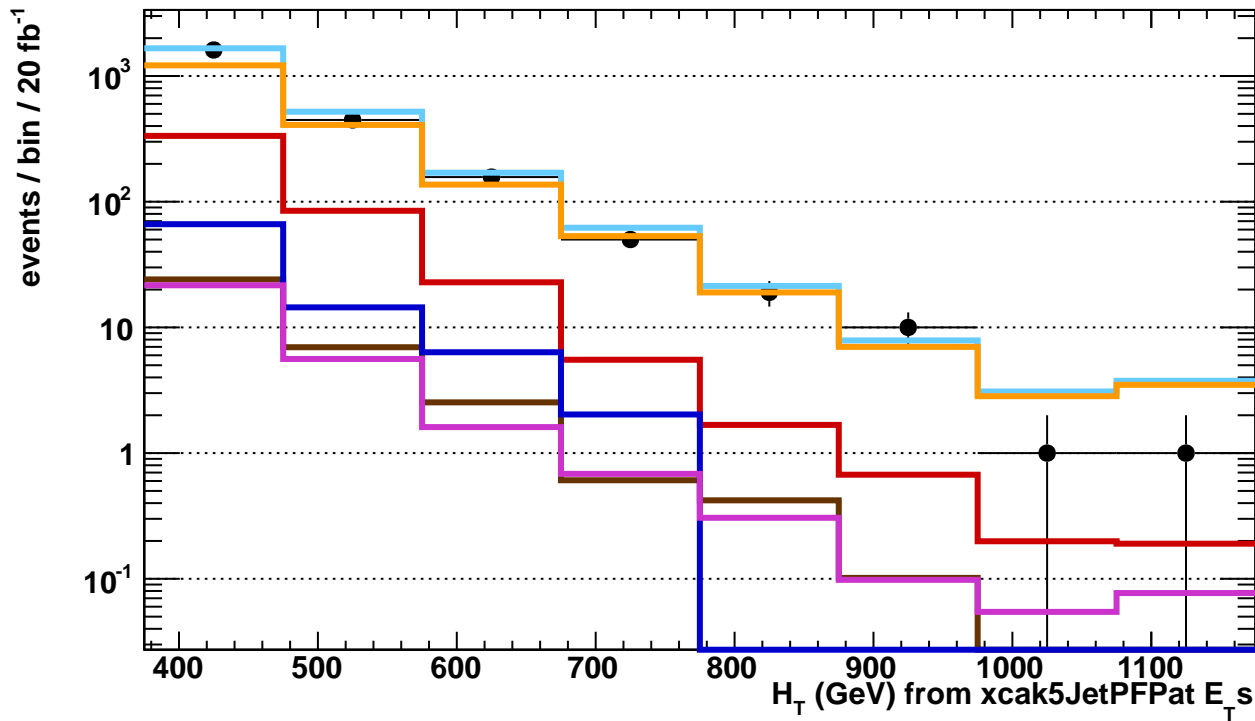


xcak5JetPFSumEIPat_ge4j_at155	
Entries	7276
Mean	553.9
RMS	153.6
Underflow	0
Overflow	0
Integral	7276

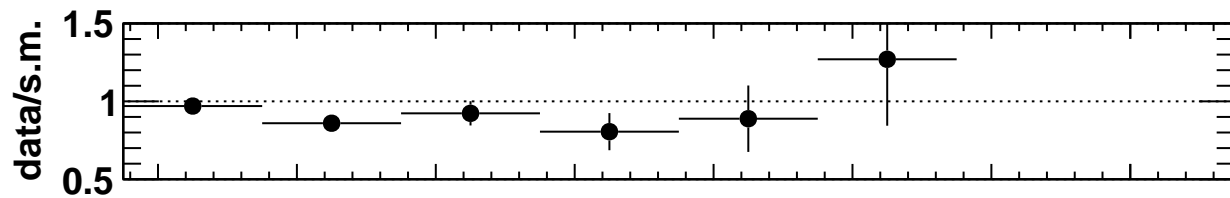
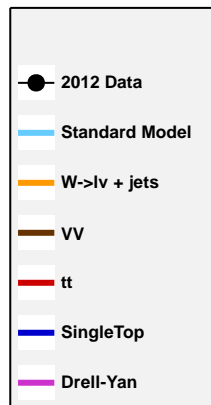


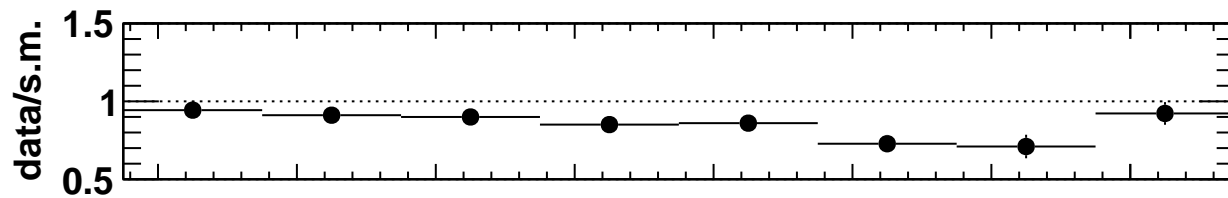
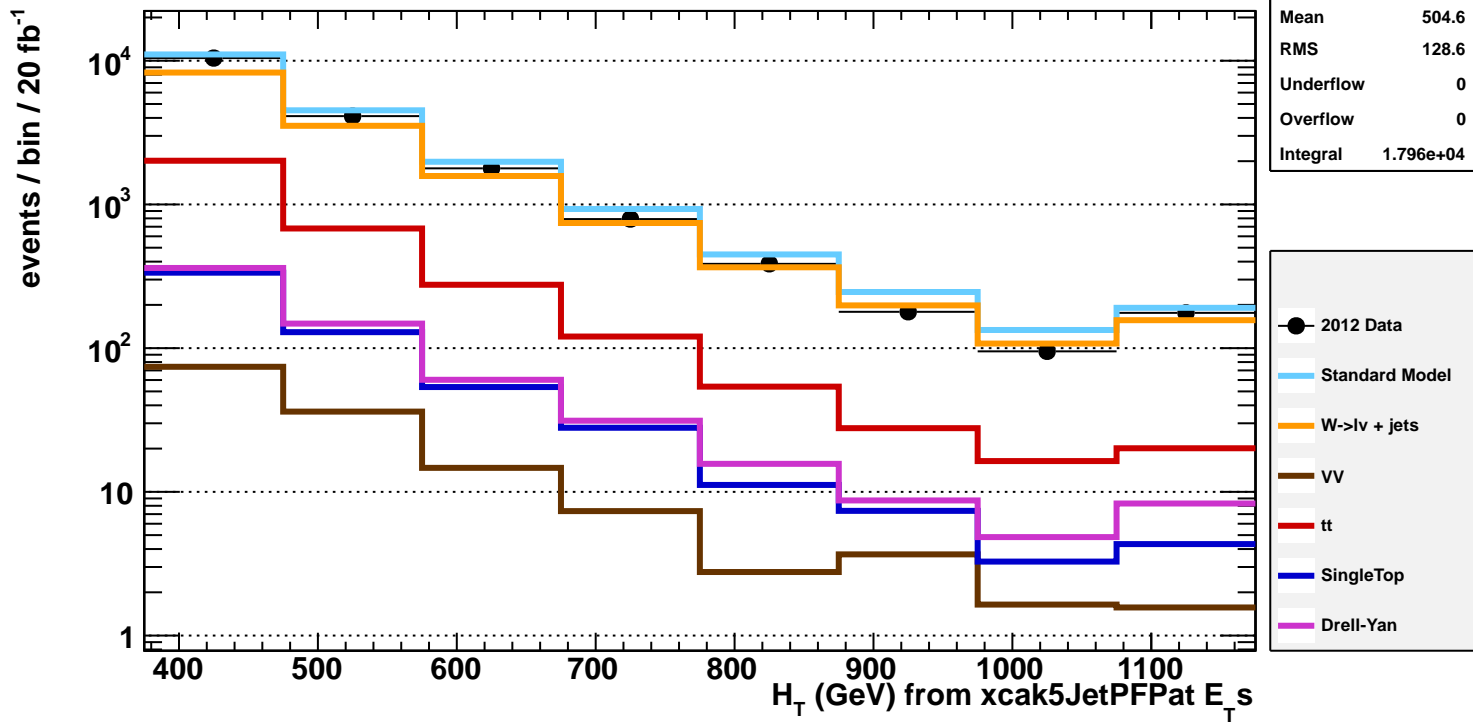
data/s.m.

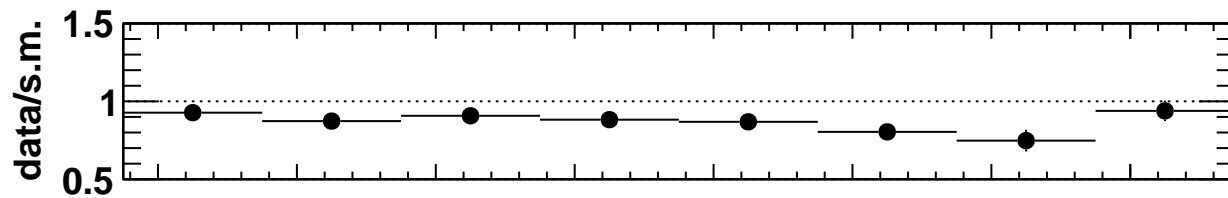
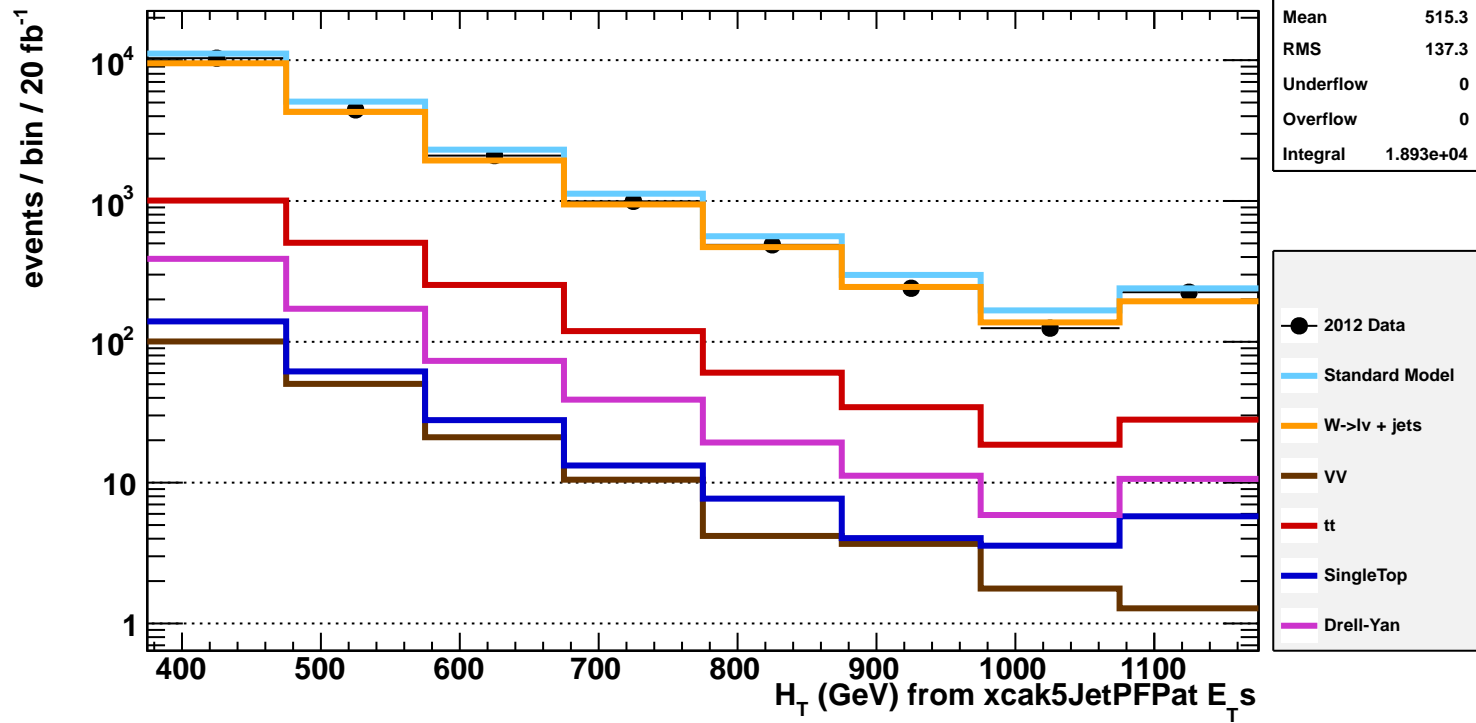




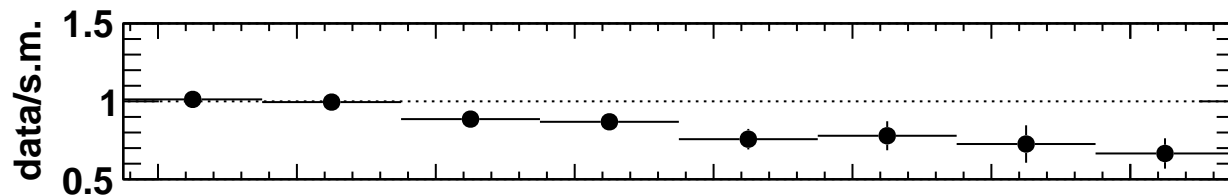
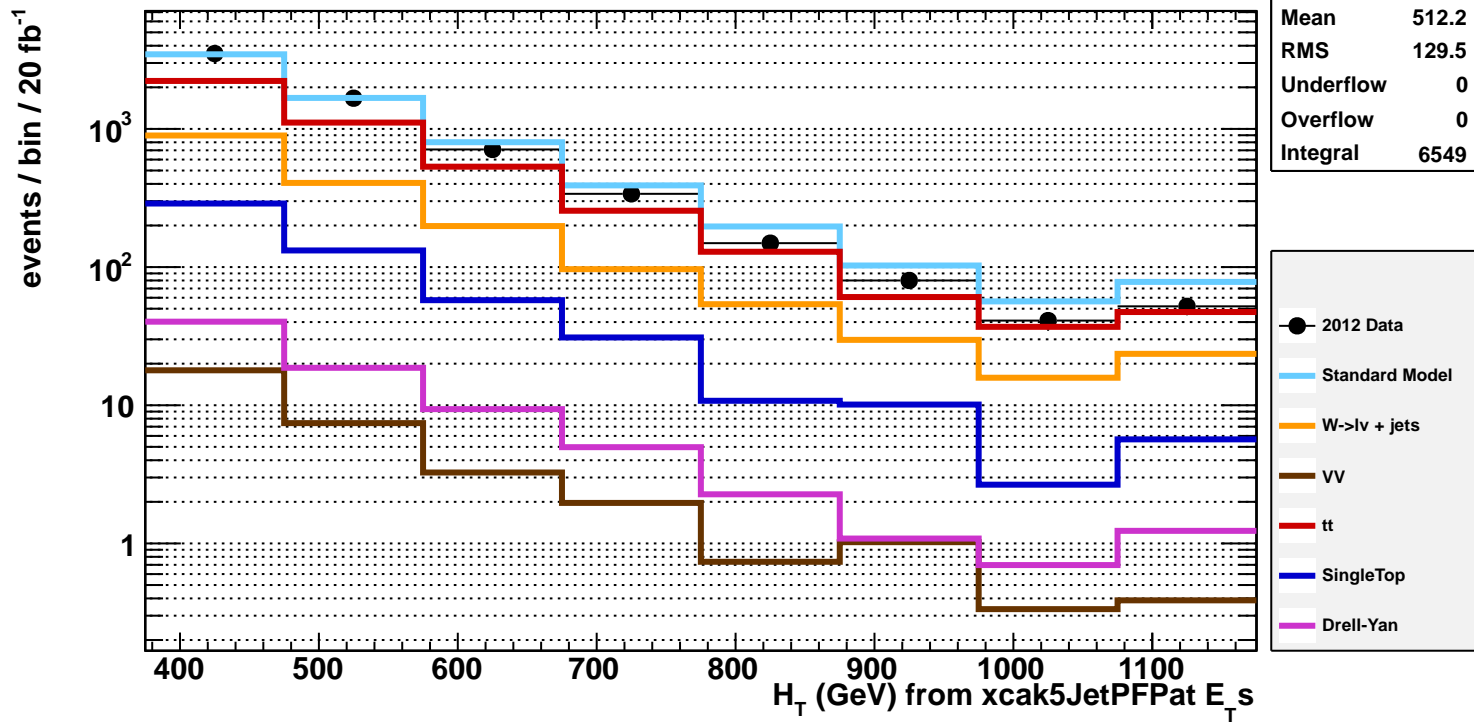
xcak5JetPFSumEtPat_le3j_aTge55	
Entries	2296
Mean	470.7
RMS	85.64
Underflow	0
Overflow	0
Integral	2296

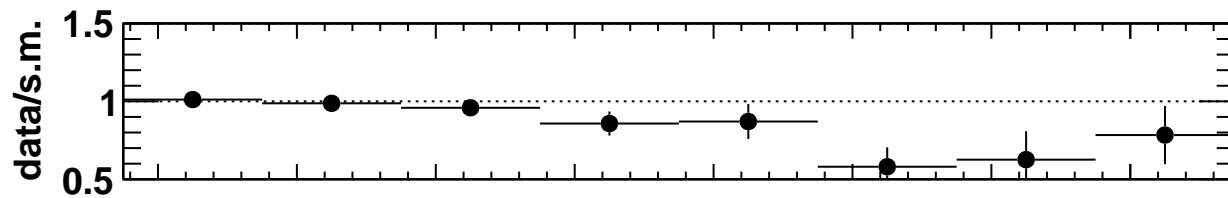
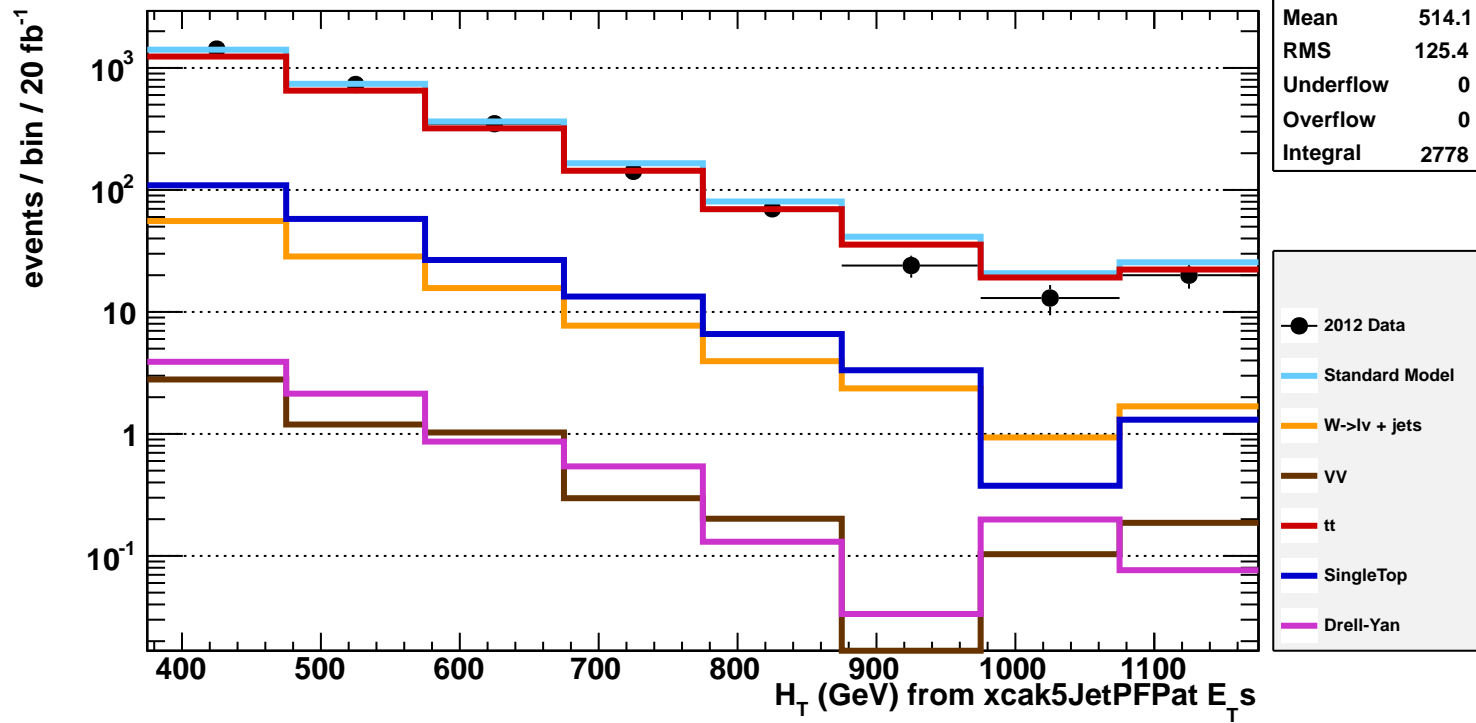


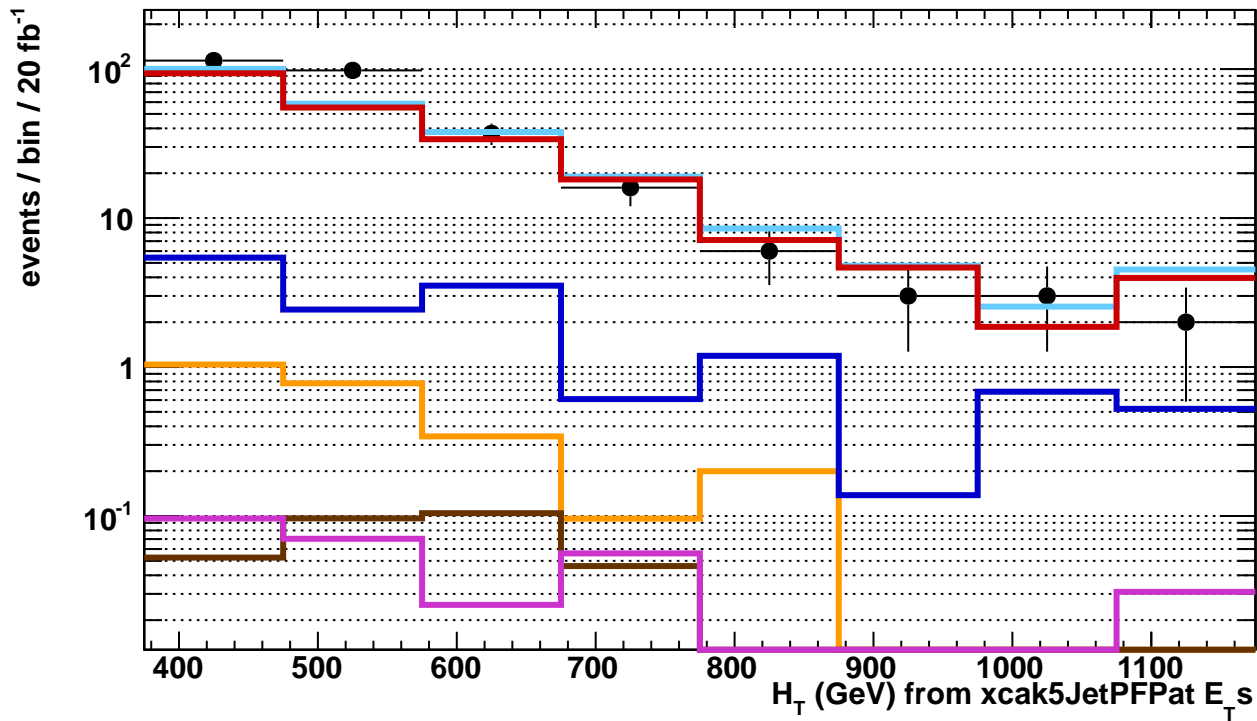




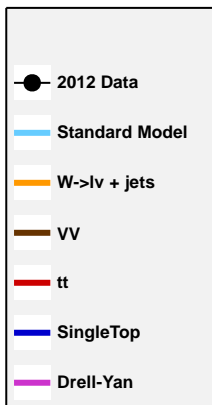


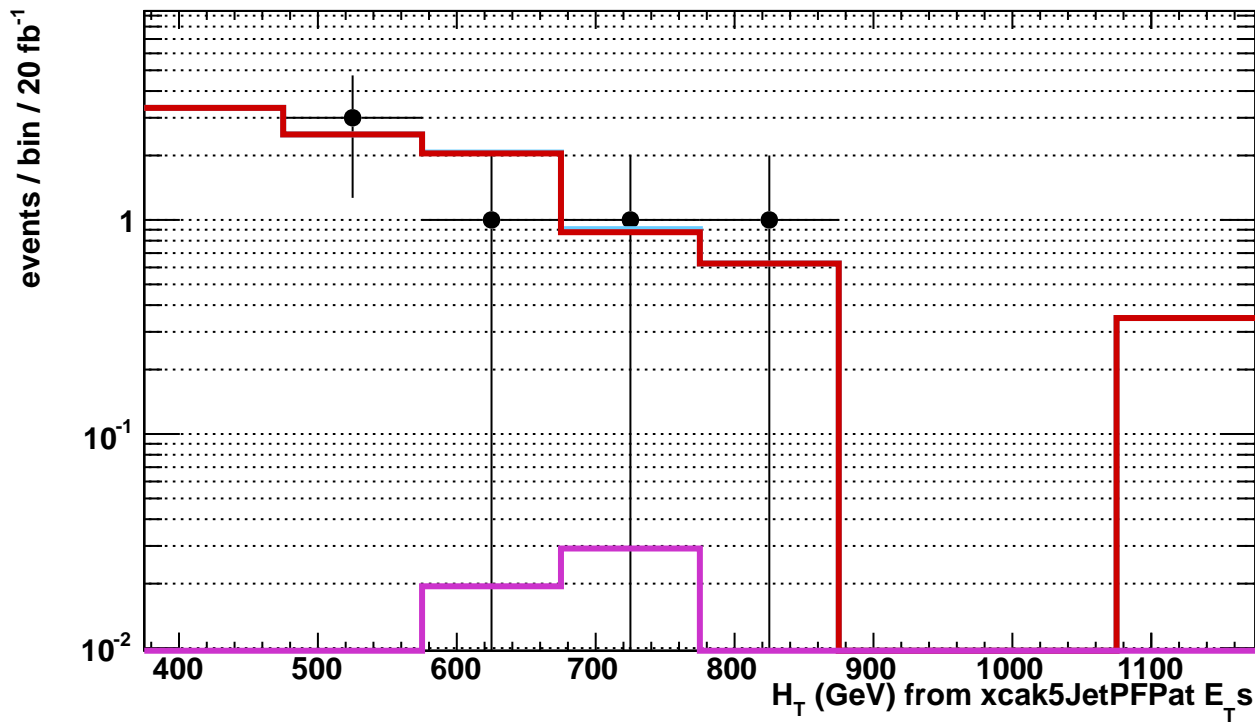




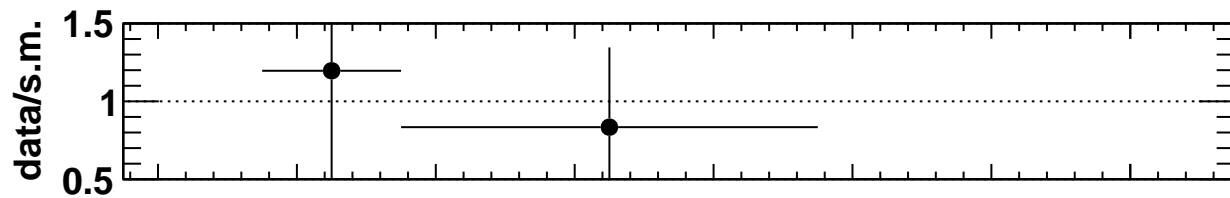
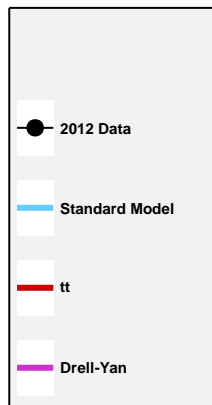


xcak5JetPFSumEIPat_eq3b	
Entries	279
Mean	529.3
RMS	128.9
Underflow	0
Overflow	0
Integral	279



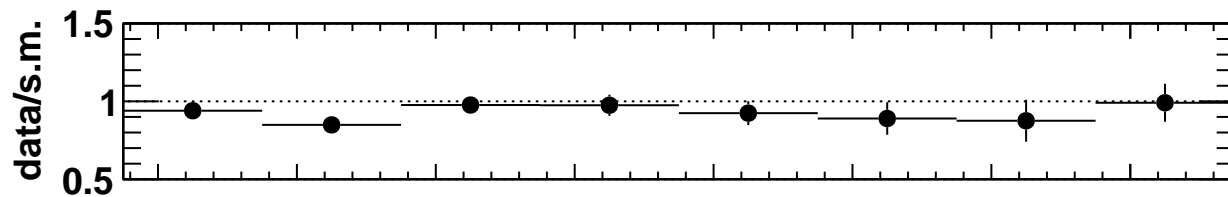
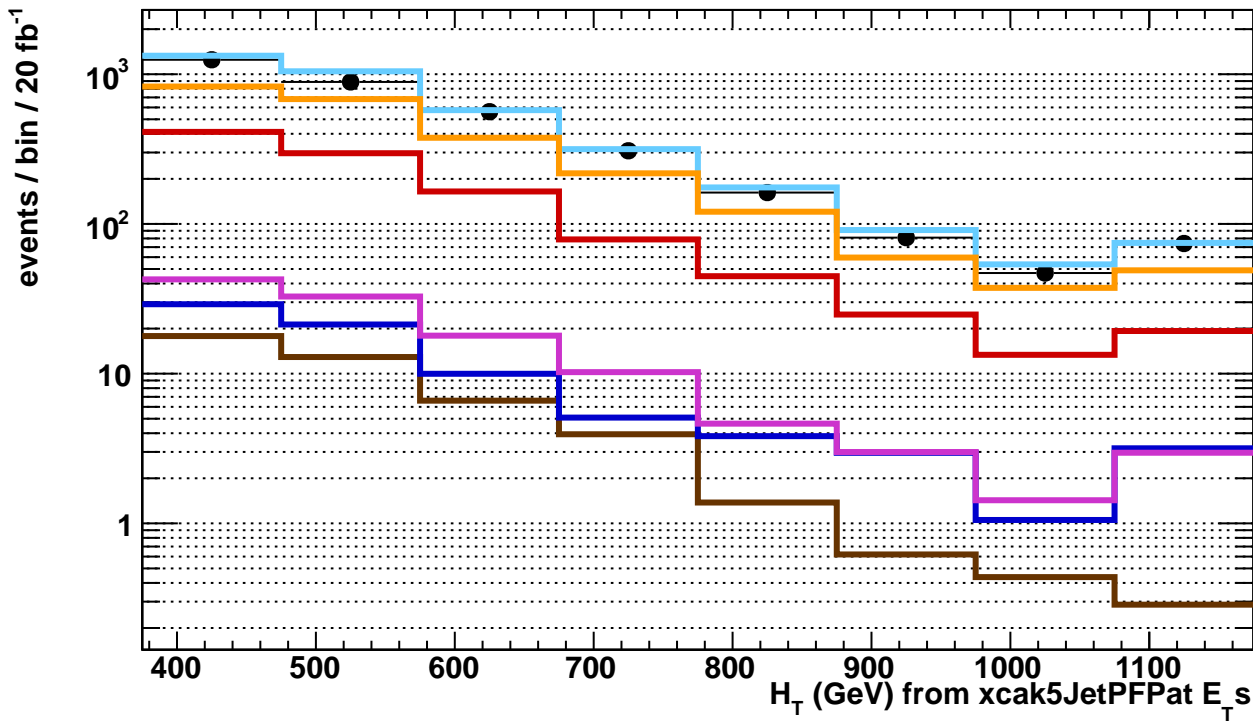


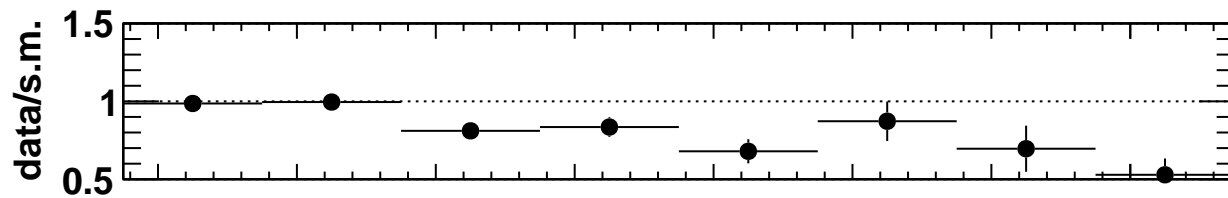
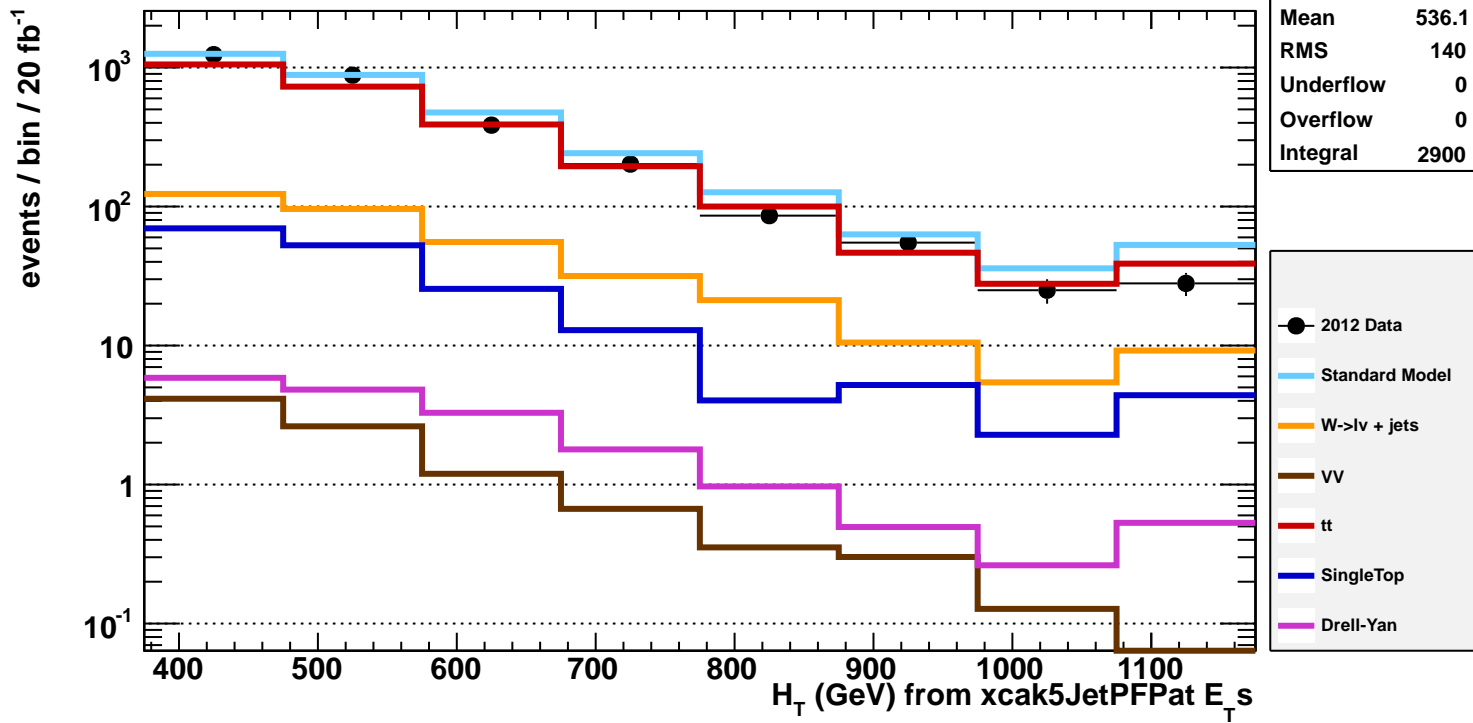
xcak5JetPFSumETPat_ge4b	
Entries	6
Mean	637.8
RMS	105.7
Underflow	0
Overflow	0
Integral	6

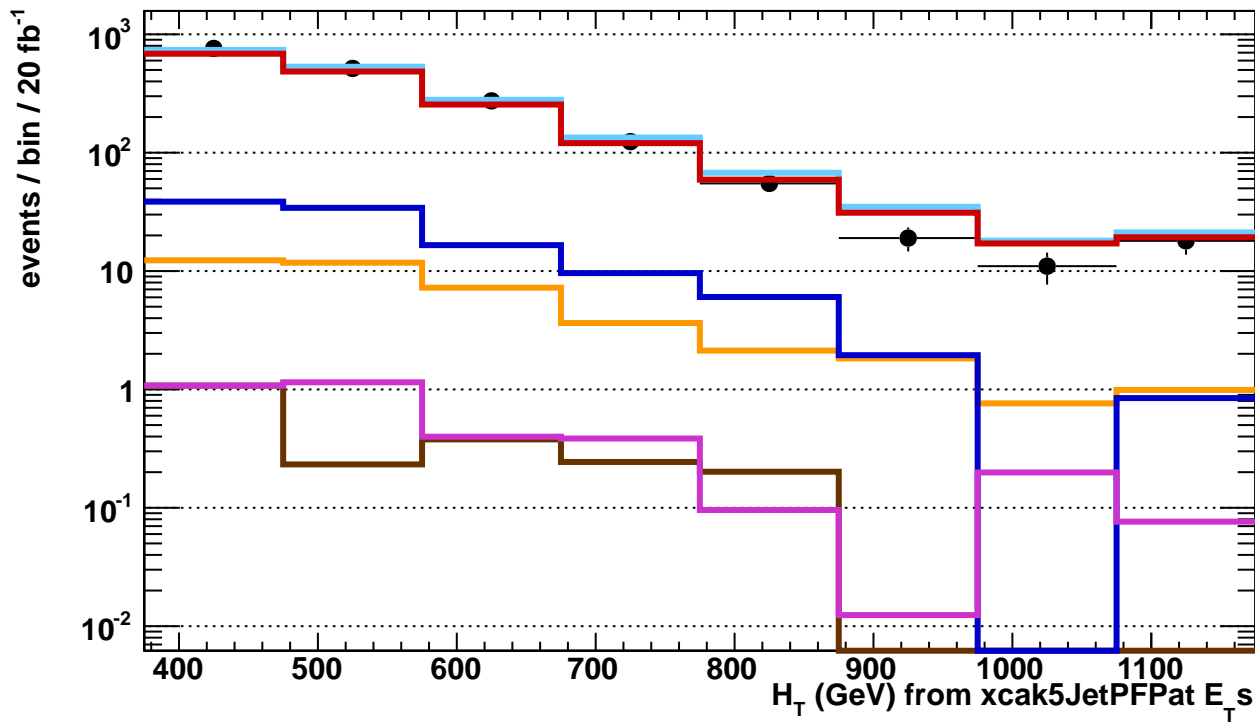


xcak5JetPFSumEtPat\_ge4j\_eq0b

Entries	3371
Mean	567.1
RMS	163.8
Underflow	0
Overflow	0
Integral	3371

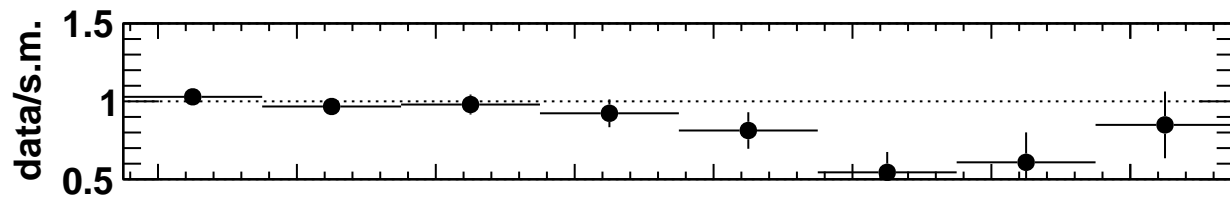
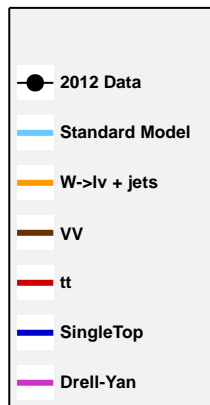






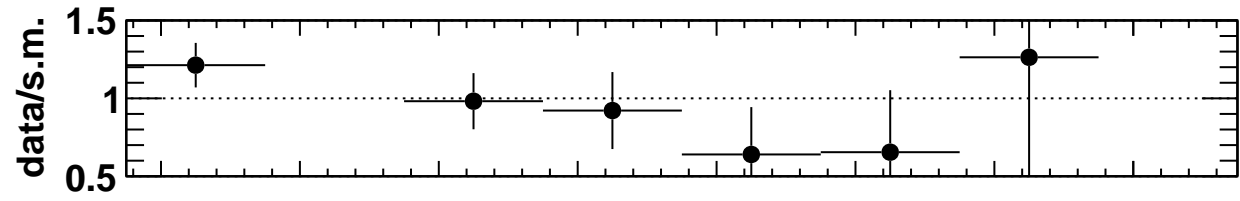
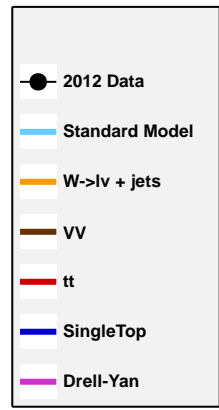
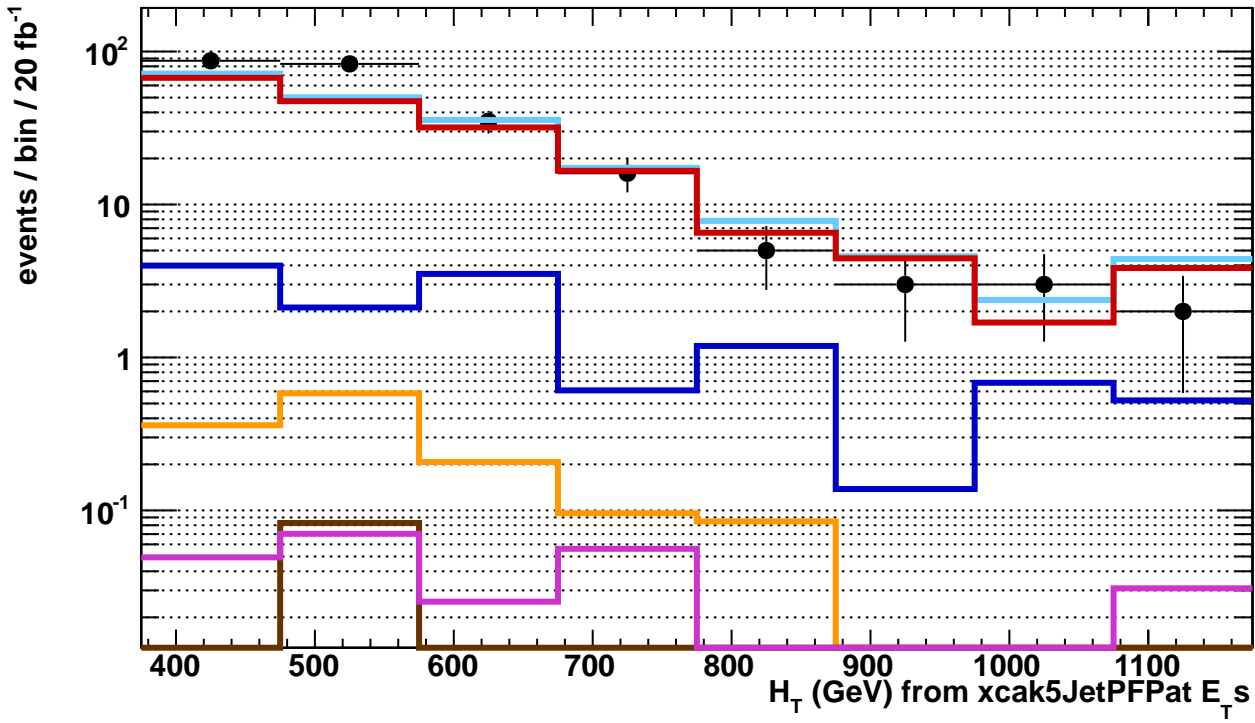
xcak5JetPFSumEtPat\_ge4j\_eq2b

Entries	1776
Mean	534.3
RMS	135
Underflow	0
Overflow	0
Integral	1776



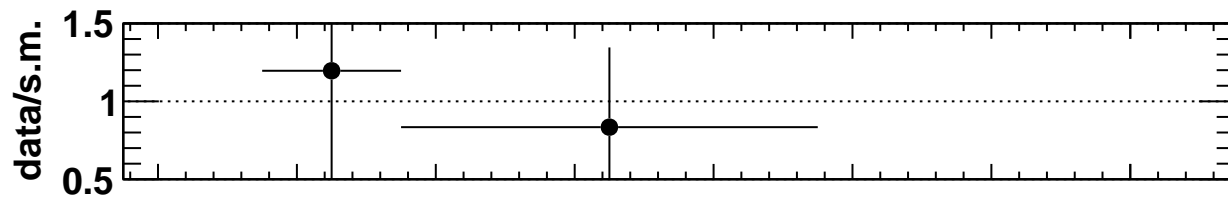
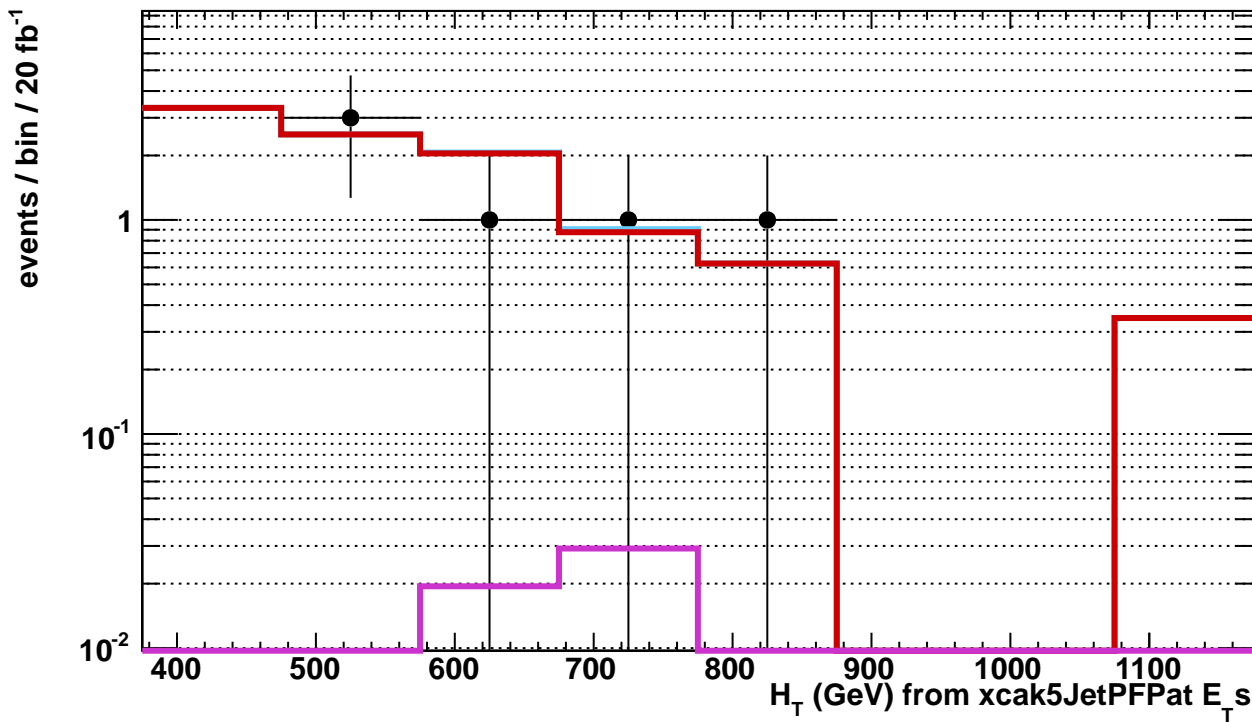
xcak5JetPFSumEtPat\_ge4j\_eq3b

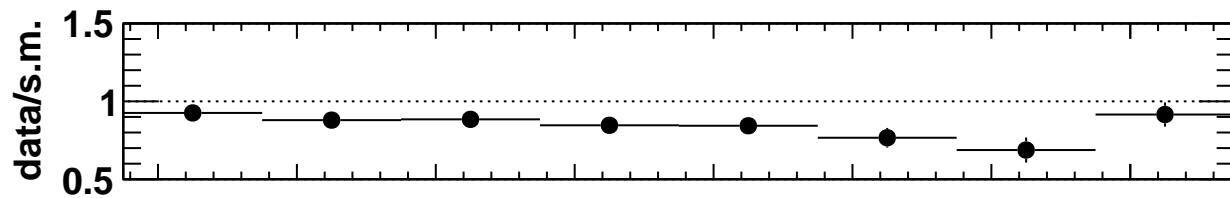
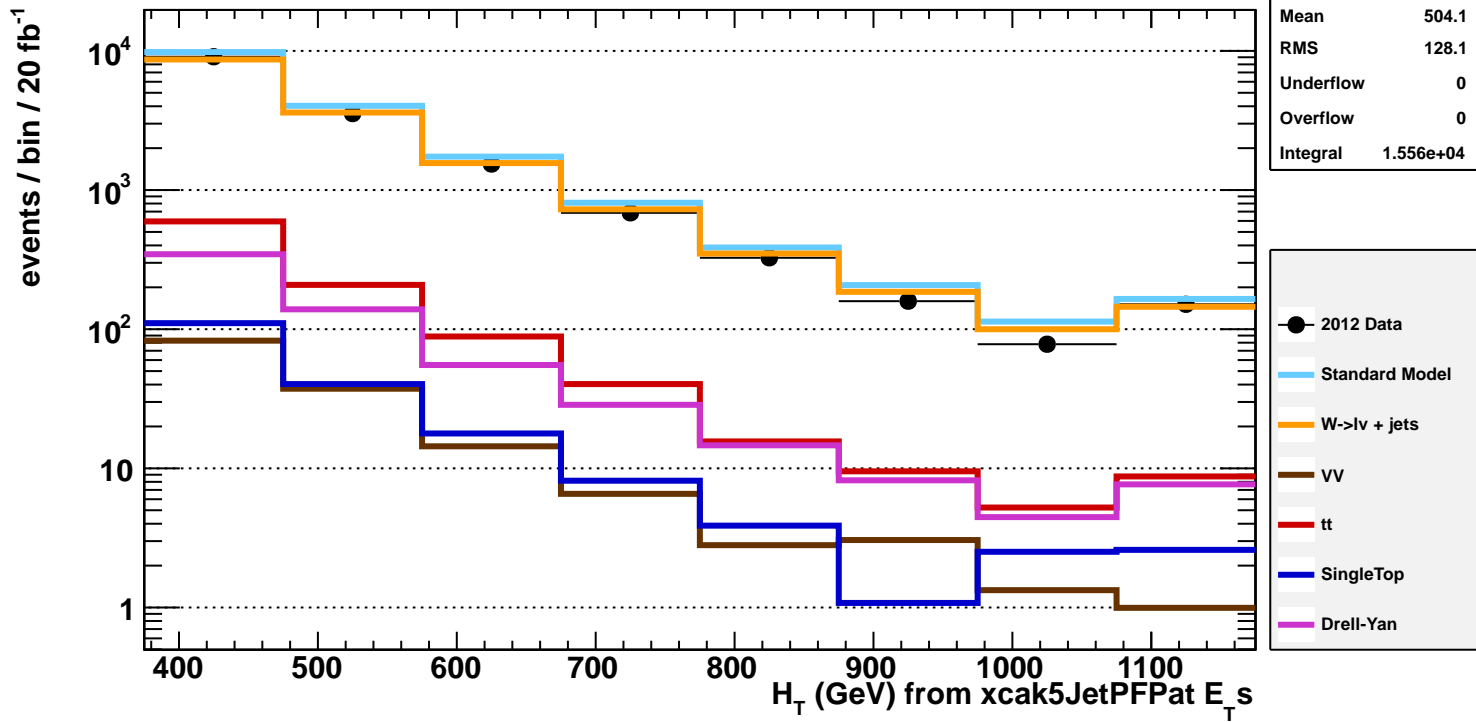
Entries	234
Mean	539.5
RMS	134.1
Underflow	0
Overflow	0
Integral	234

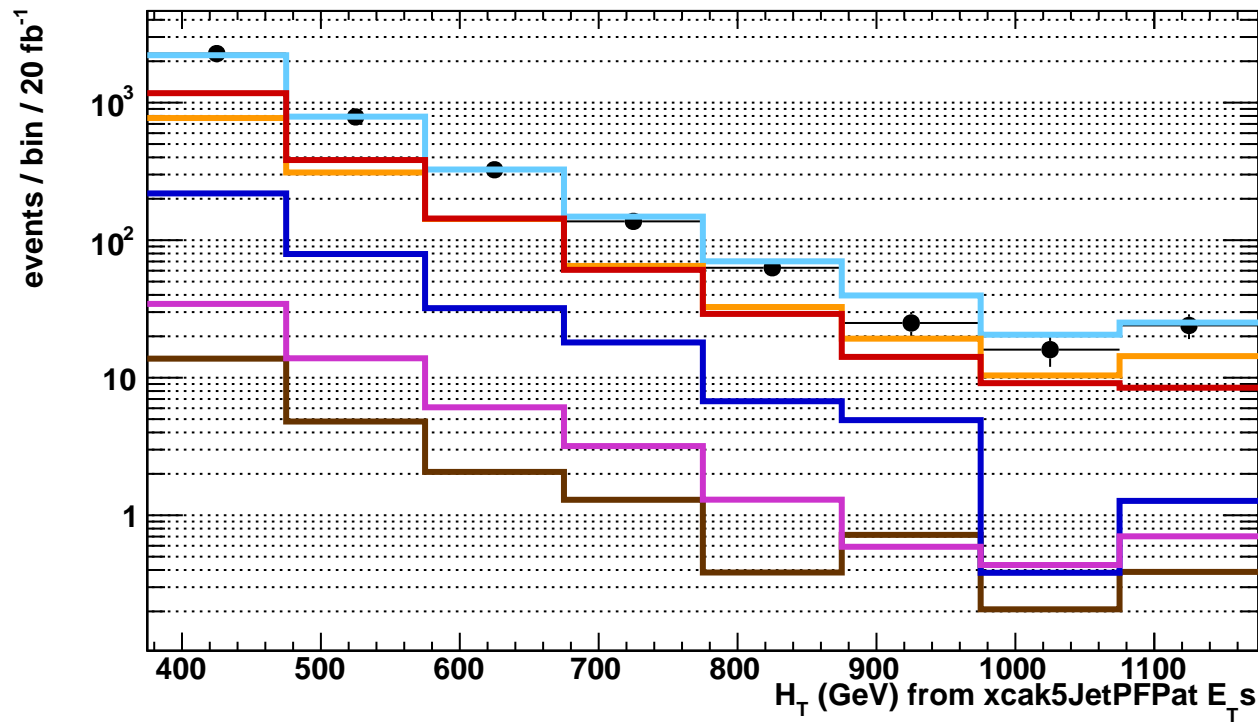




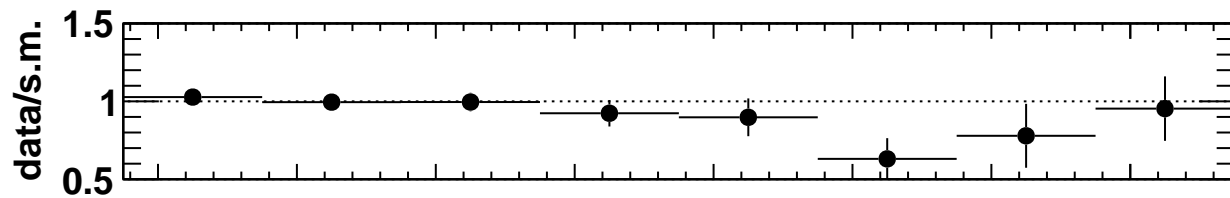
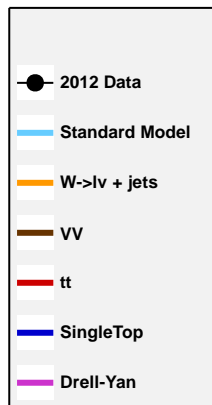
xcak5JetPFSumEtPat_ge4j_ge4b	
Entries	6
Mean	637.8
RMS	105.7
Underflow	0
Overflow	0
Integral	6

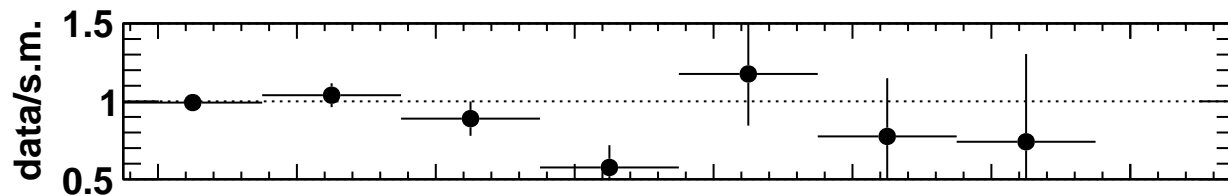
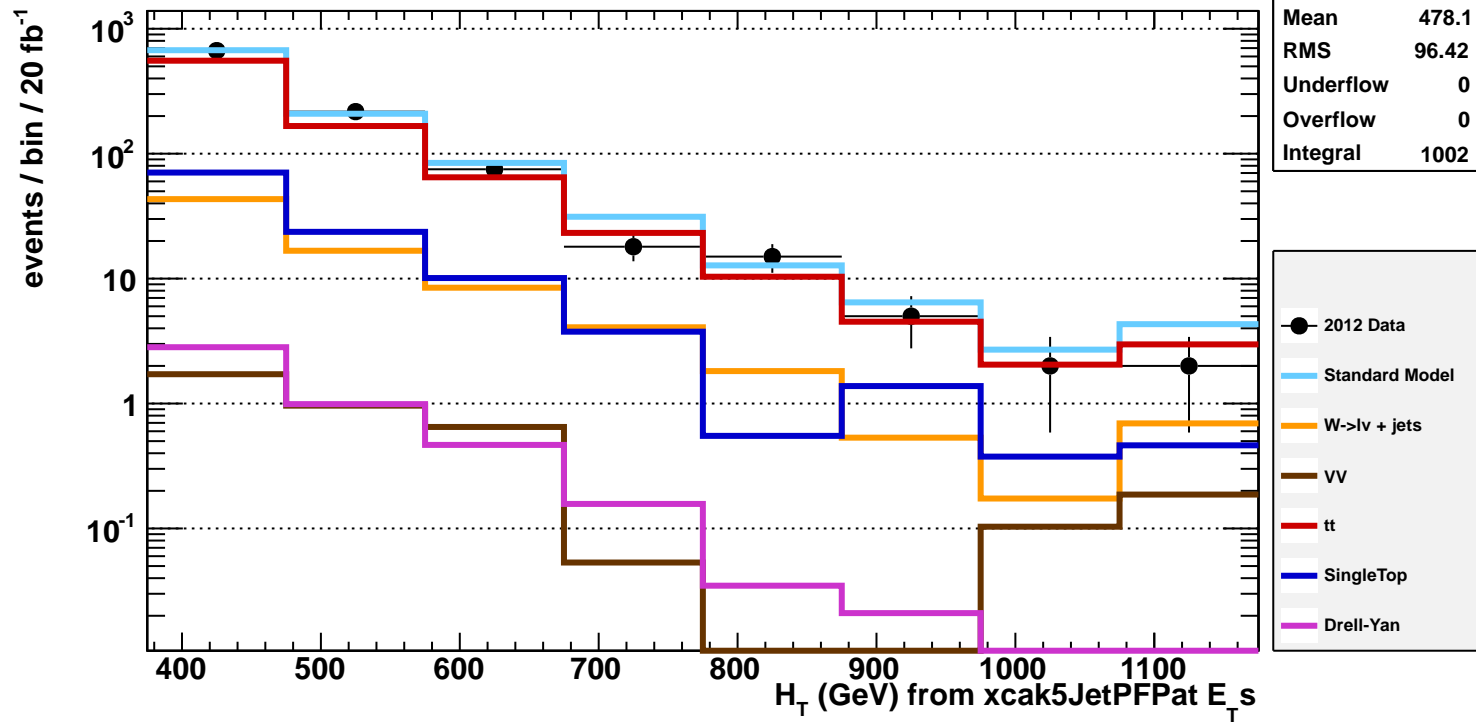




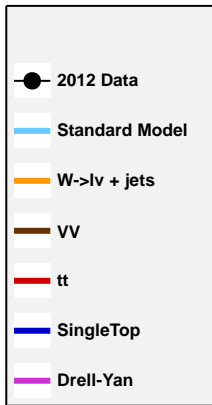
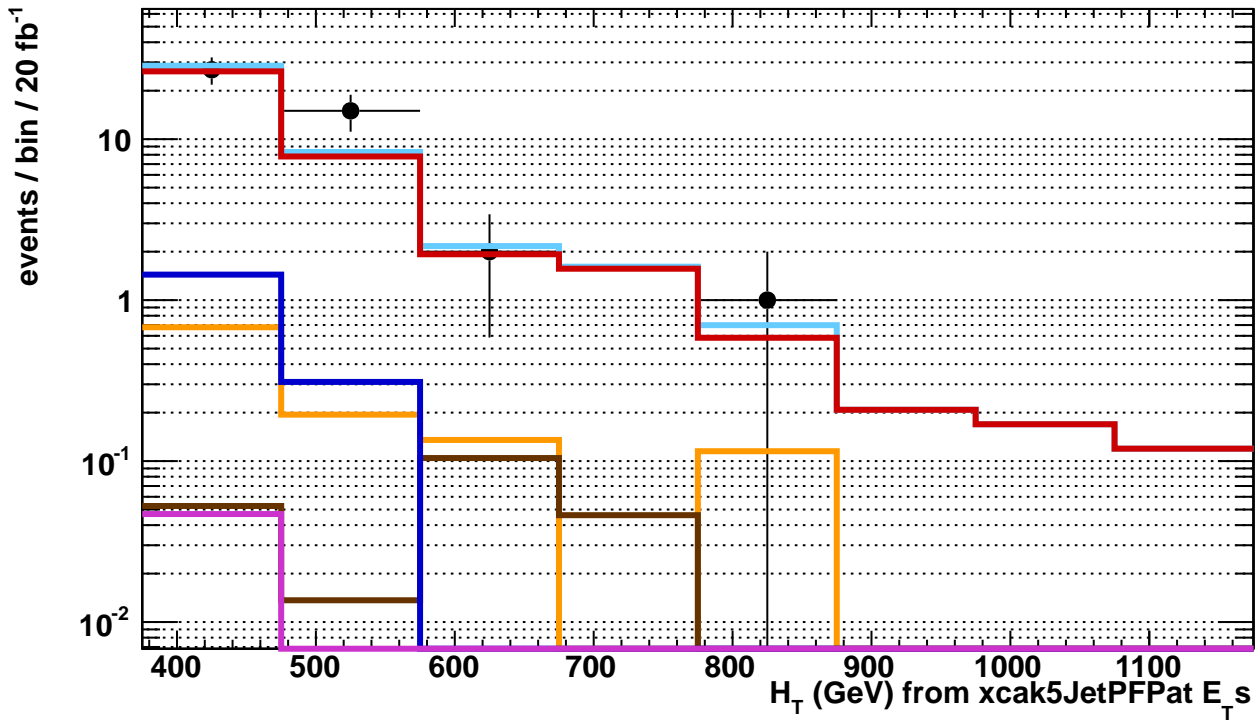


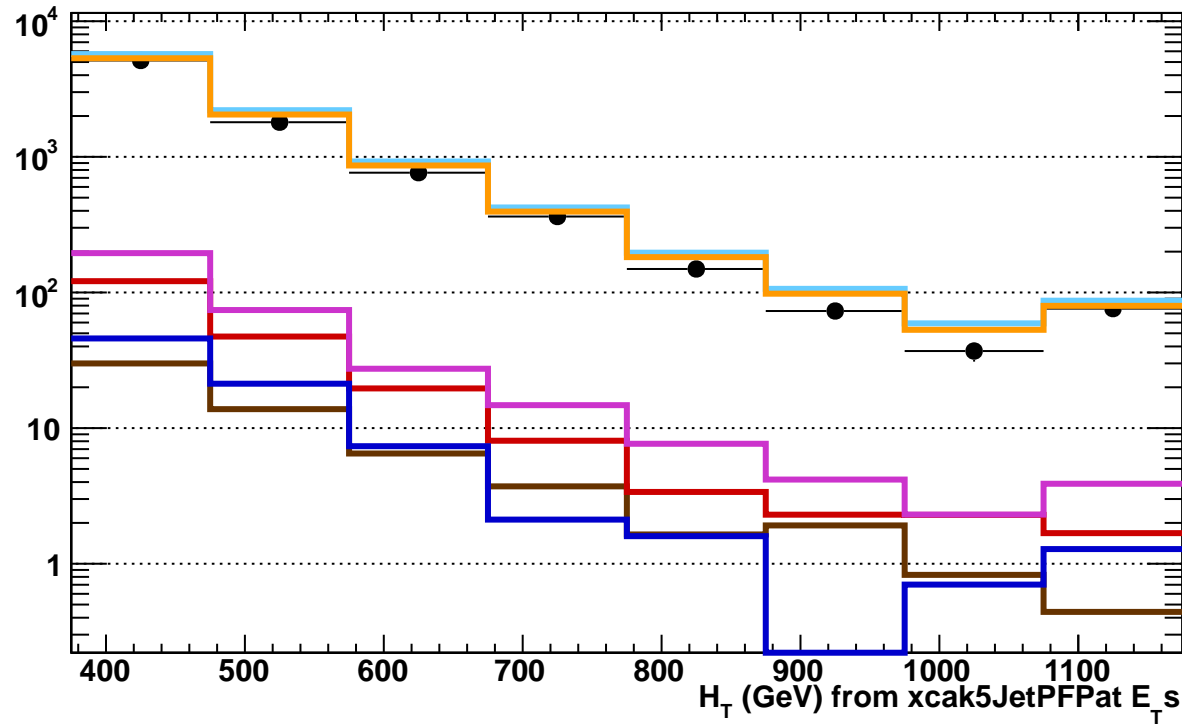
xcak5JetPFSumEtPat_le3j_eq1b	
Entries	3649
Mean	493.2
RMS	117.1
Underflow	0
Overflow	0
Integral	3649



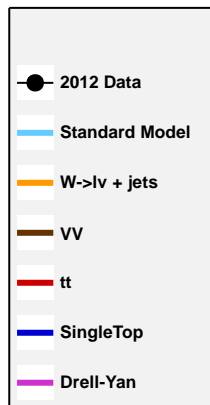


xcak5JetPFSumEtPat_le3j_eq3b	
Entries	45
Mean	463.2
RMS	87.76
Underflow	0
Overflow	0
Integral	45

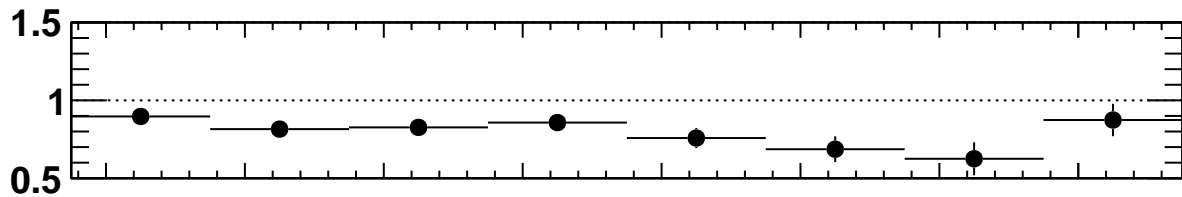


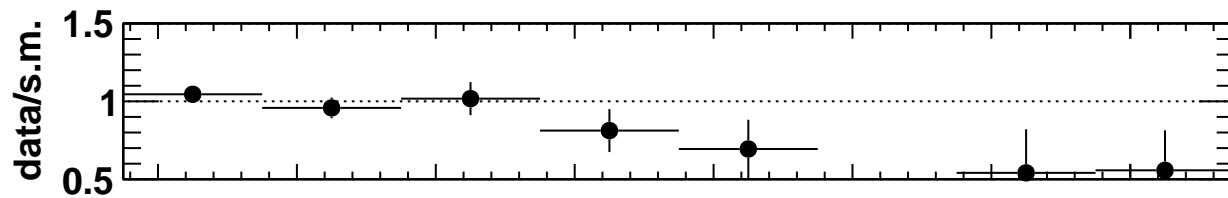
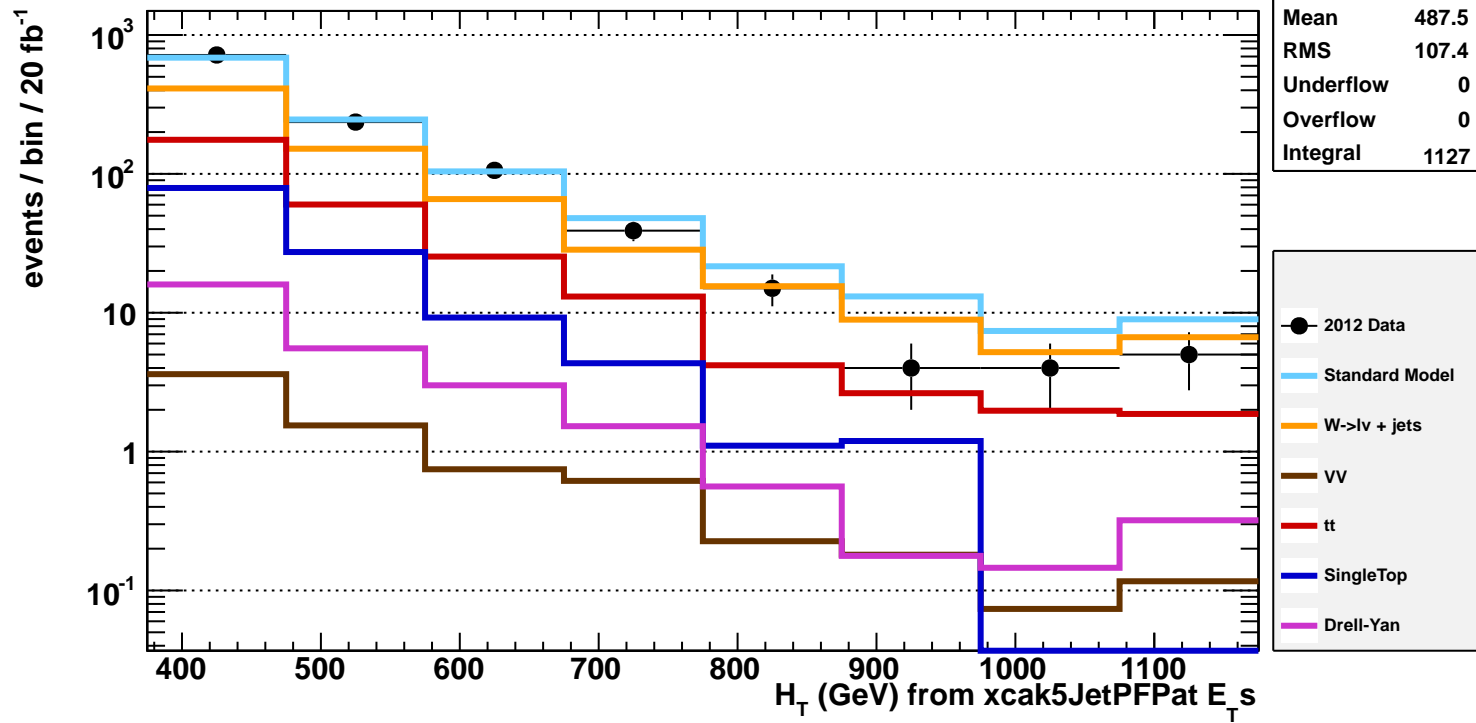
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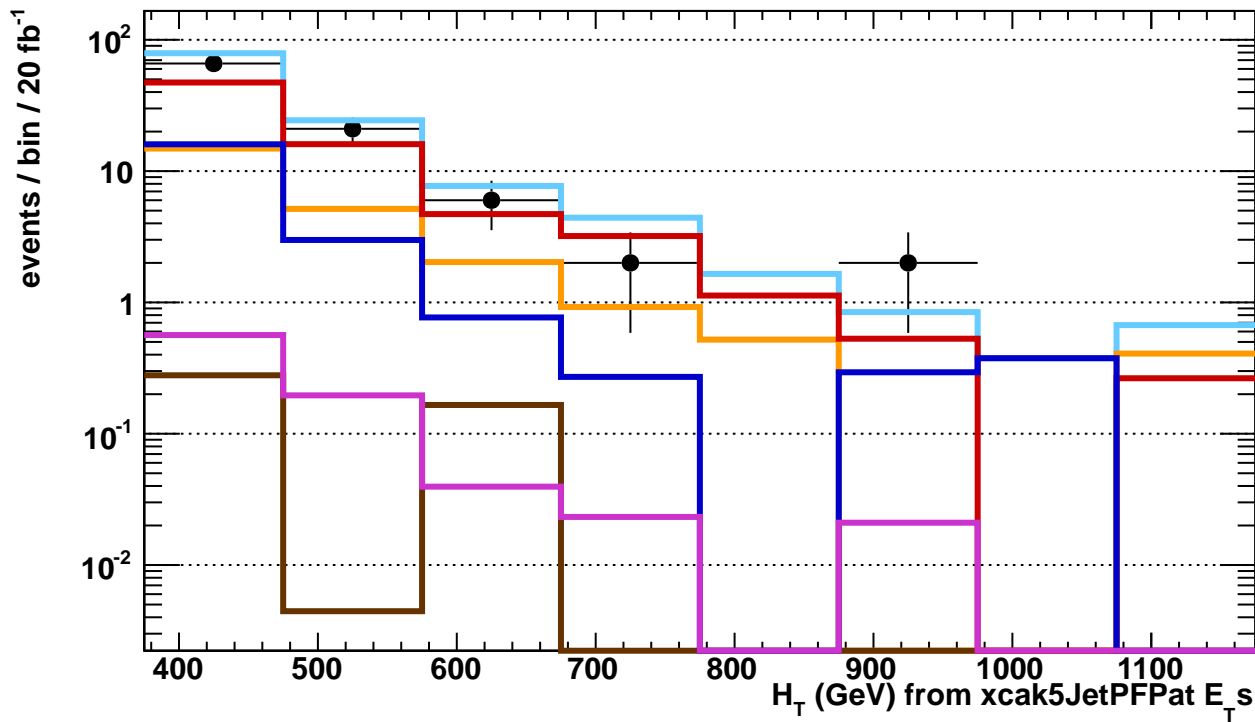
xcak5JetPFSumEtPat_eq2].eq0b	
Entries	8395
Mean	498
RMS	124
Underflow	0
Overflow	0
Integral	8395



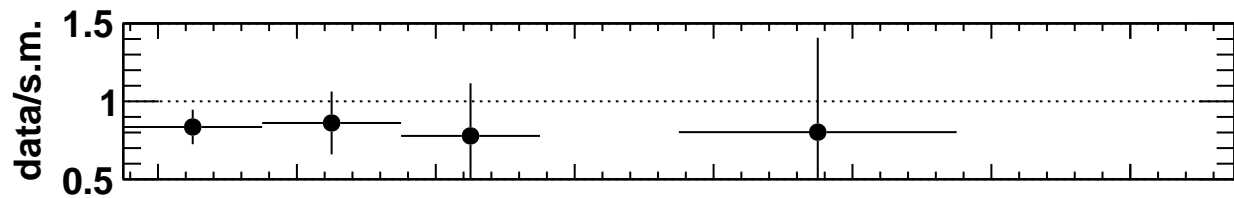
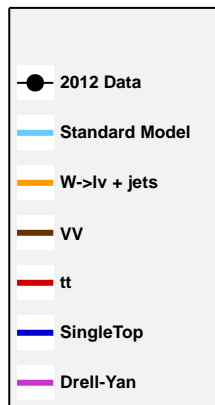
data/s.m.





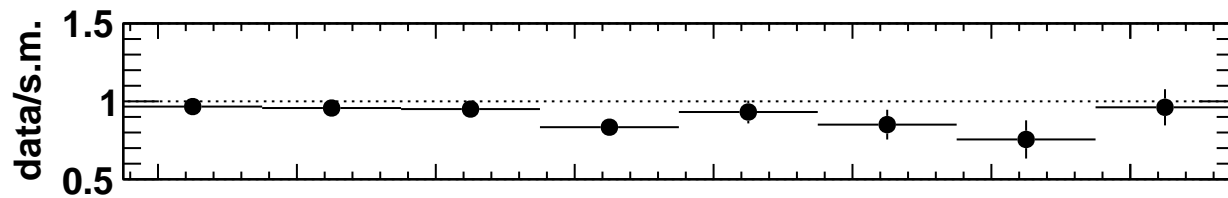
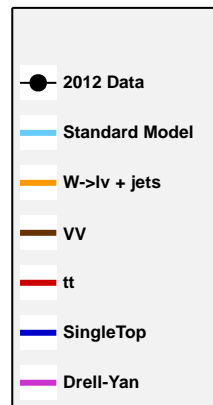
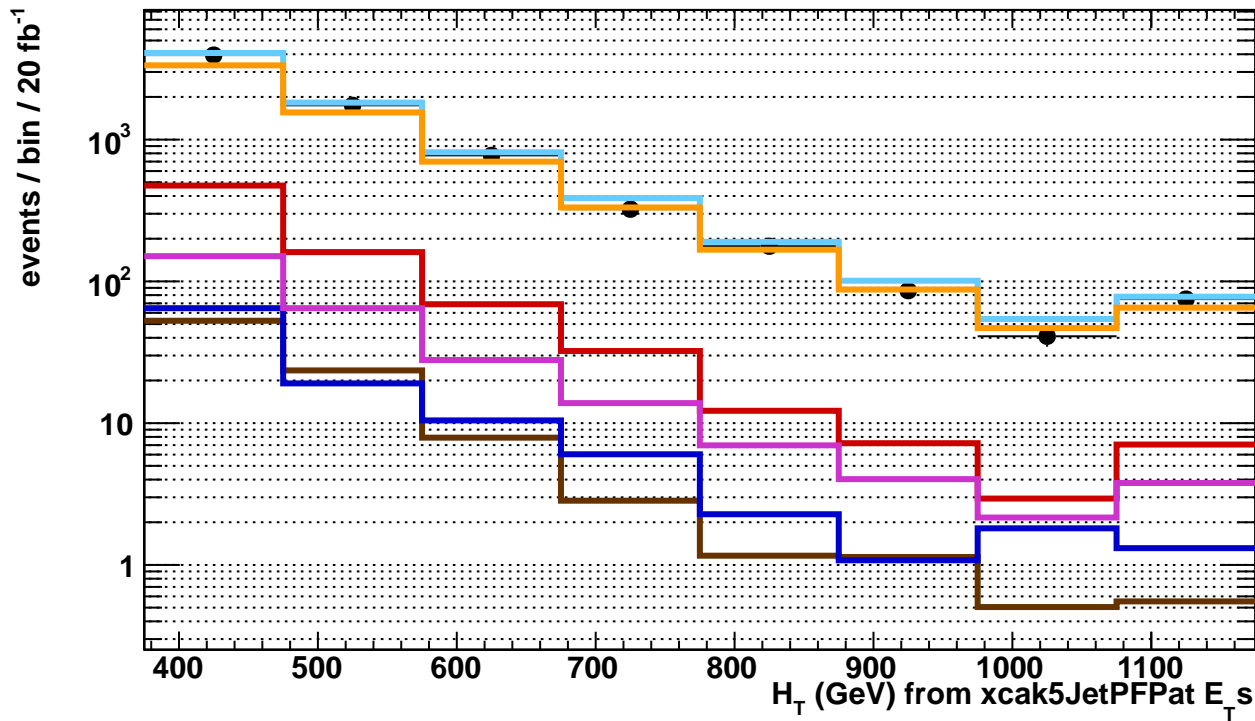


xcak5JetPFSumEtPat_eq2_eq2b	
Entries	97
Mean	465.7
RMS	98.34
Underflow	0
Overflow	0
Integral	97

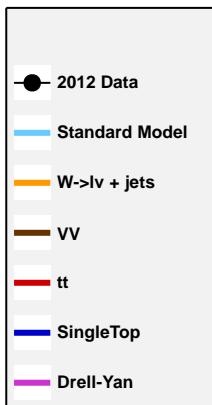
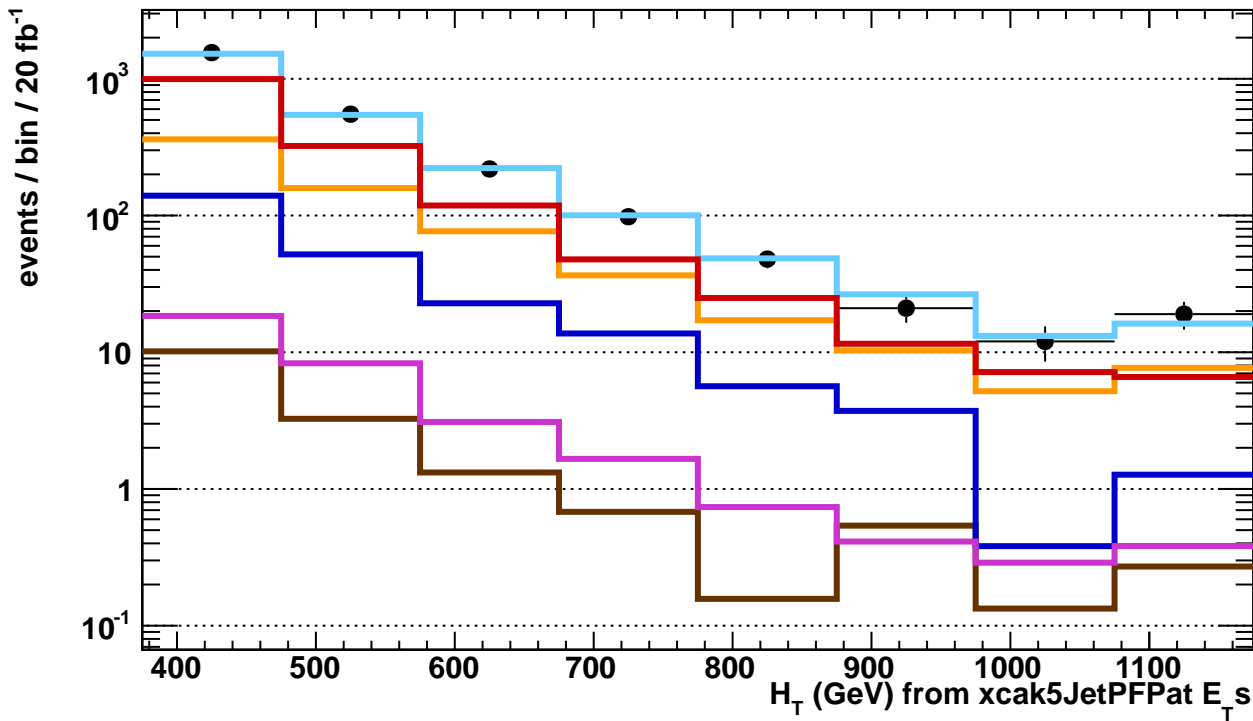




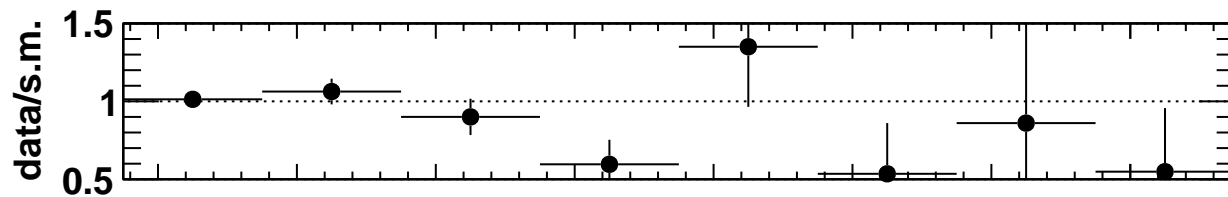
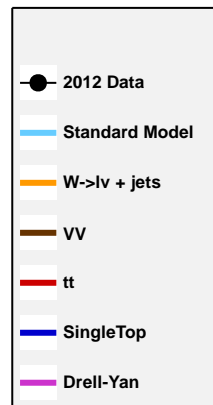
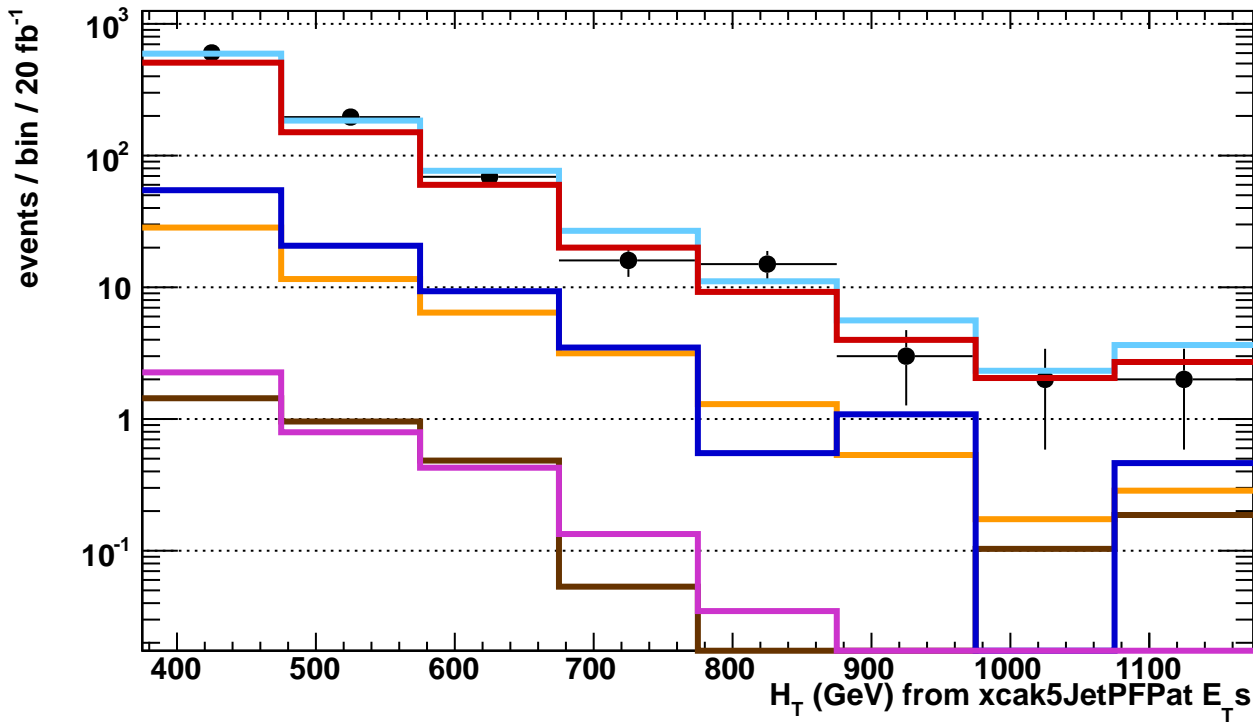
xcak5JetPFSumEtPat_eq3j_eq0b	
Entries	7166
Mean	511.1
RMS	132.4
Underflow	0
Overflow	0
Integral	7166



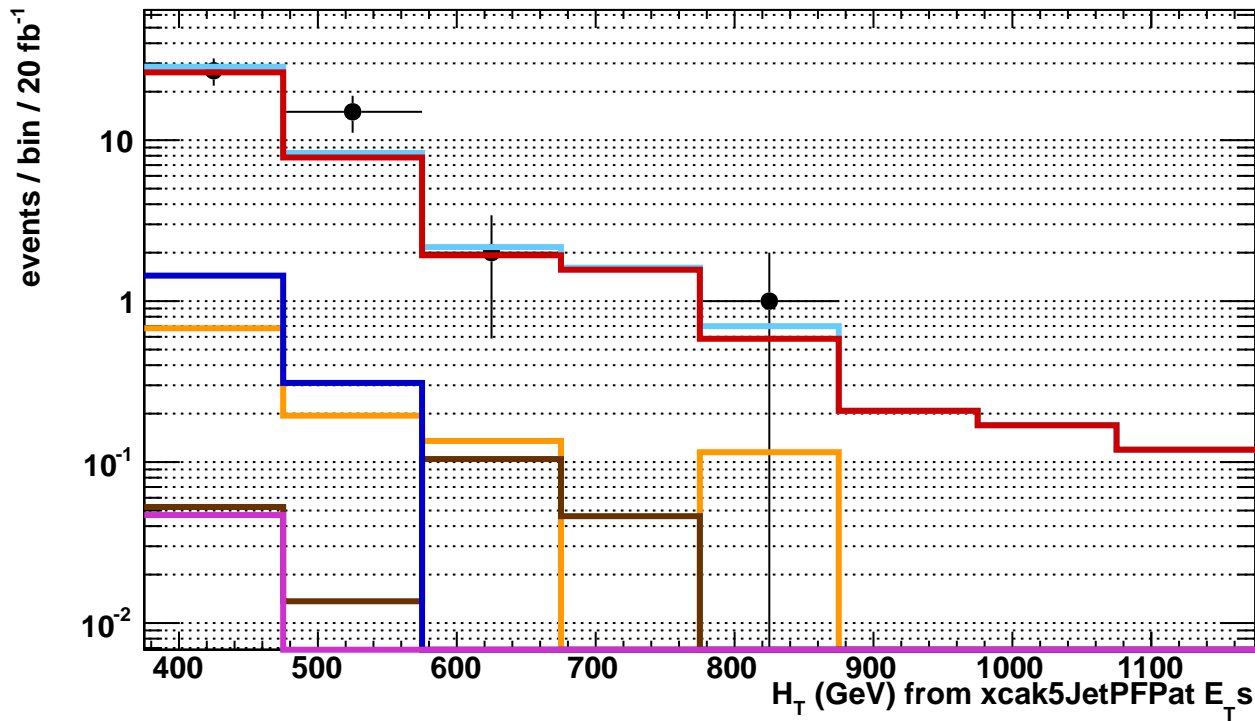
xcak5JetPFSumEtPat_eq3_eq1b	
Entries	2522
Mean	495.8
RMS	121.2
Underflow	0
Overflow	0
Integral	2522



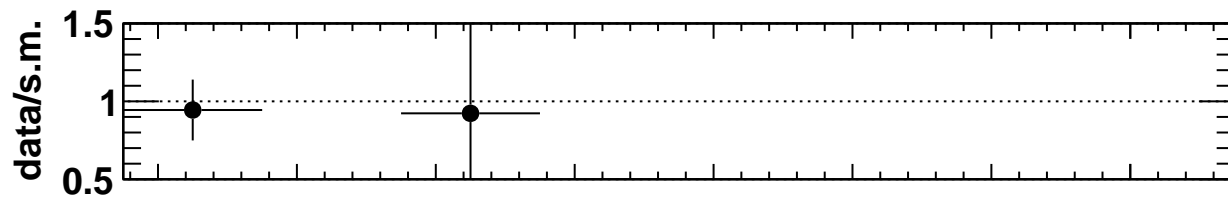
xcak5JetPFSumEtPat_eq3j_eq2b	
Entries	905
Mean	478.4
RMS	96.53
Underflow	0
Overflow	0
Integral	905



xcak5JetPFSumEtPat_eq3j_eq3b	
Entries	45
Mean	463.2
RMS	87.76
Underflow	0
Overflow	0
Integral	45

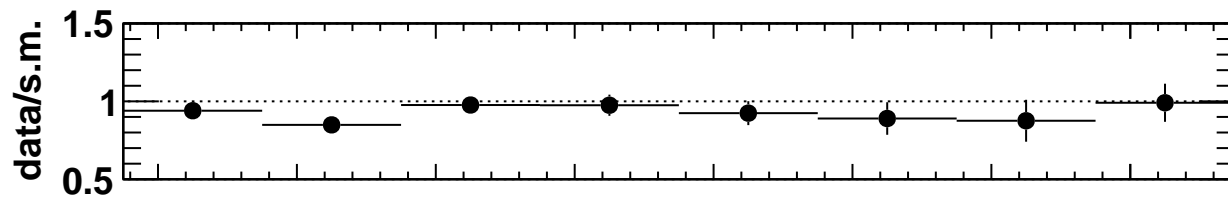
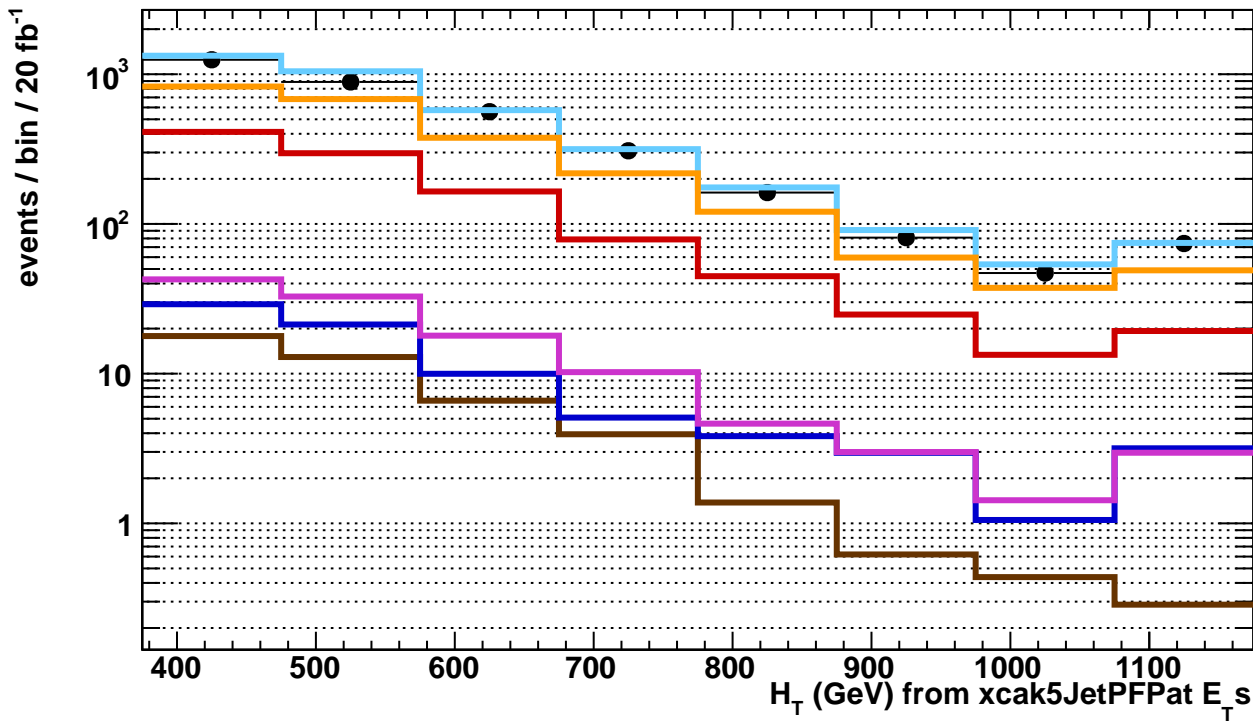


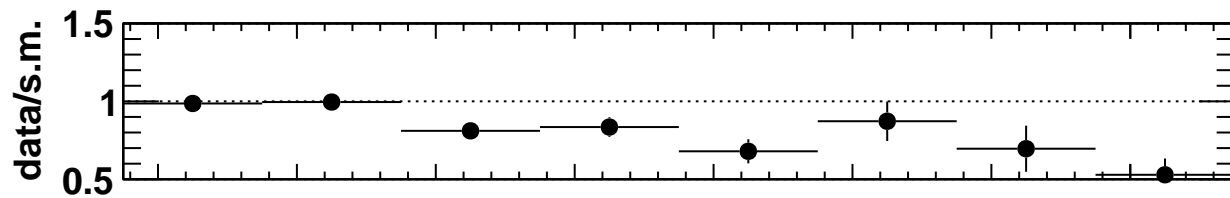
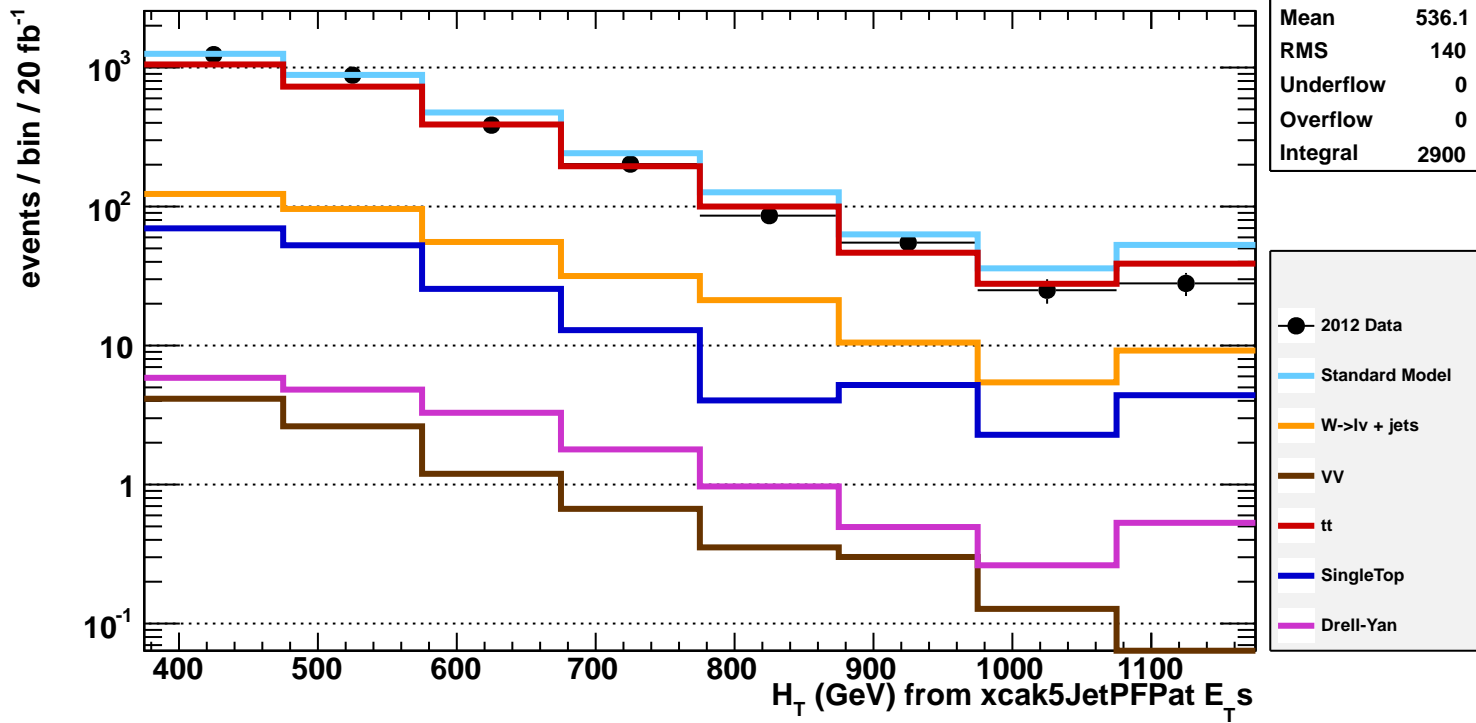
● 2012 Data	
Standard Model	
W->lv + jets	
VV	
tt	
SingleTop	
Drell-Yan	

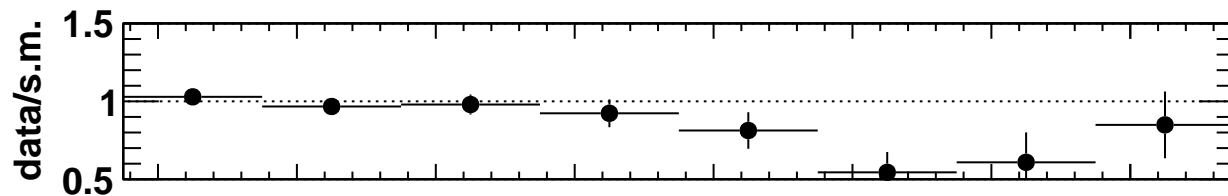
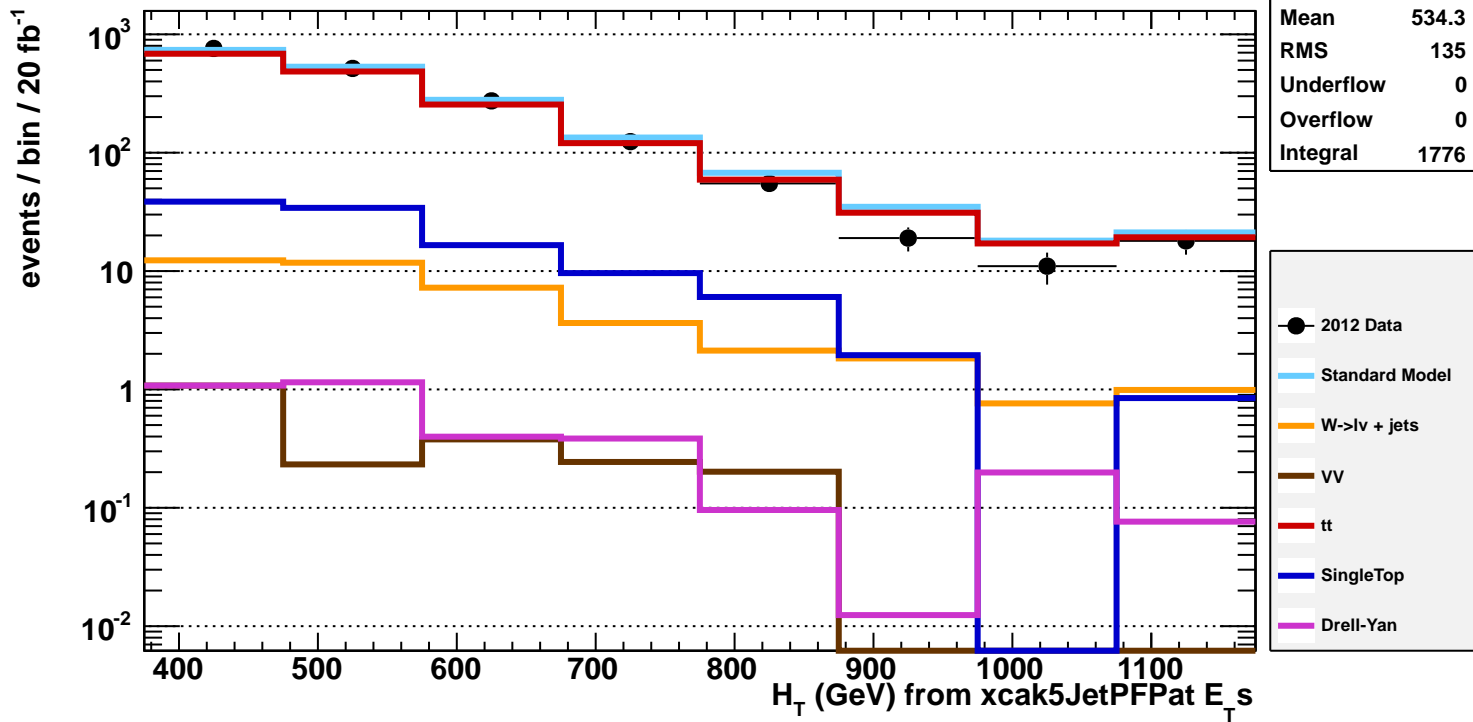


xcak5JetPFSumEtPat\_ge4j\_eq0b

Entries	3371
Mean	567.1
RMS	163.8
Underflow	0
Overflow	0
Integral	3371

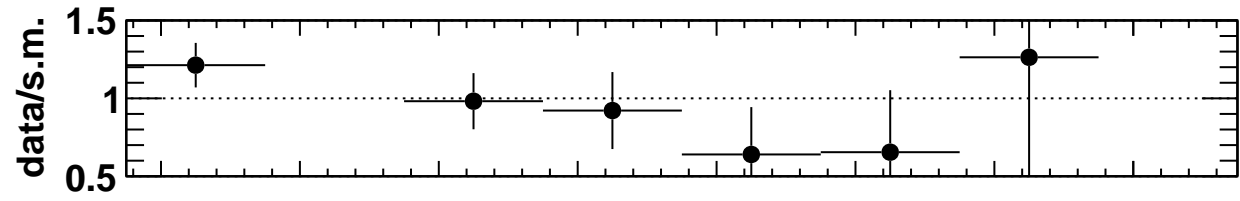
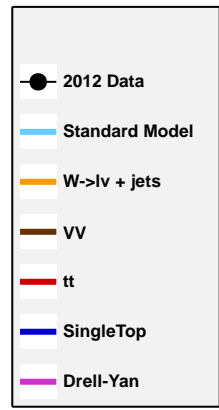
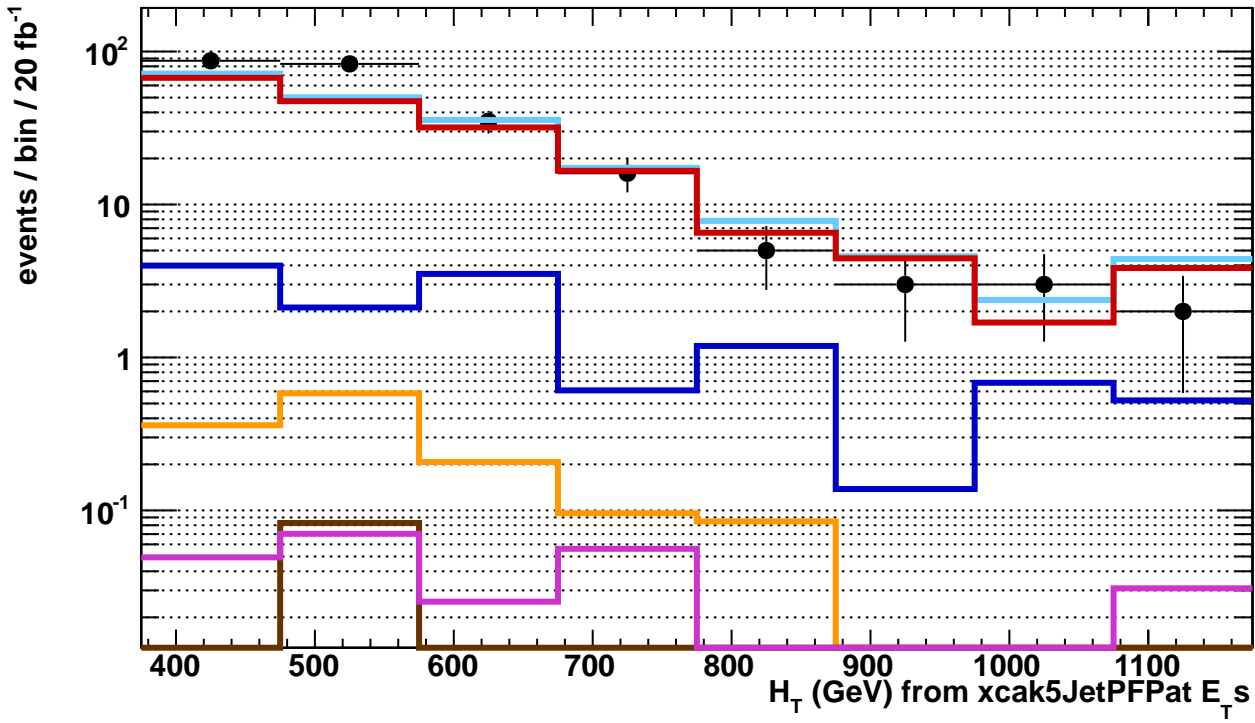




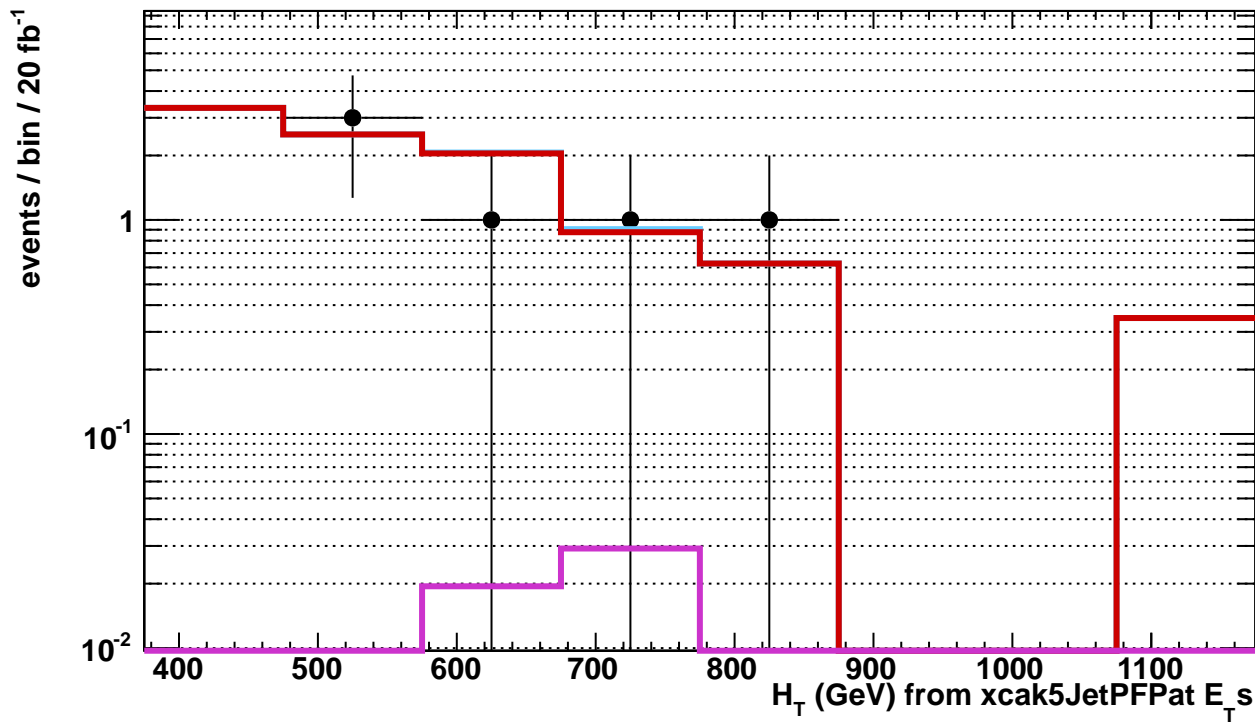


xcak5JetPFSumEtPat\_ge4j\_eq3b

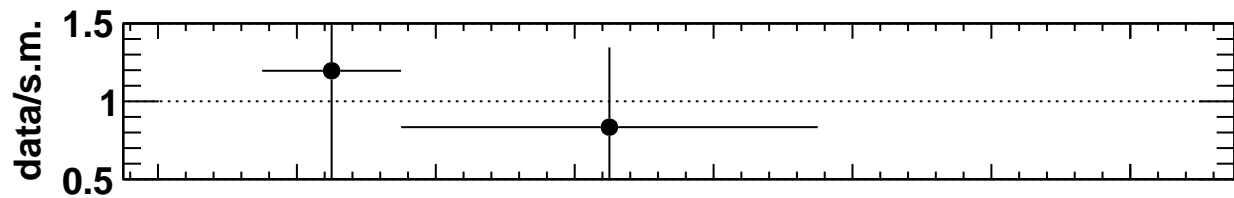
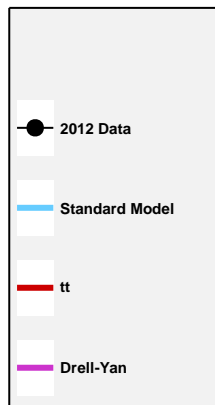
Entries	234
Mean	539.5
RMS	134.1
Underflow	0
Overflow	0
Integral	234

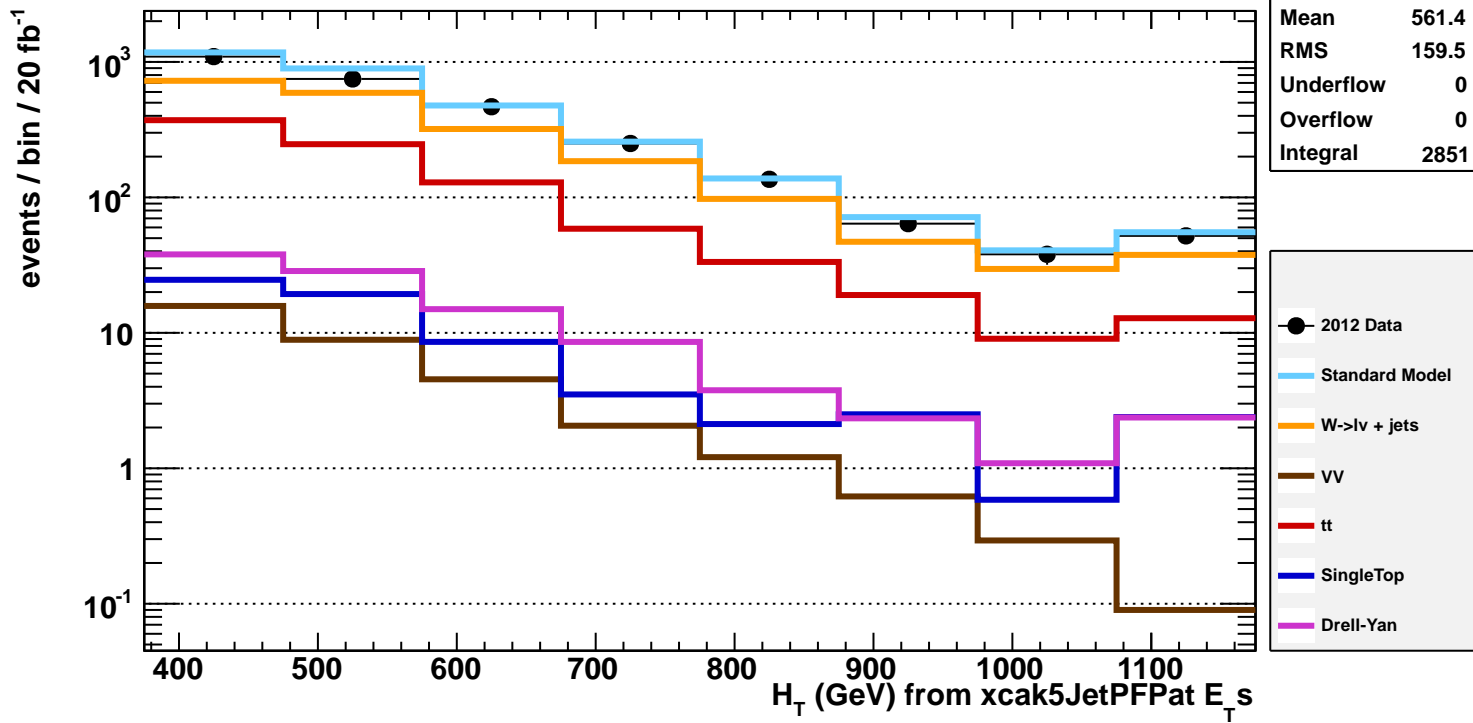




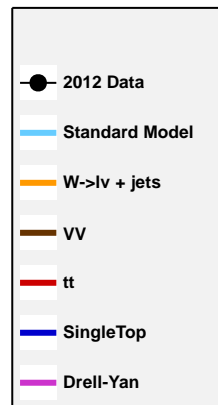
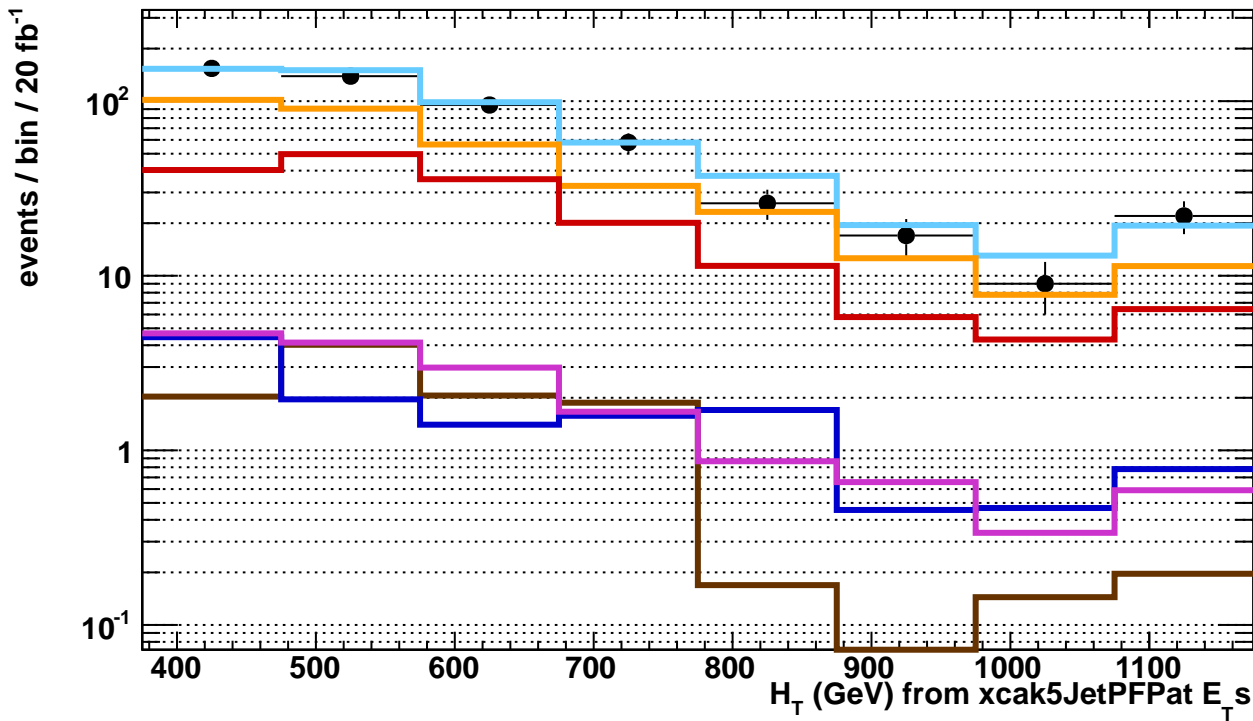


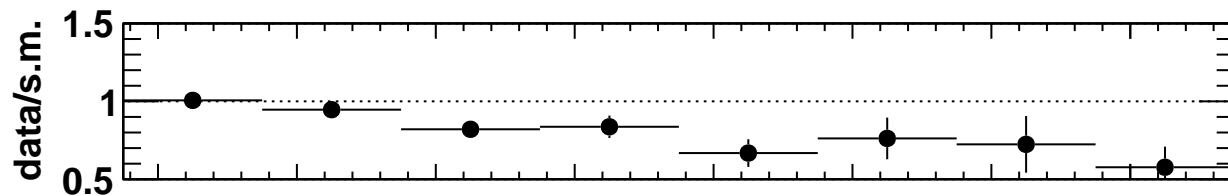
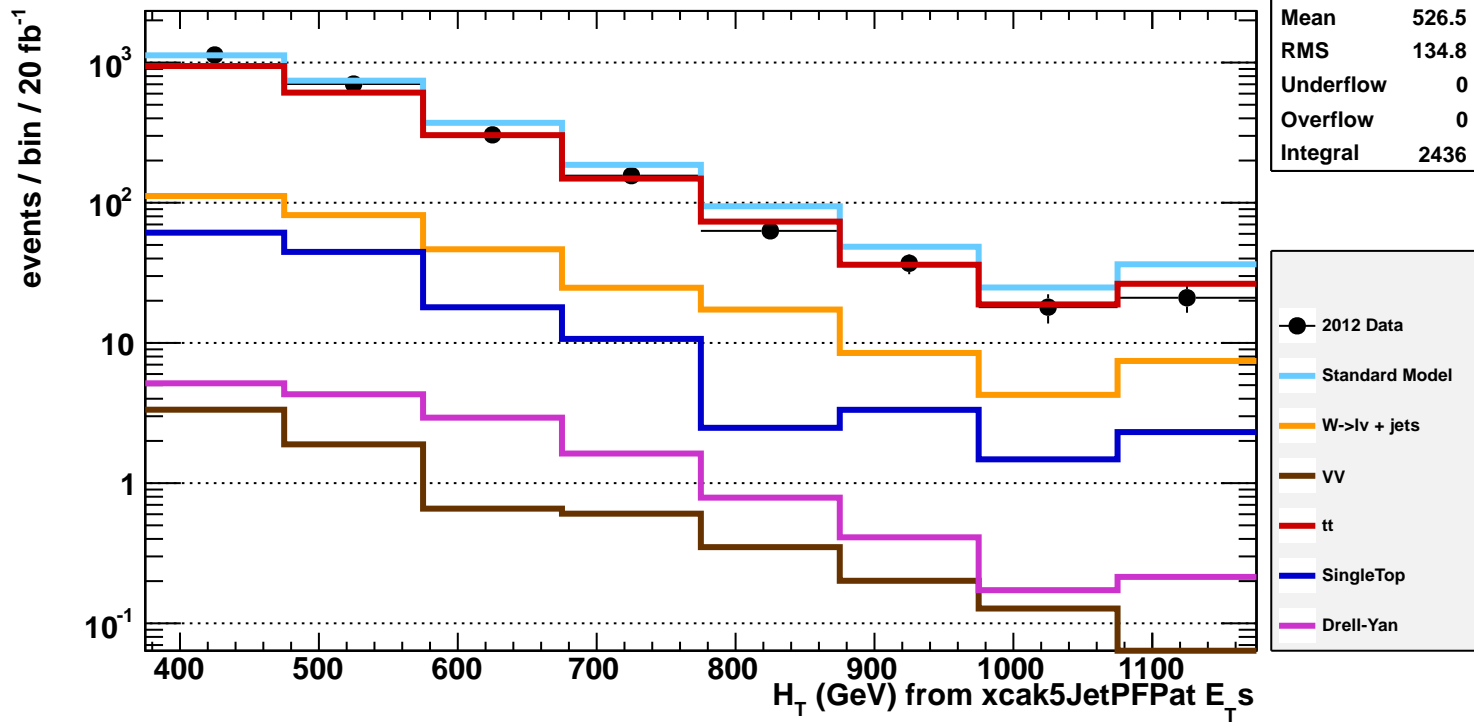
xcak5JetPFSumEtPat_ge4j_ge4b	
Entries	6
Mean	637.8
RMS	105.7
Underflow	0
Overflow	0
Integral	6

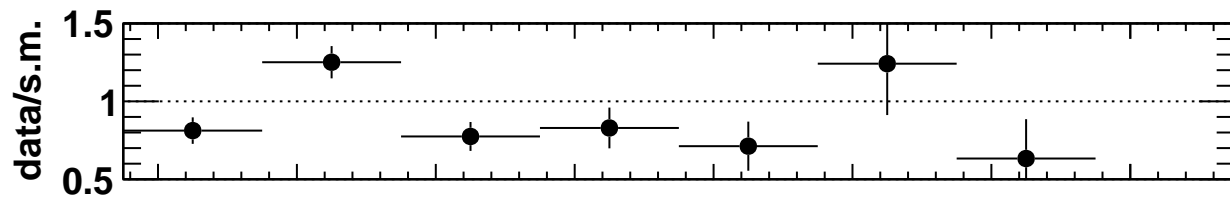
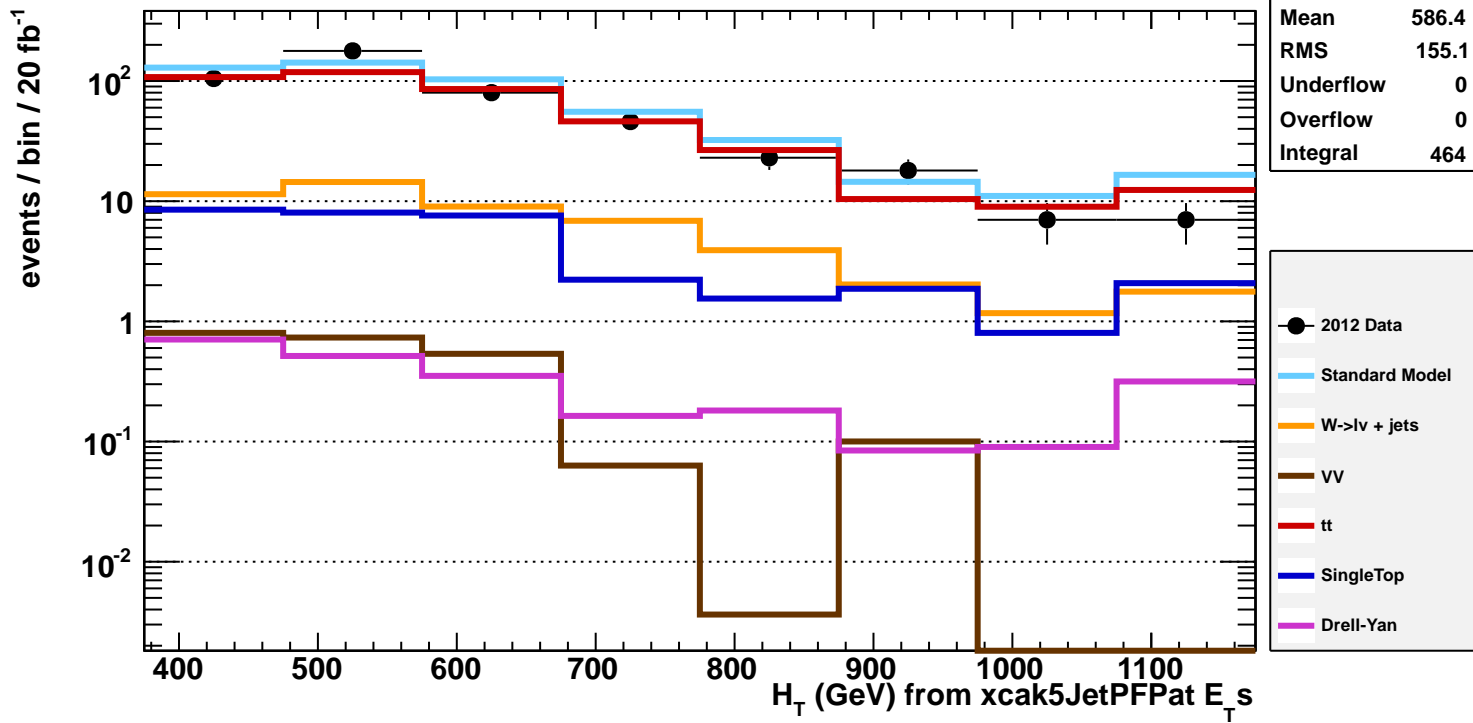


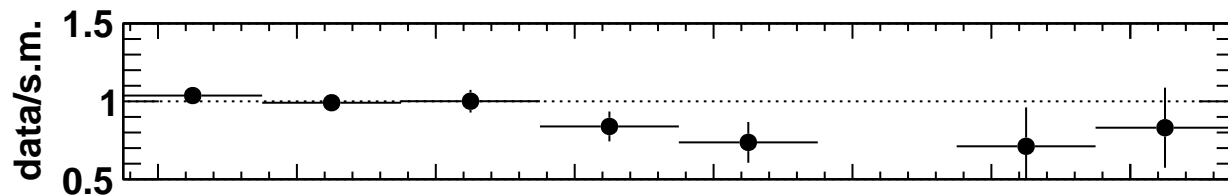
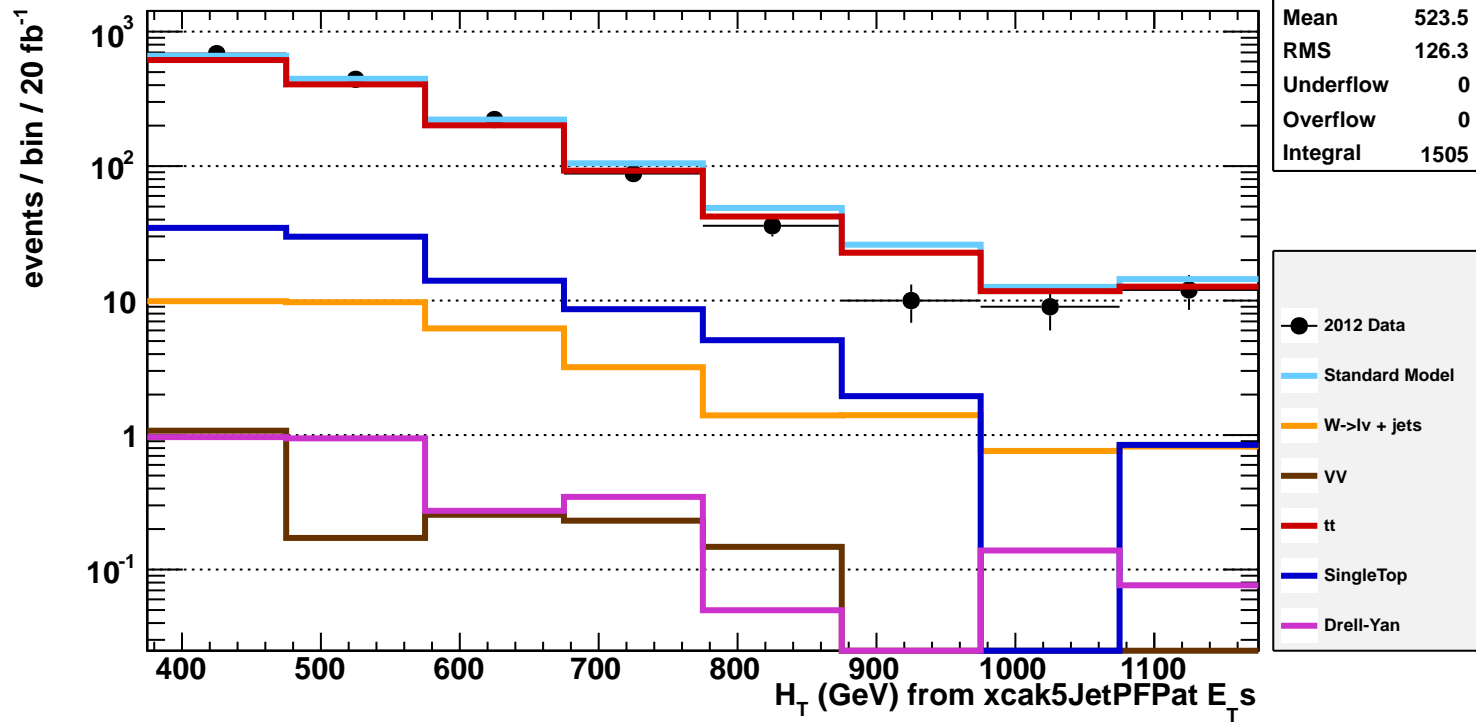


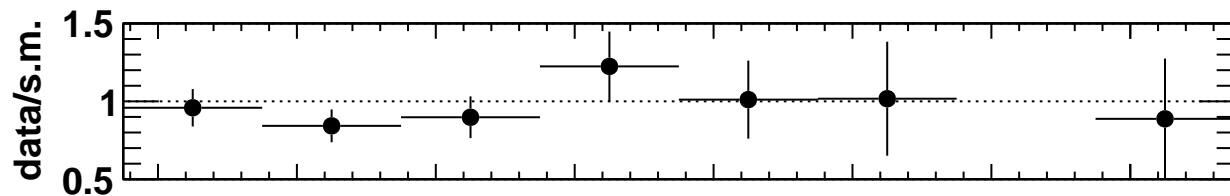
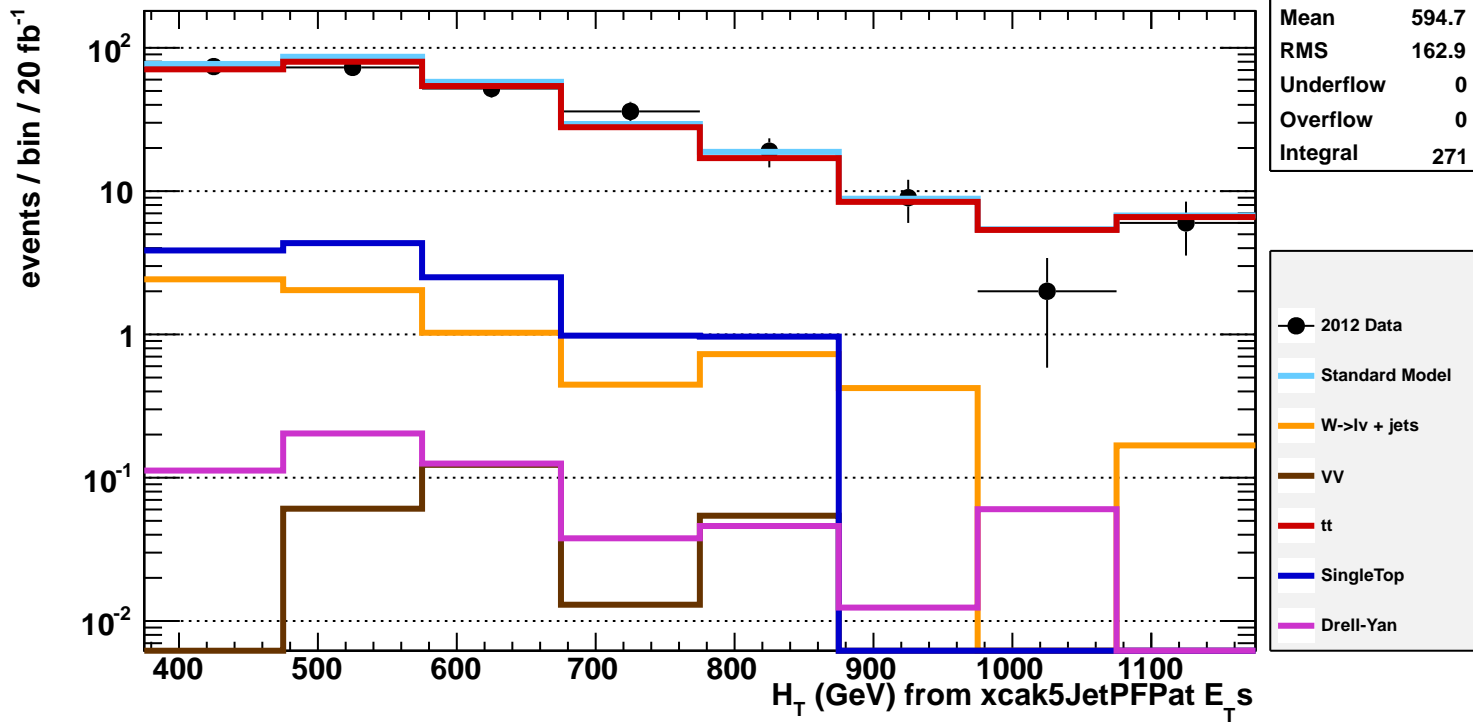
xcak5JetPFSumEtPat_ge4j_eq0b_dRl65	
Entries	520
Mean	598.1
RMS	182.2
Underflow	0
Overflow	0
Integral	520

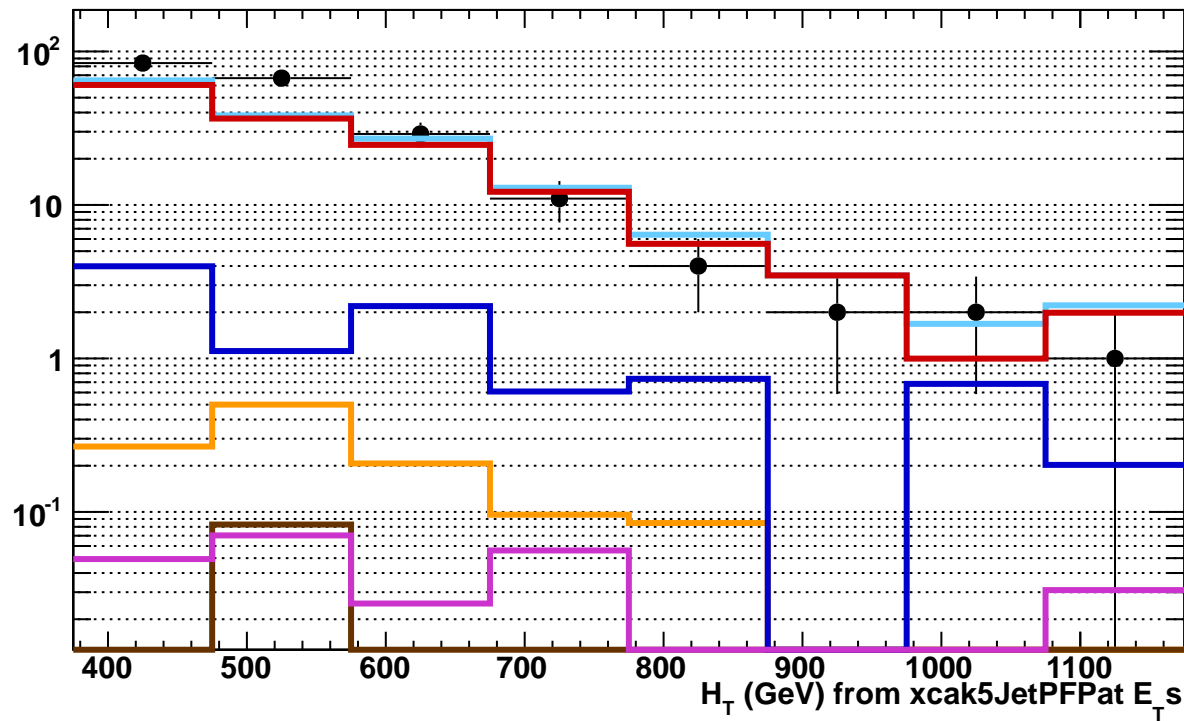






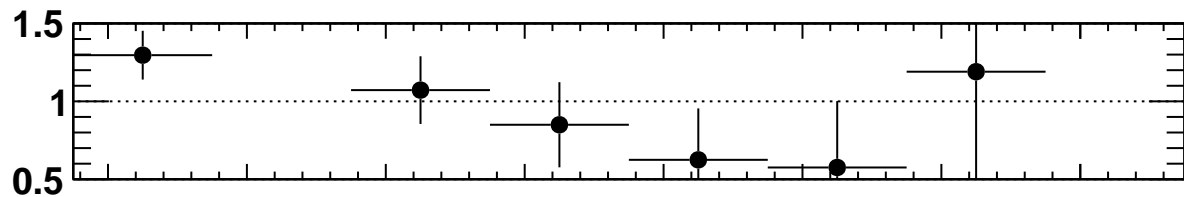




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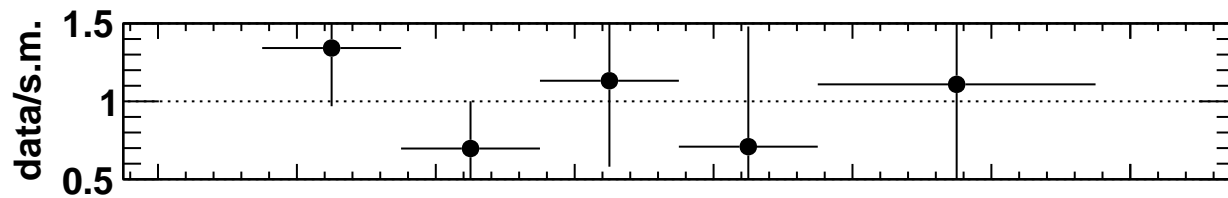
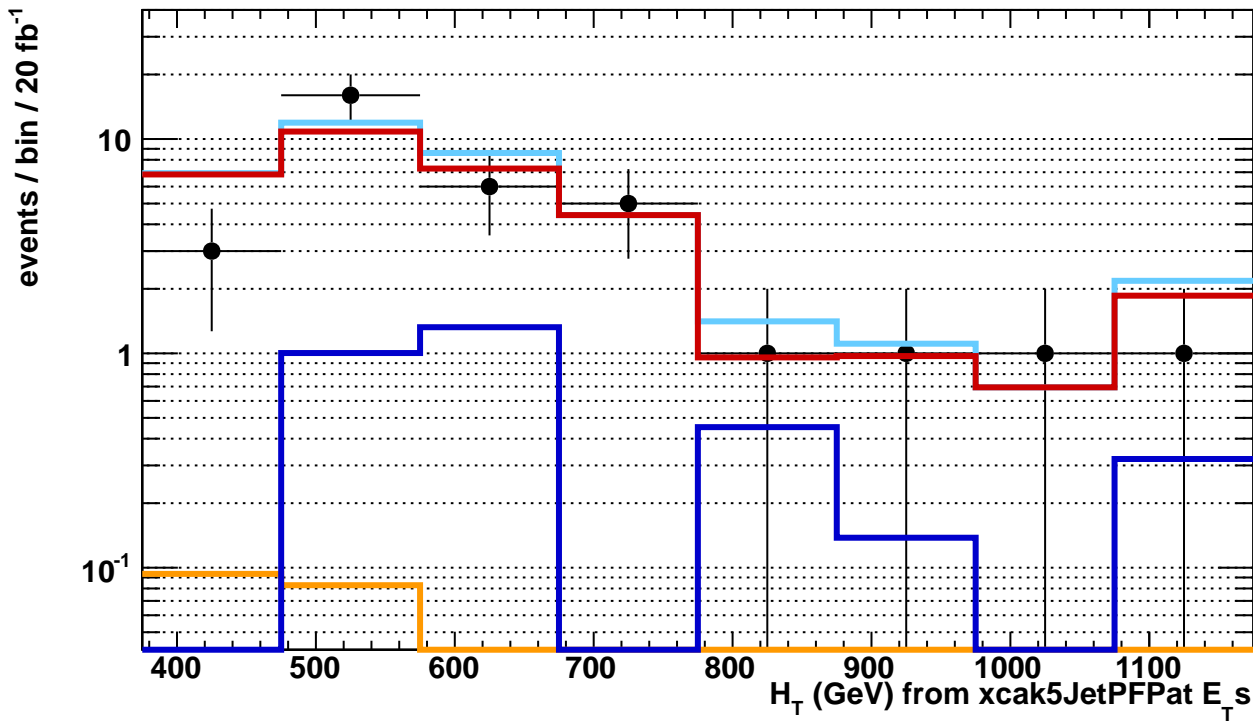
xcak5JetPFPatEIPat_ge4J_eq3b_dRge65	
Entries	200
Mean	526.5
RMS	124.7
Underflow	0
Overflow	0
Integral	200

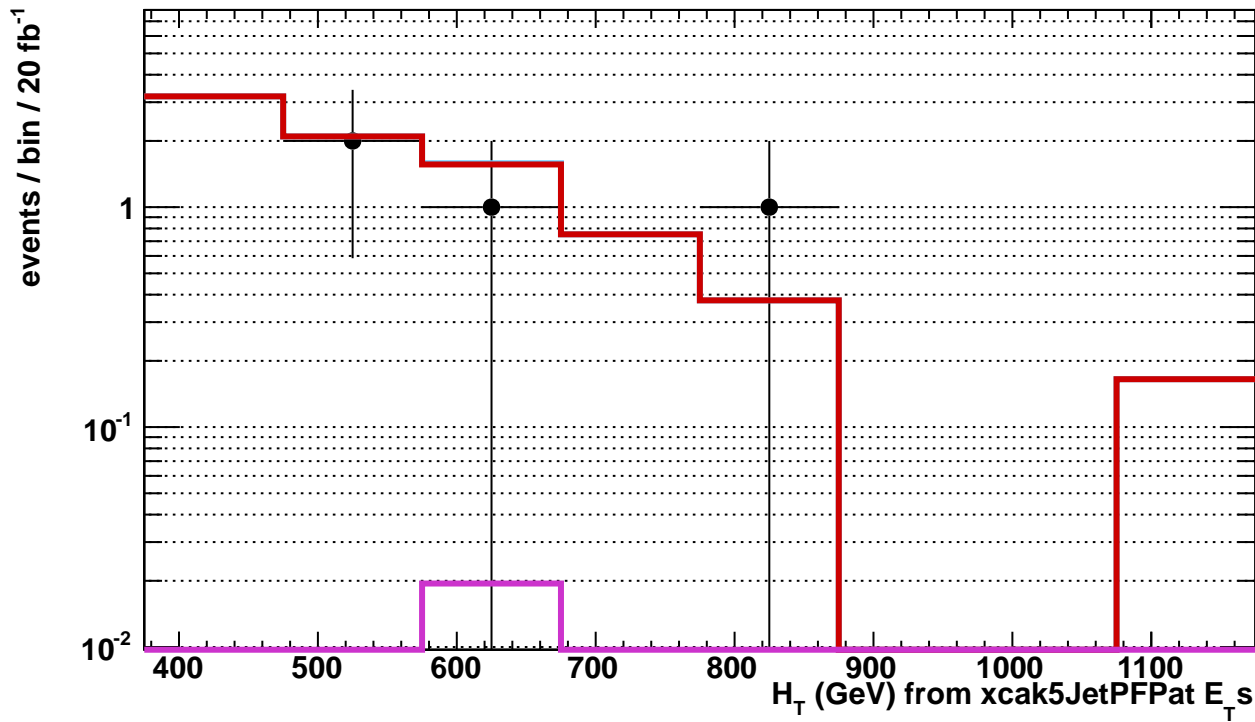
data/s.m.



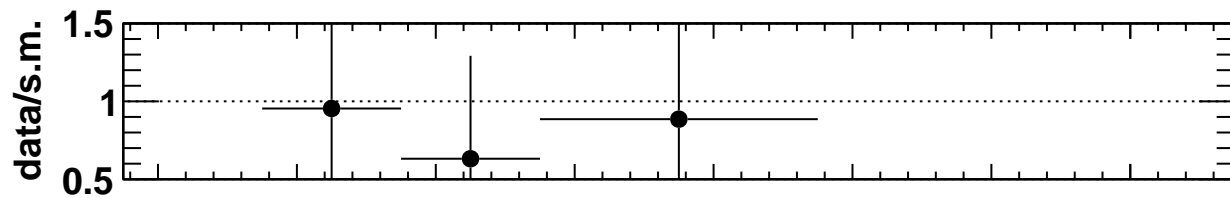
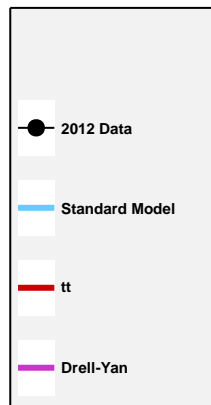


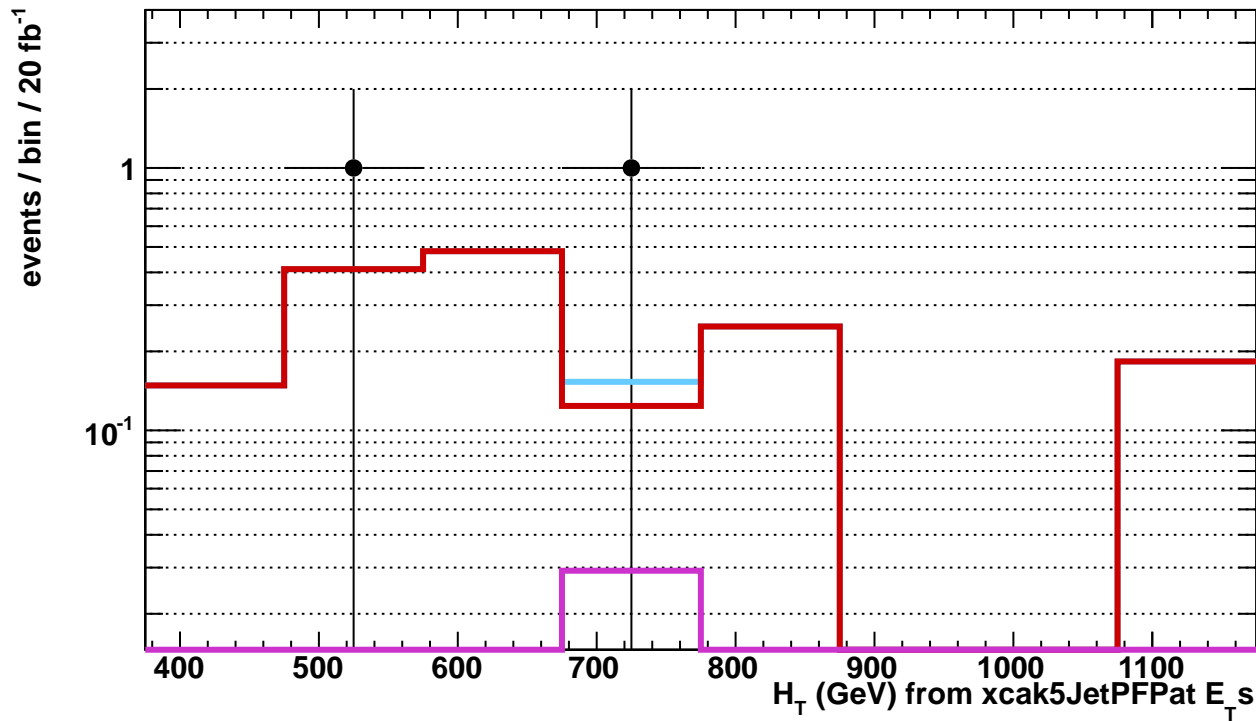
xcak5JetPFSumEtPat_ge4j_eq3b_dRl65	
Entries	34
Mean	610.3
RMS	152.6
Underflow	0
Overflow	0
Integral	34



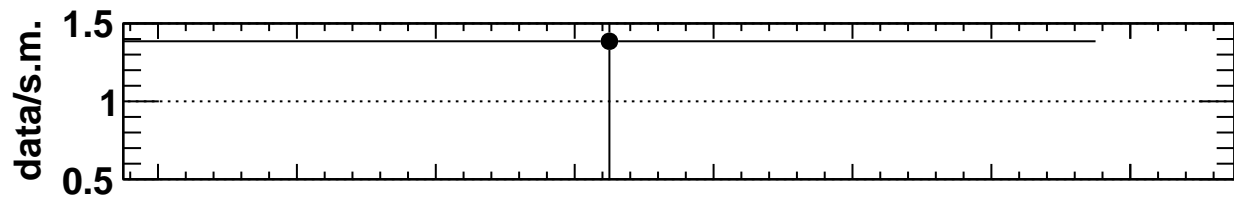
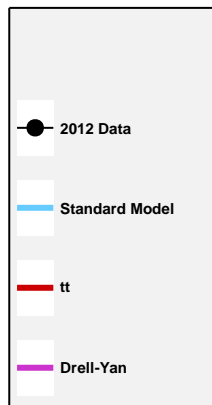


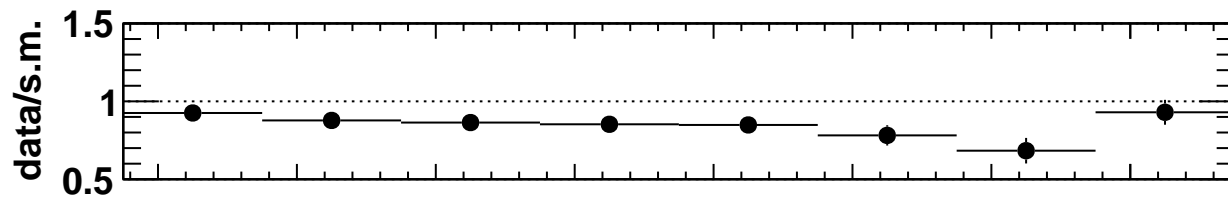
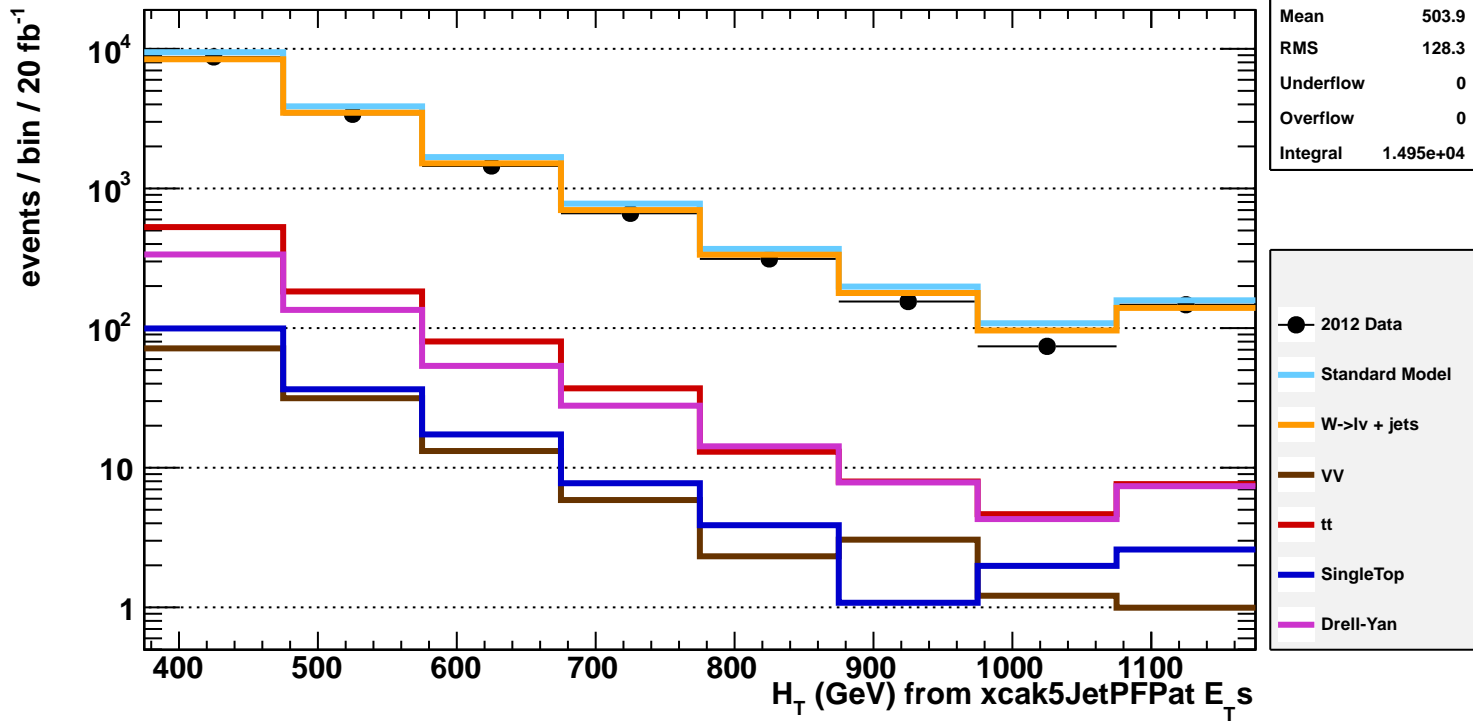
xcak5JetPFPatEIPat_ge4j_ge4b_dRge65	
Entries	4
Mean	639.7
RMS	122.2
Underflow	0
Overflow	0
Integral	4

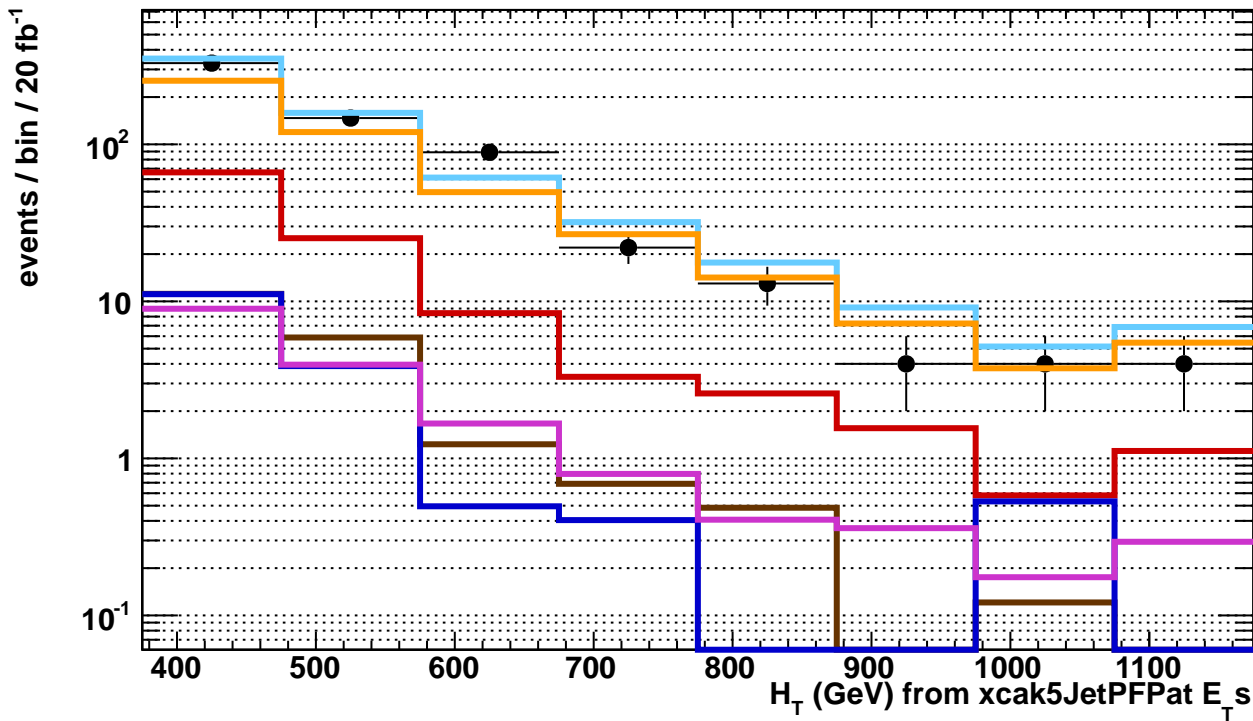




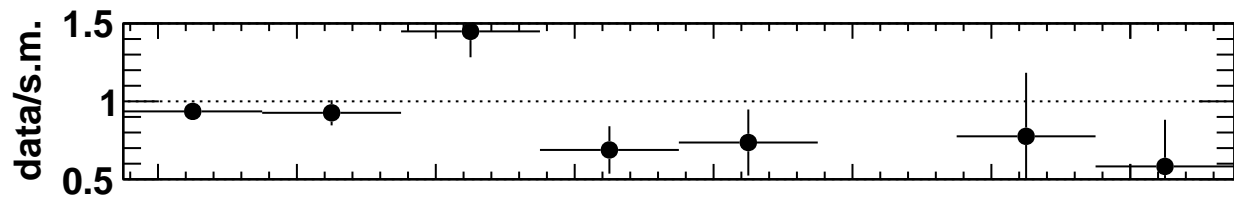
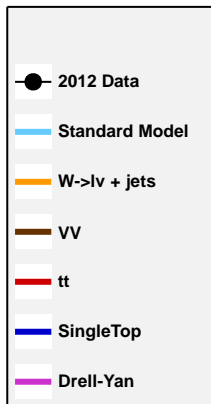
kcak5JetPFSumEtPat_ge4j_ge4b_dRl65	
Entries	2
Mean	634.1
RMS	60.32
Underflow	0
Overflow	0
Integral	2



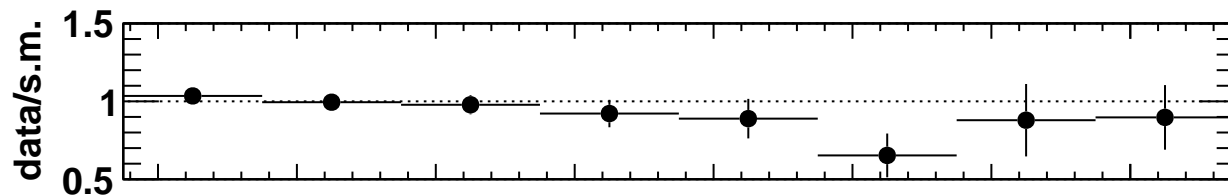
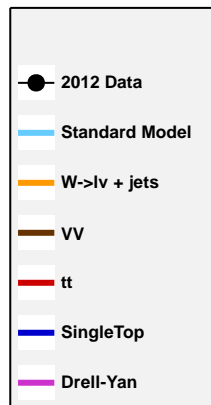
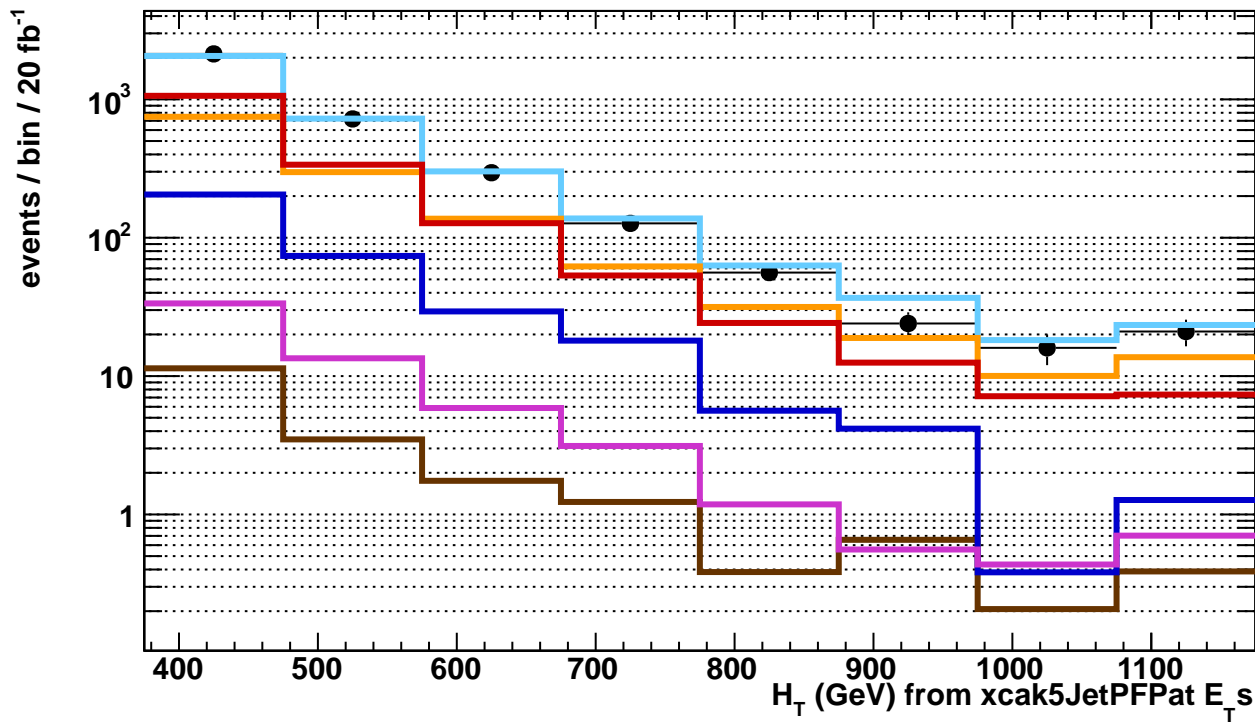


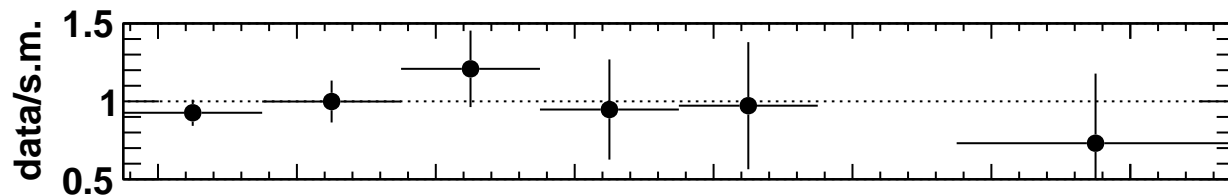
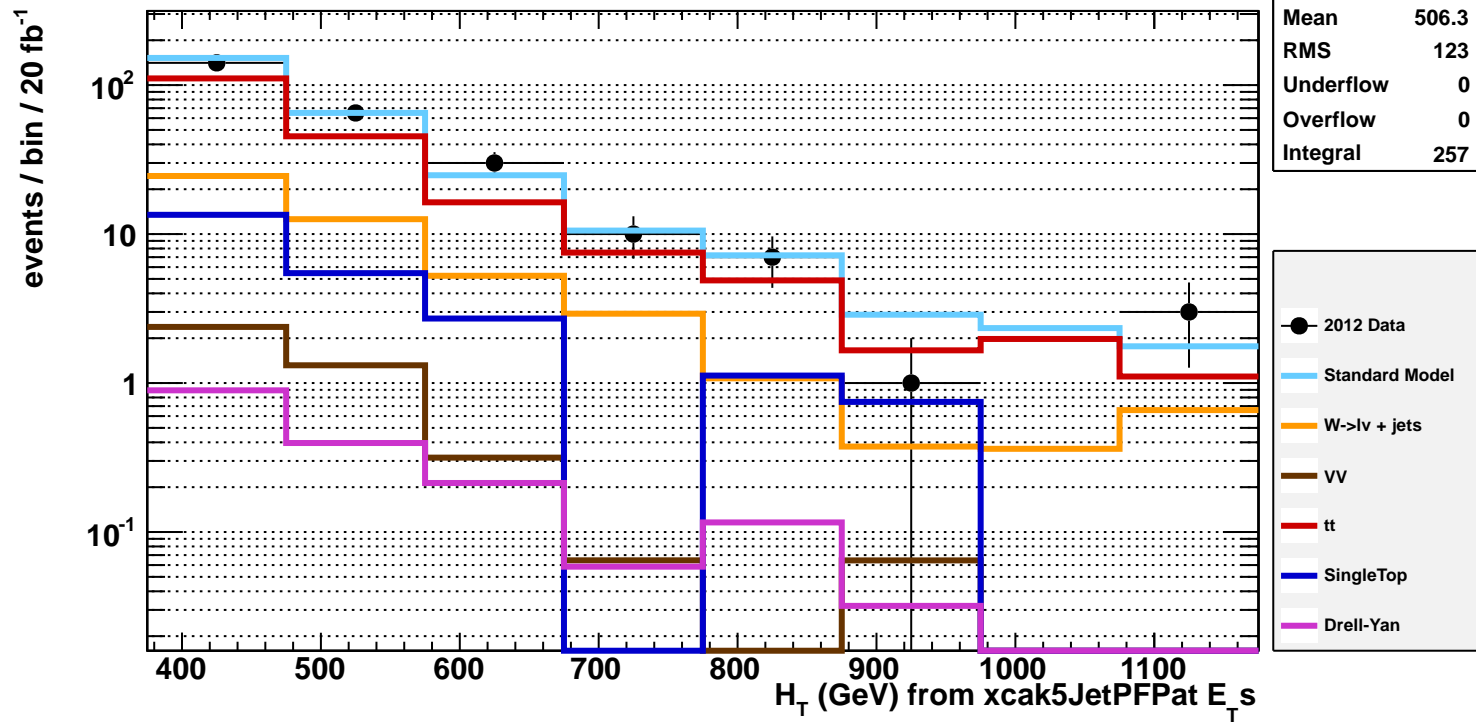


xcak5JetPFSumEtPat_le3j_eq0b_dR165	
Entries	612
Mean	509.2
RMS	122.3
Underflow	0
Overflow	0
Integral	612

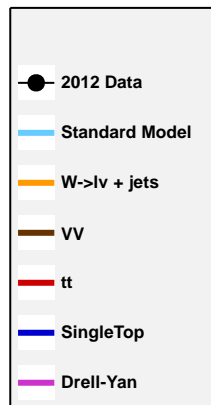
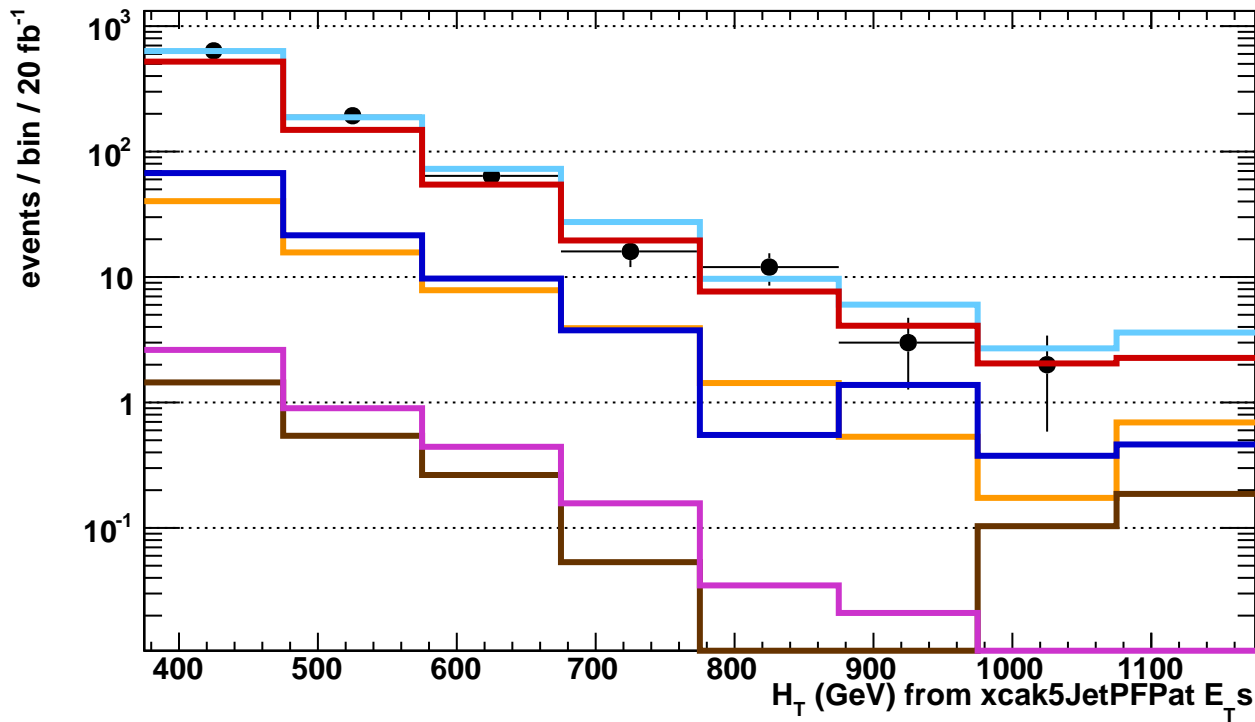


xcak5JetPFSumEIPat_63_eq1b_dRge65	
Entries	3392
Mean	492.2
RMS	116.6
Underflow	0
Overflow	0
Integral	3392



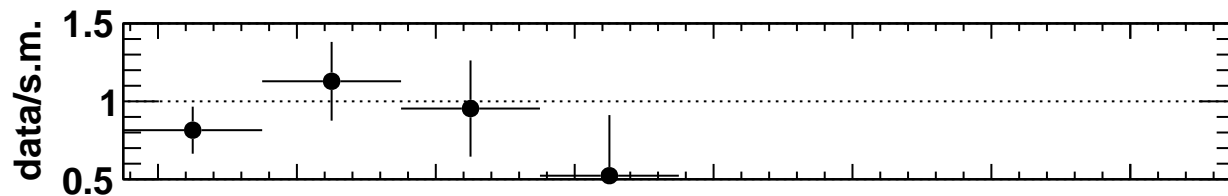
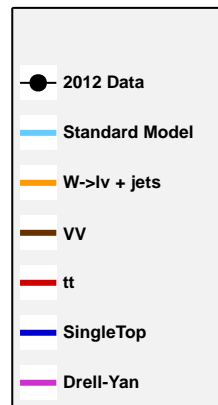
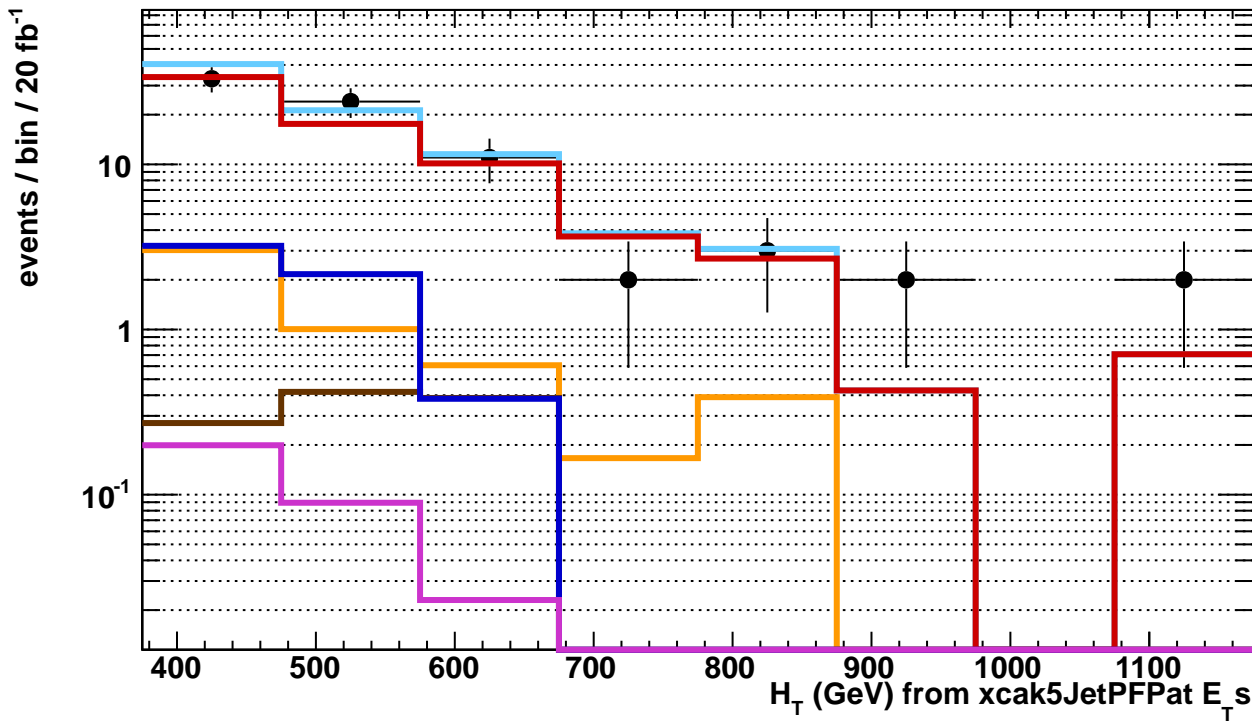


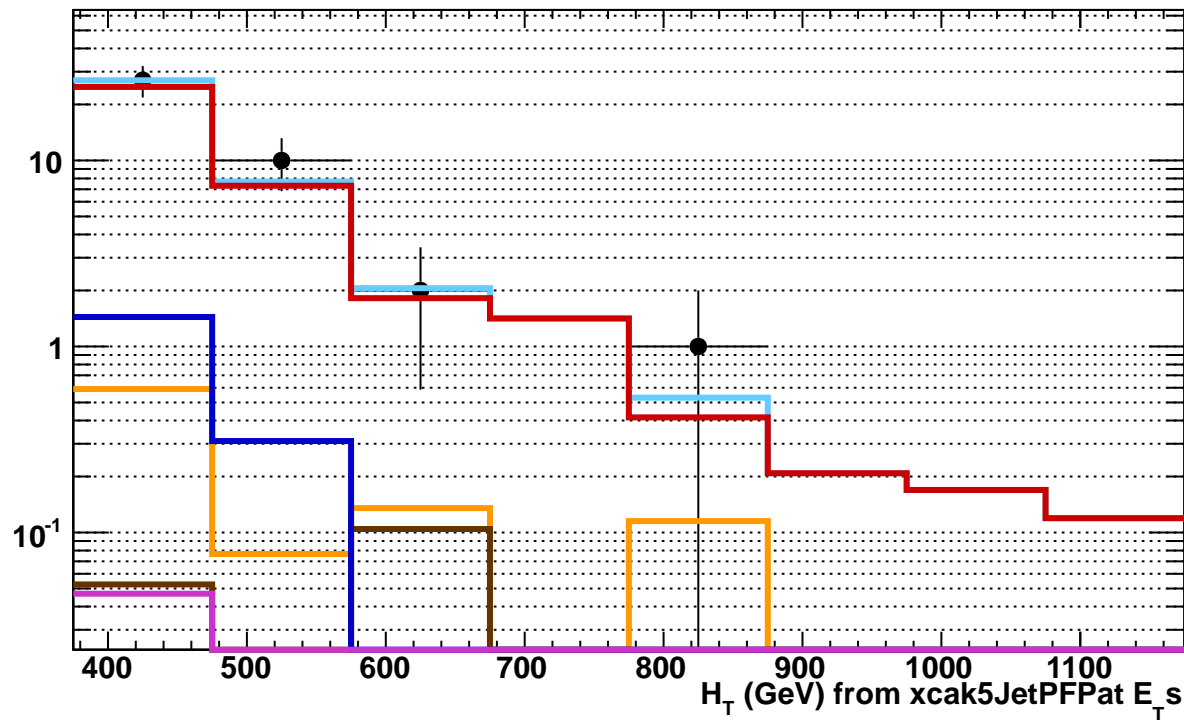
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Entries	925
Mean	464.3
RMS	93.42
Underflow	0
Overflow	0
Integral	925



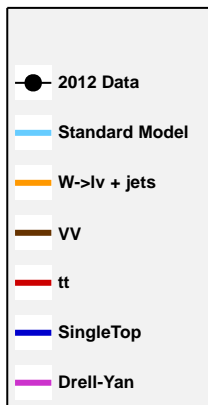


xcak5JetPFSumEtPat_le3j_eq2b_dR165	
Entries	77
Mean	539.3
RMS	153.5
Underflow	0
Overflow	0
Integral	77

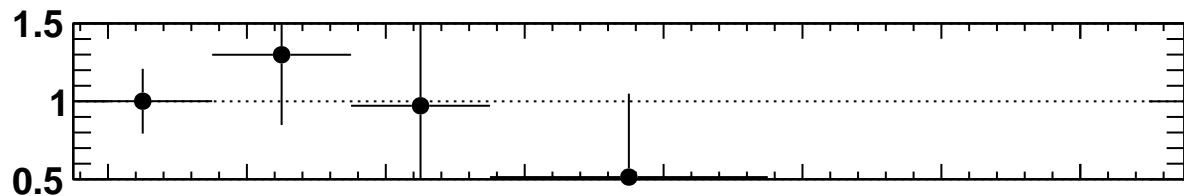


events / bin / 20 fb<sup>-1</sup>

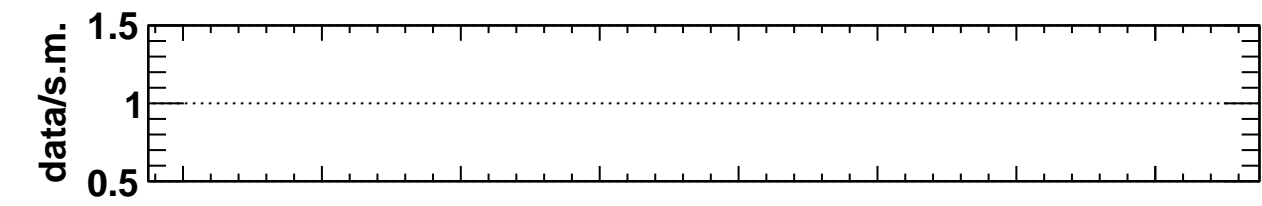
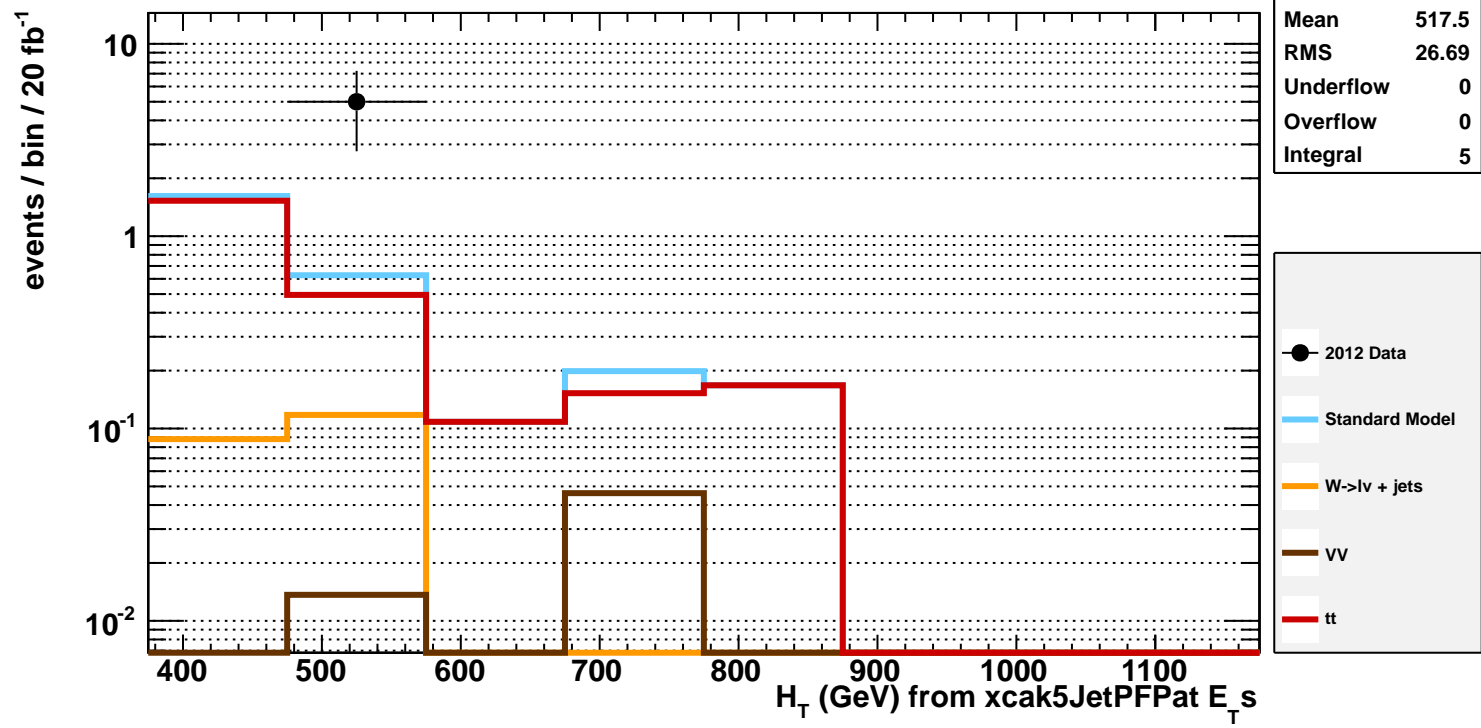
xcak5JetPFSumEIPat_1e3_eq3b_dRge65	
Entries	40
Mean	456.5
RMS	90.34
Underflow	0
Overflow	0
Integral	40

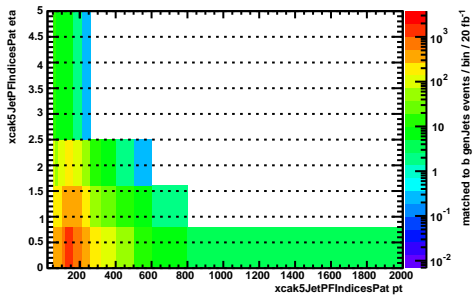
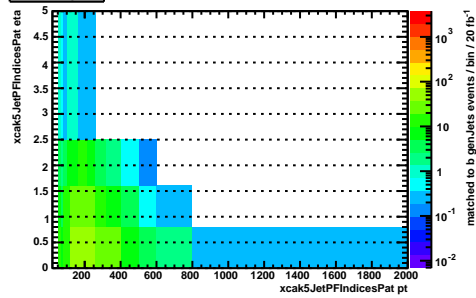
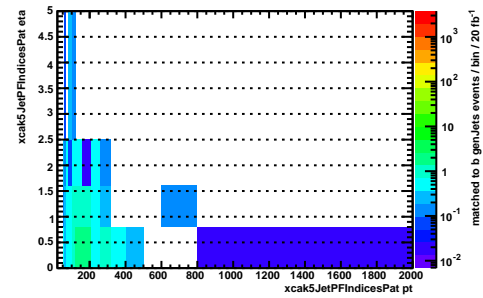
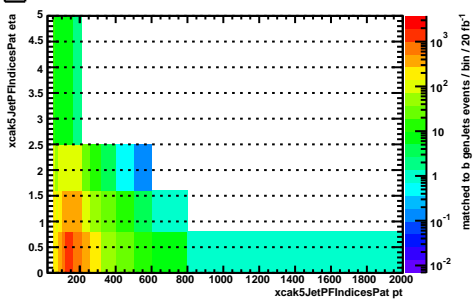
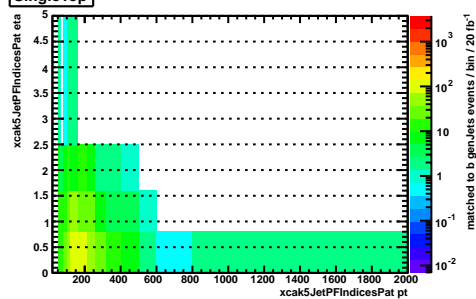
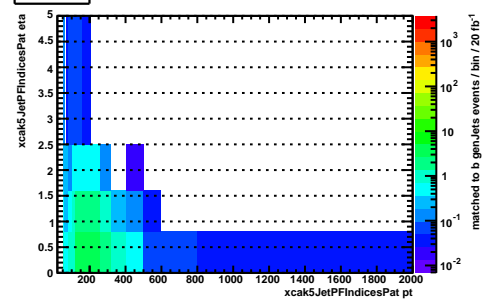


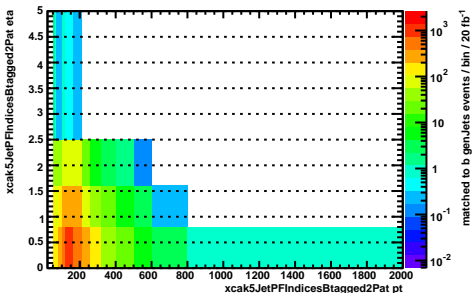
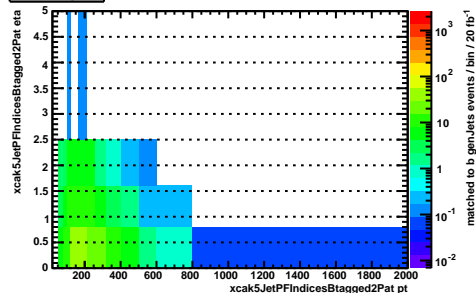
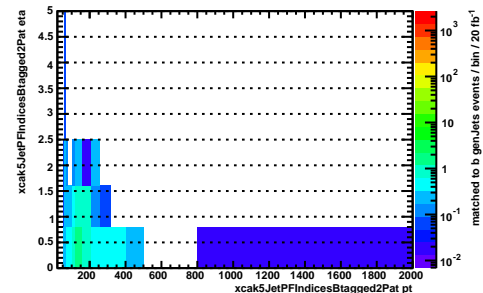
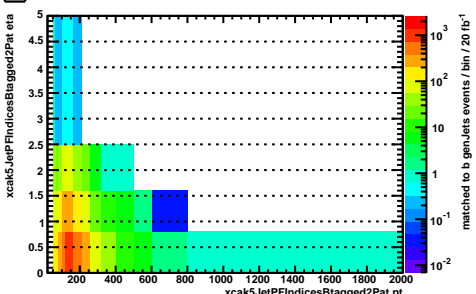
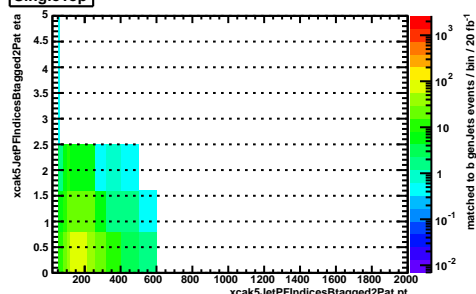
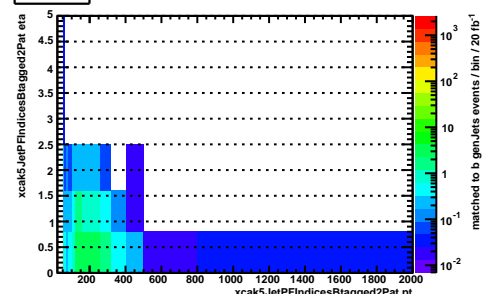
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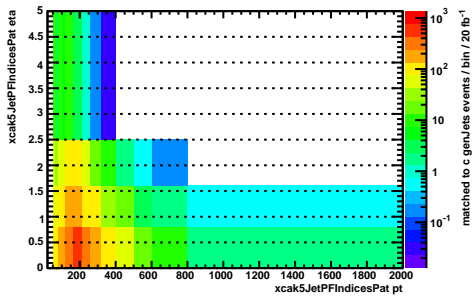
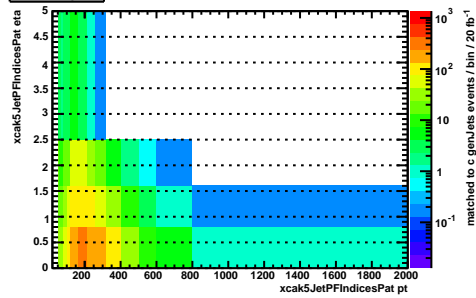
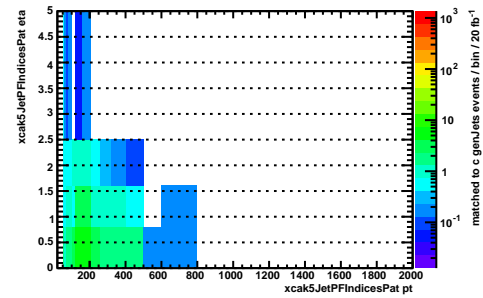
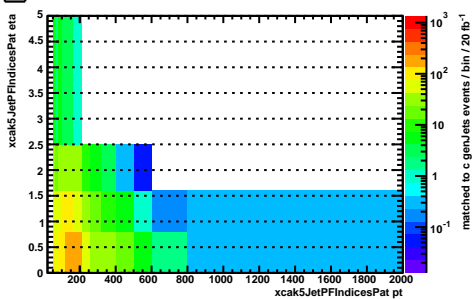
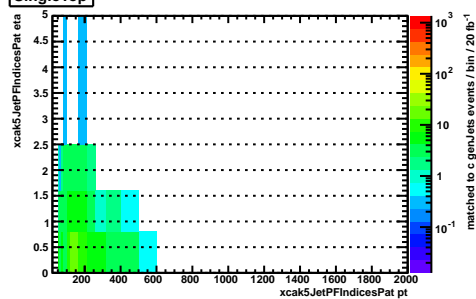
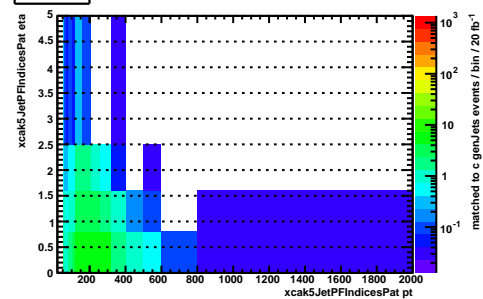


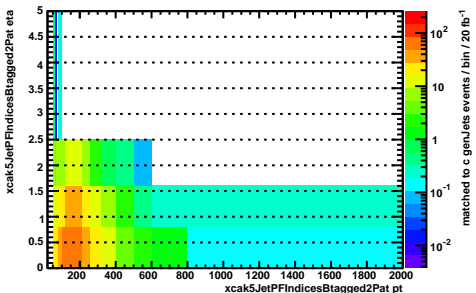
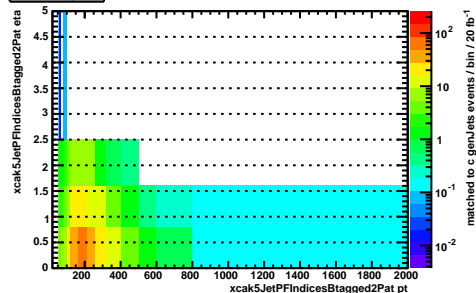
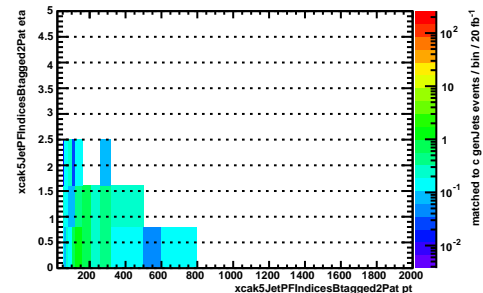
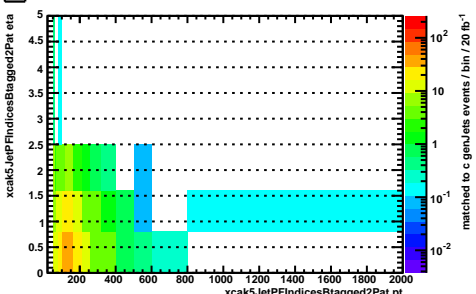
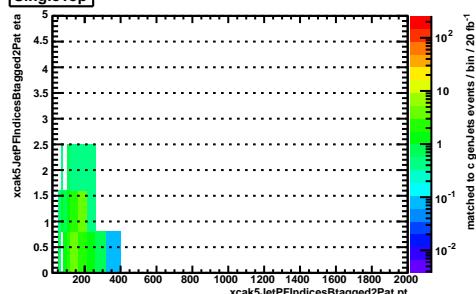
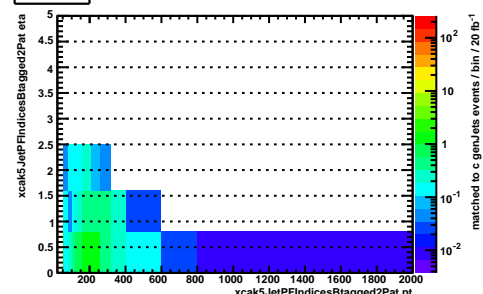
xcak5JetPFSumEtPat_le3j_eq3b_dRl65	
Entries	5
Mean	517.5
RMS	26.69
Underflow	0
Overflow	0
Integral	5

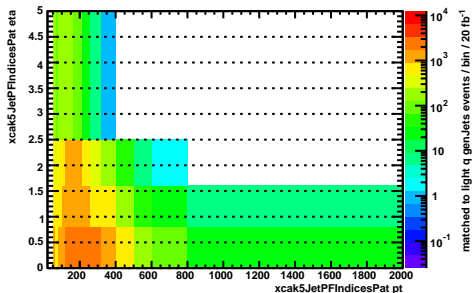
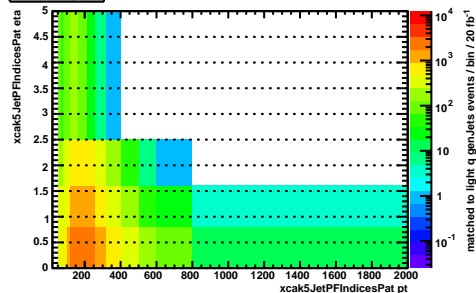
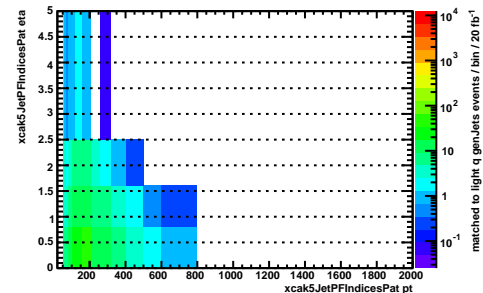
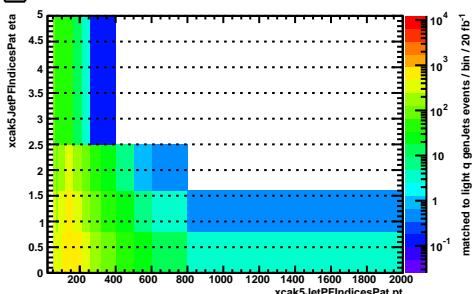
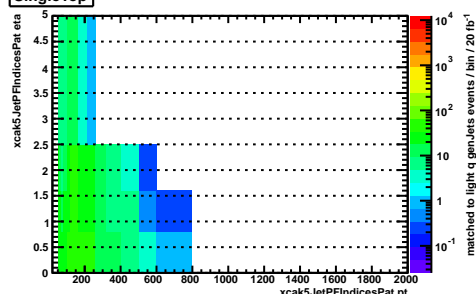
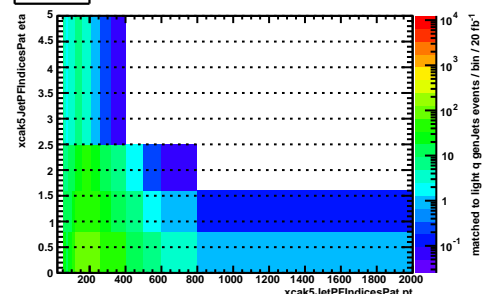


**Standard Model****W→lv + jets****VV****tt****SingleTop****Drell-Yan**

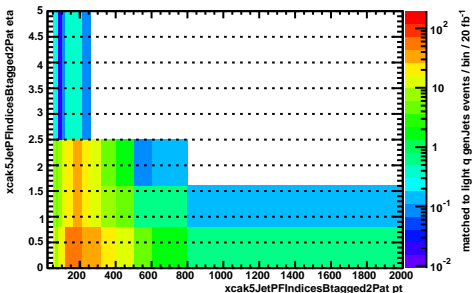
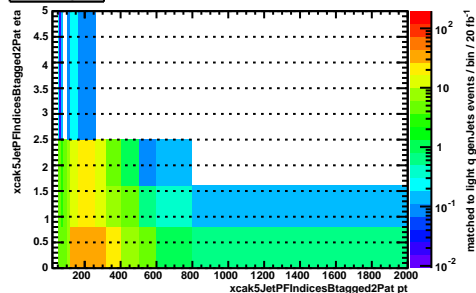
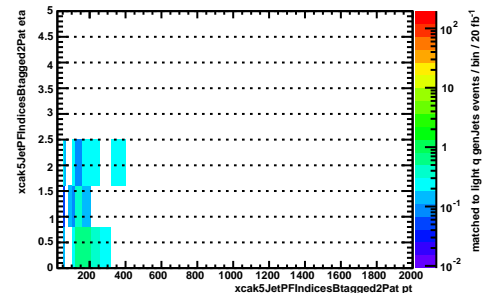
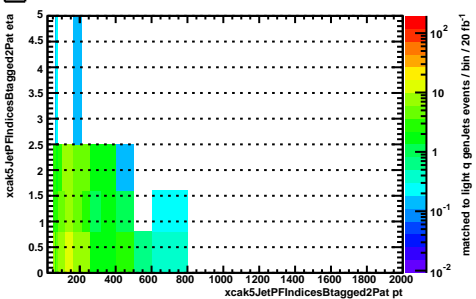
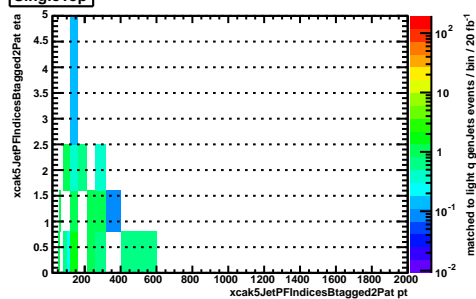
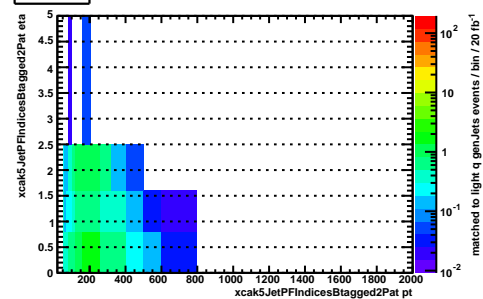
**Standard Model****W→lv + jets****VV****tt****SingleTop****Drell-Yan**

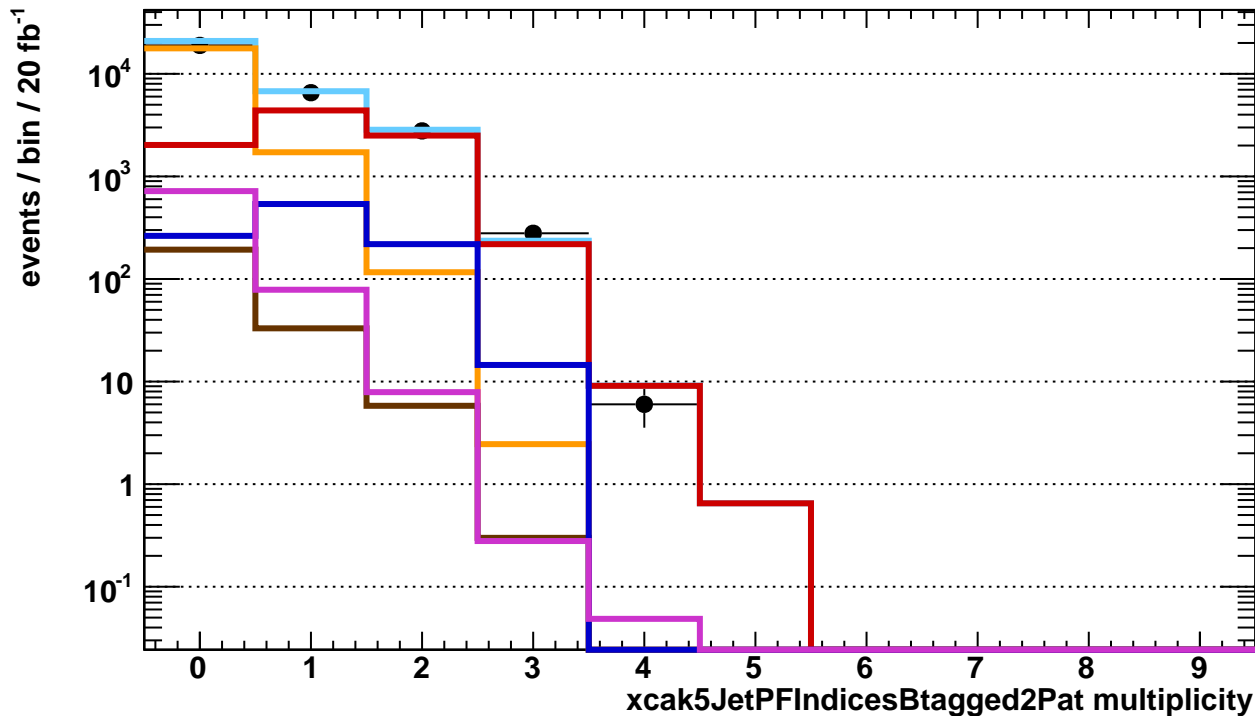
**Standard Model****W→lv + jets****vv****tt****SingleTop****Drell-Yan**

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

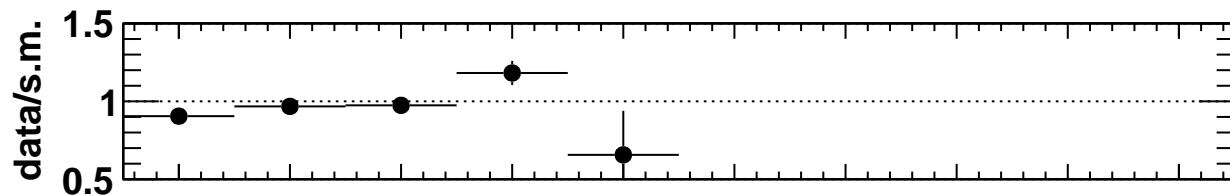
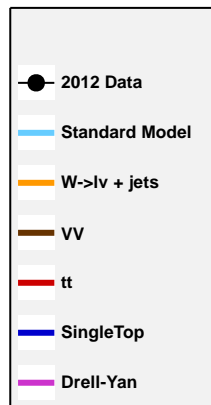
**Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

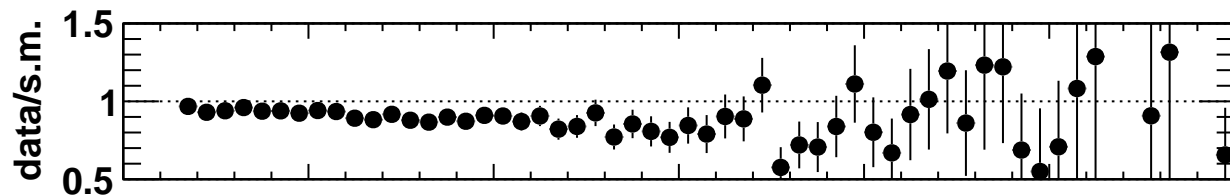
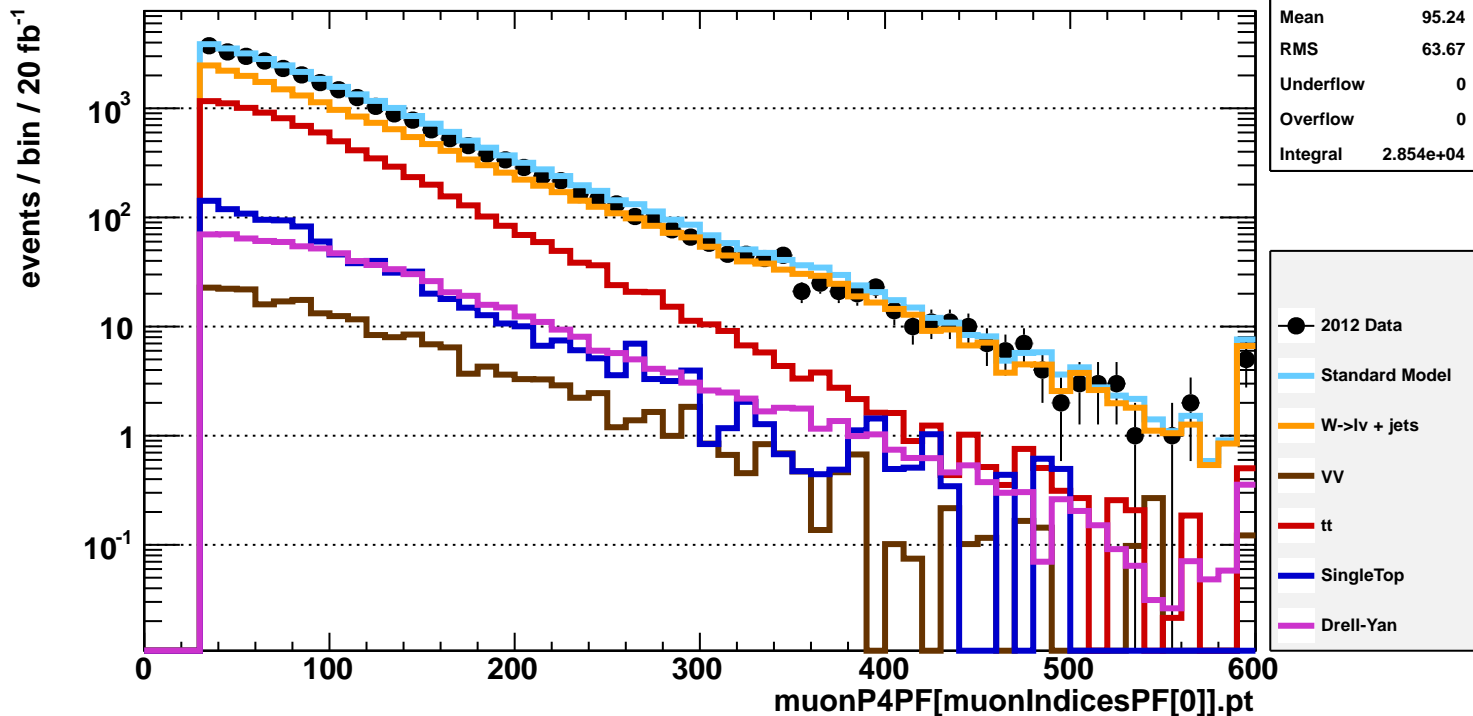


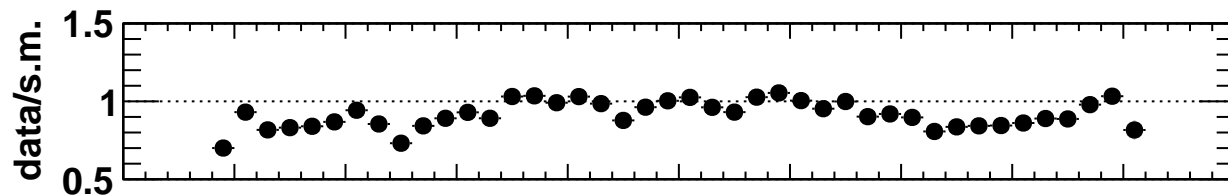
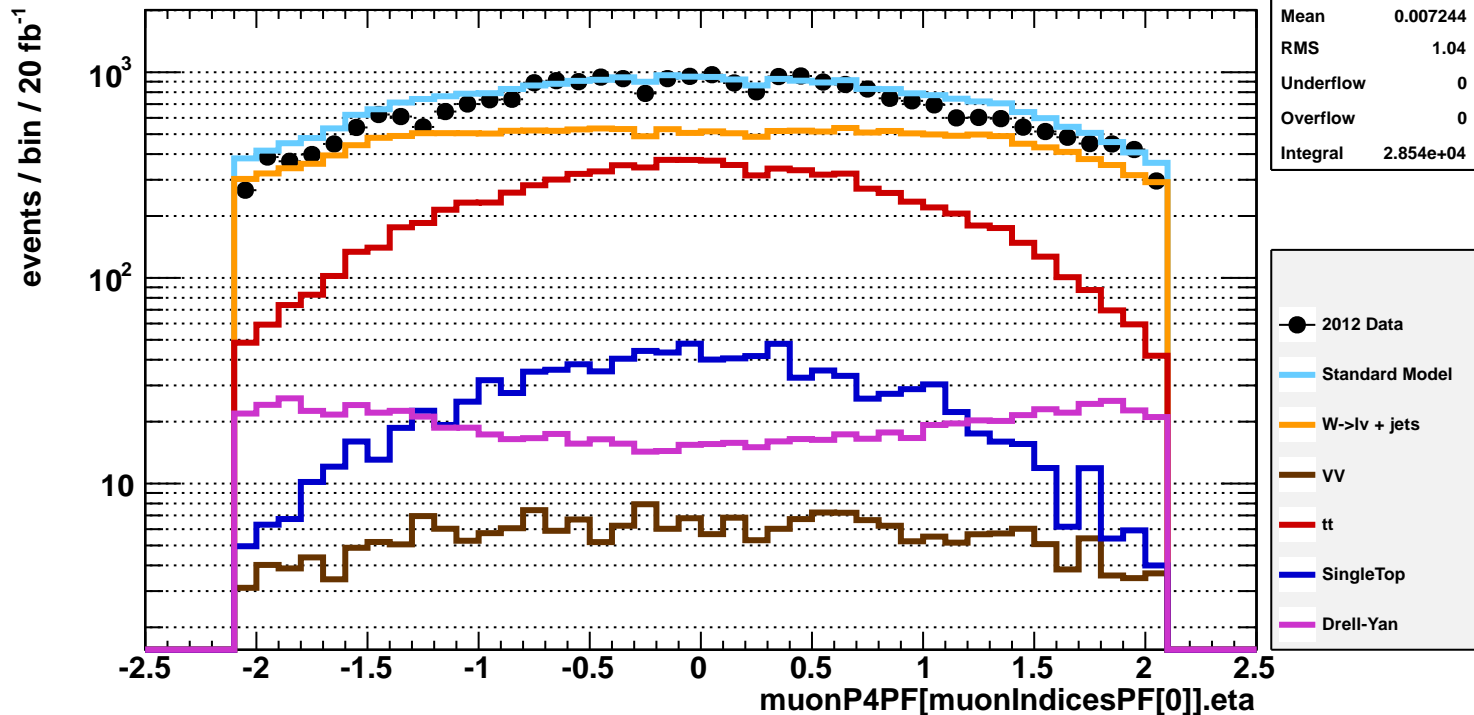
**Standard Model****W→lv + jets****VV****tt****SingleTop****Drell-Yan**

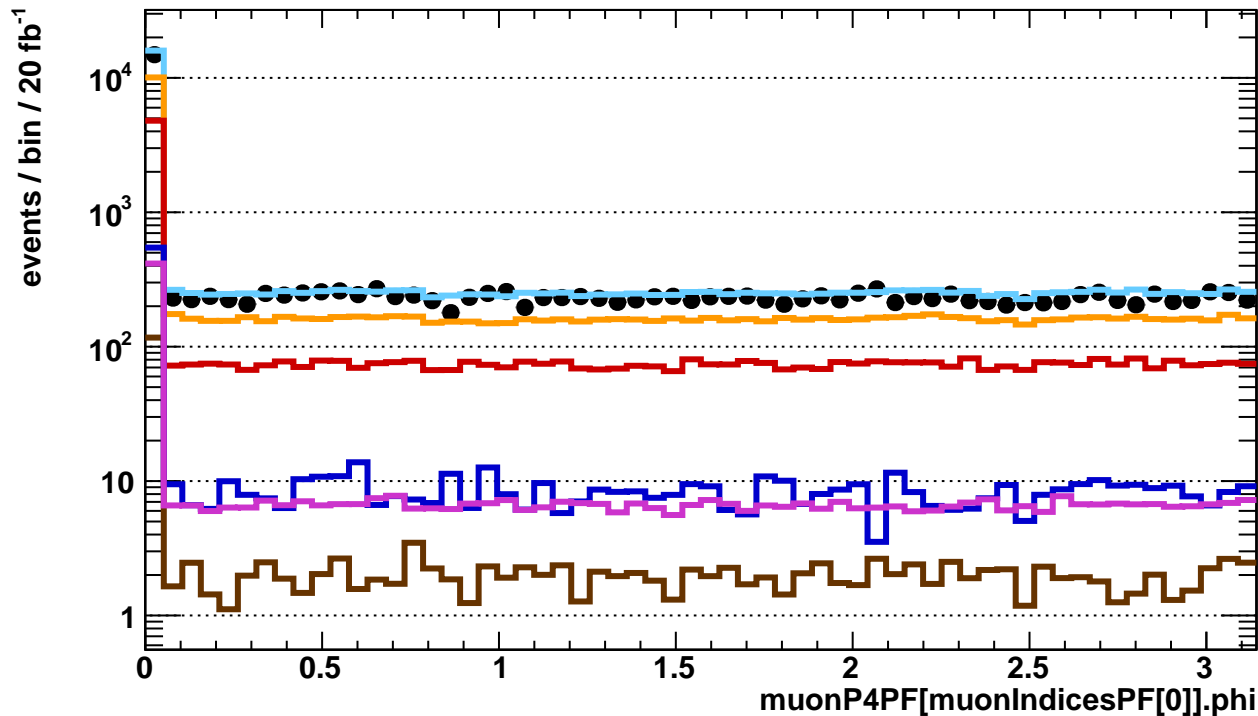


xcak5JetPFIndicesBtagged2PatMultiplicity	
Entries	28544
Mean	0.4542
RMS	0.7097
Underflow	0
Overflow	0
Integral	2.854e+04

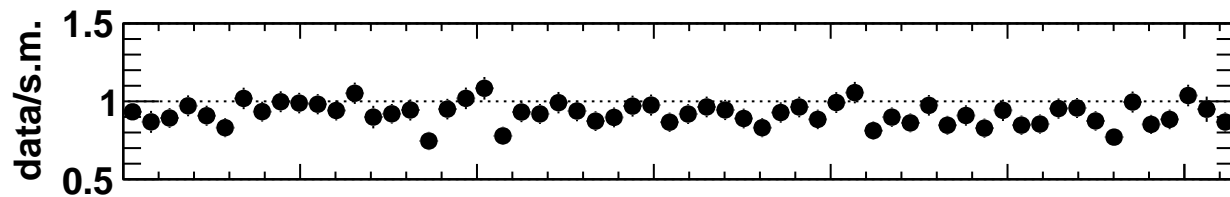


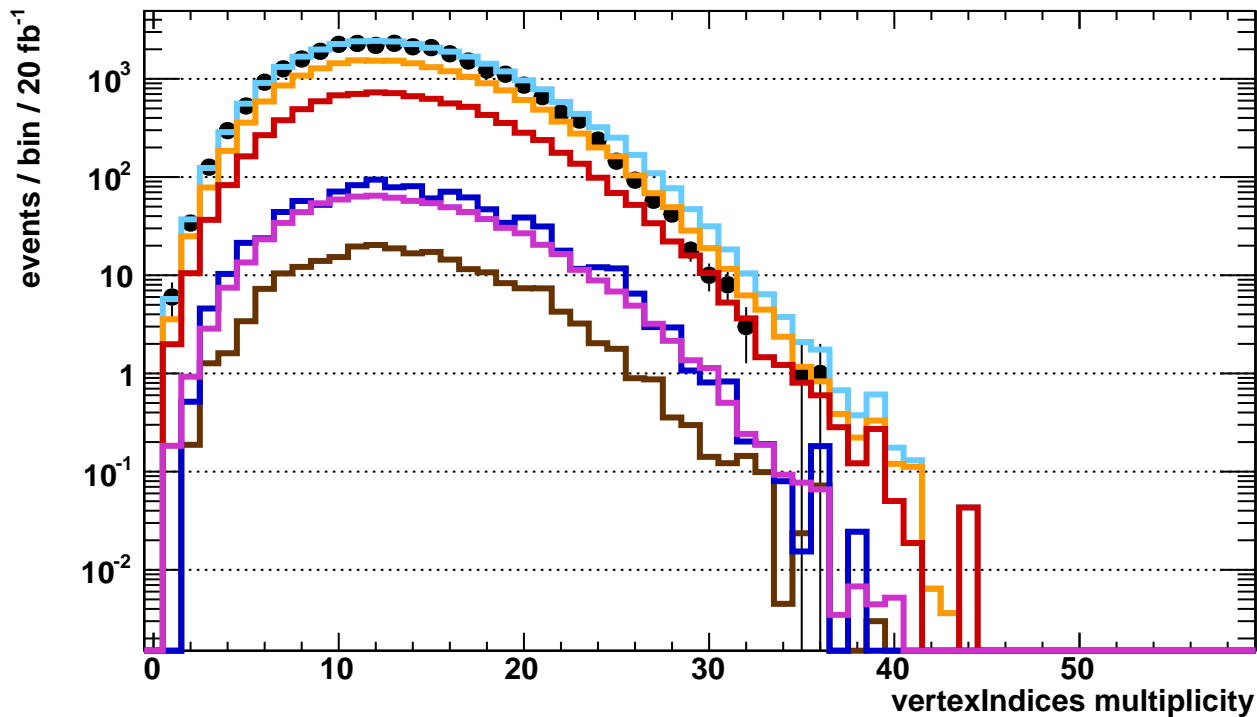




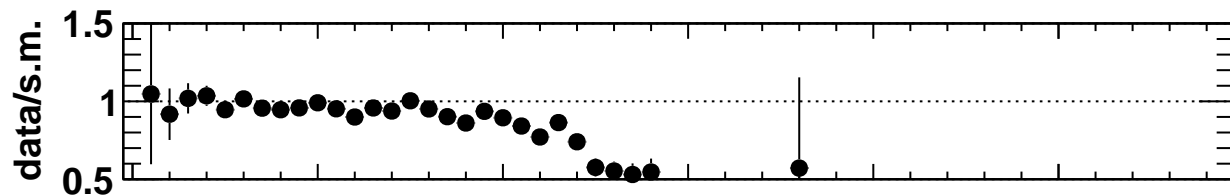
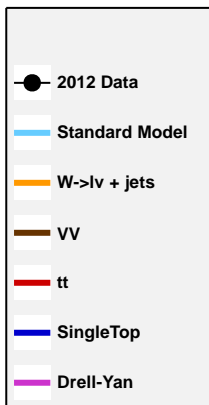


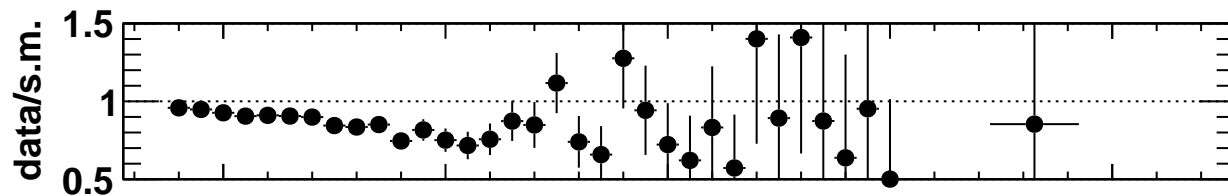
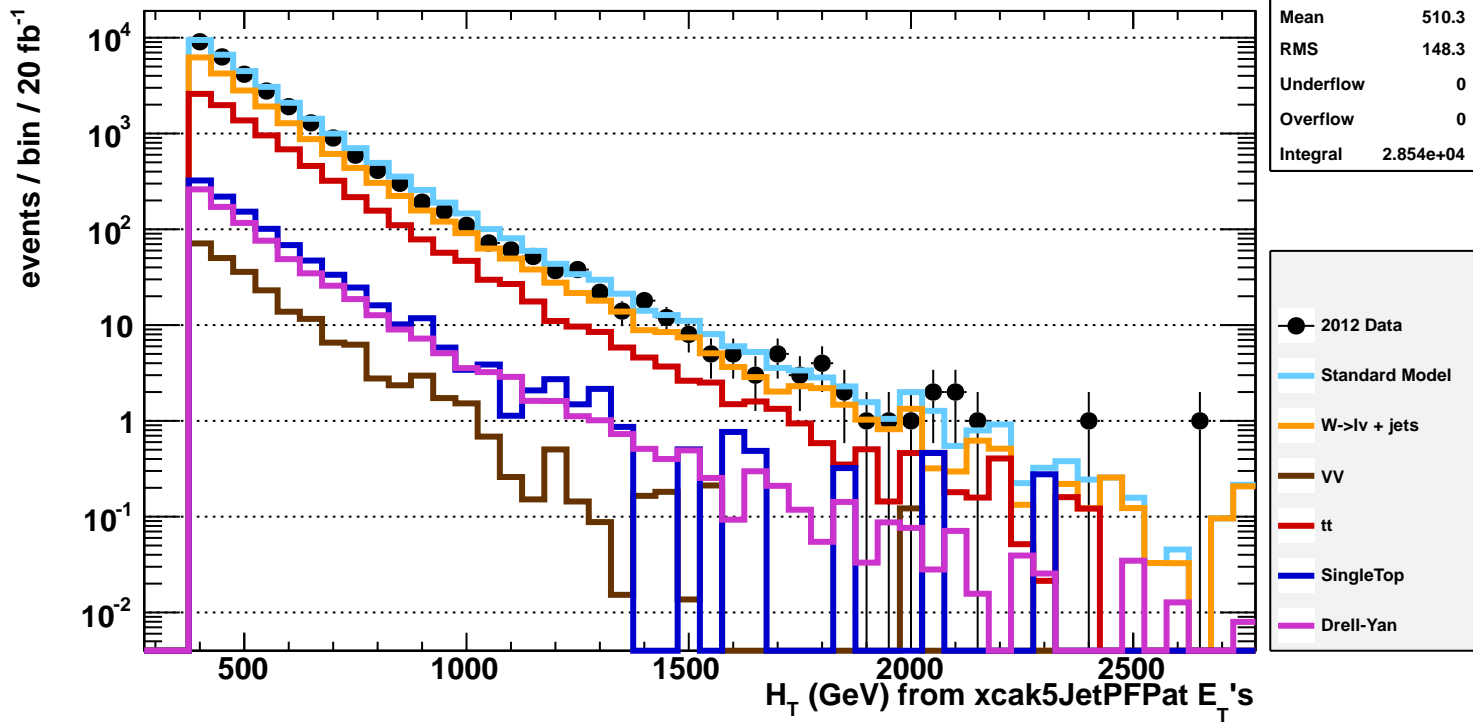
muonP4PF,phi[[0]]; muonIndicesPF	
Entries	28544
Mean	0.7733
RMS	0.9955
Underflow	0
Overflow	0
Integral	2.854e+04

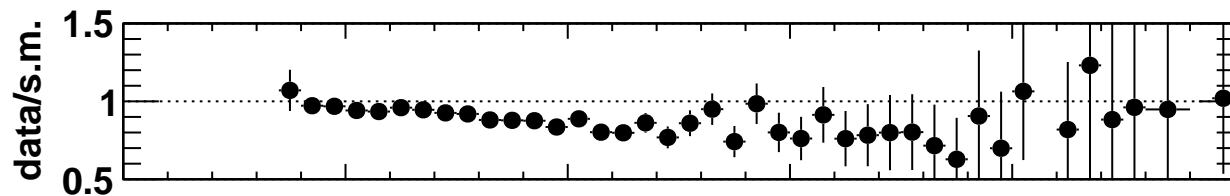
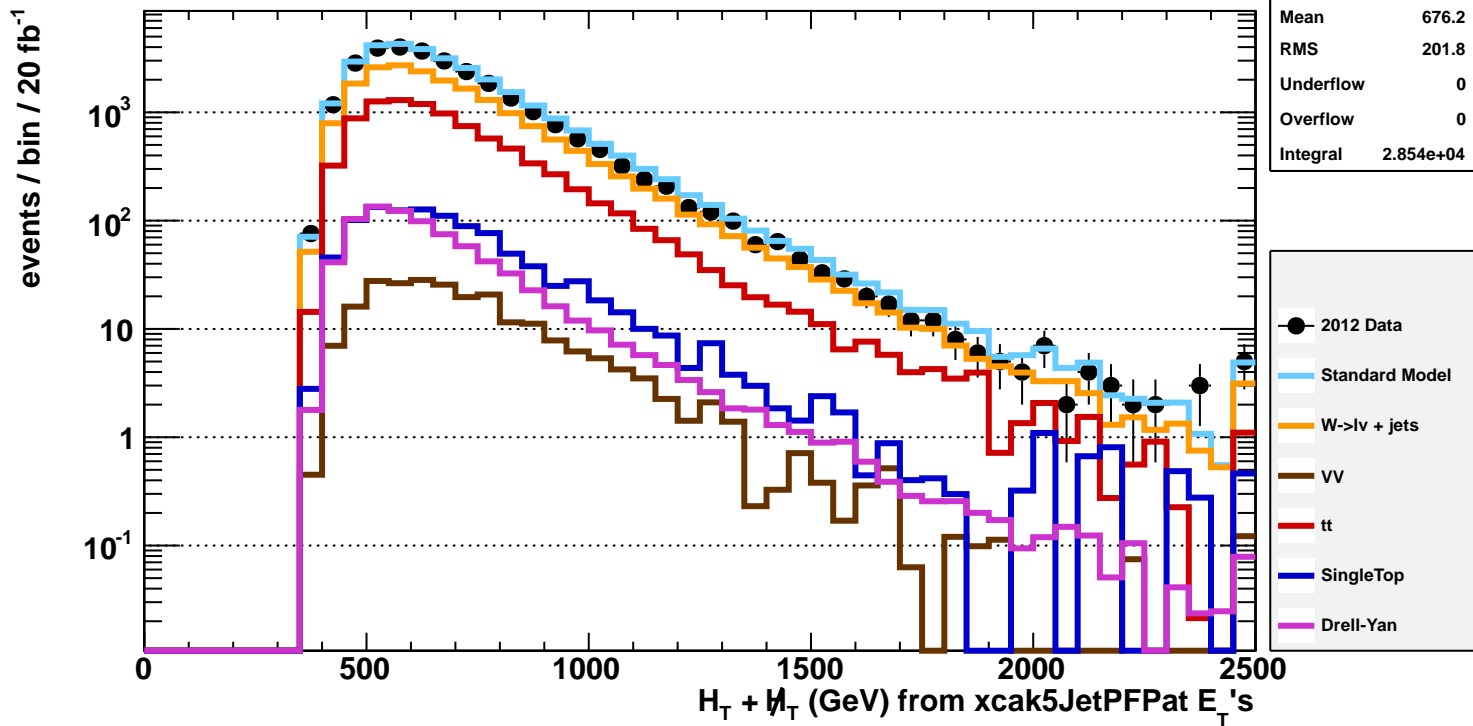




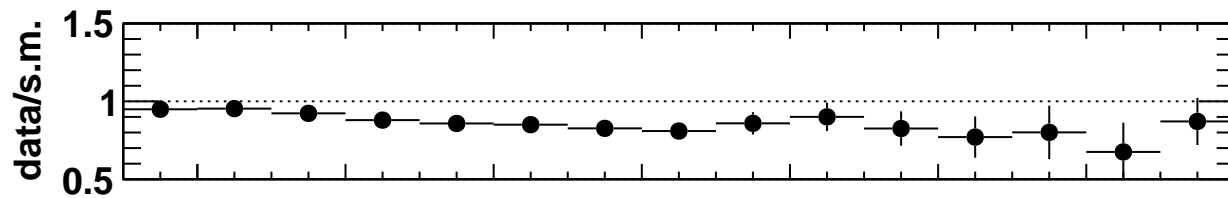
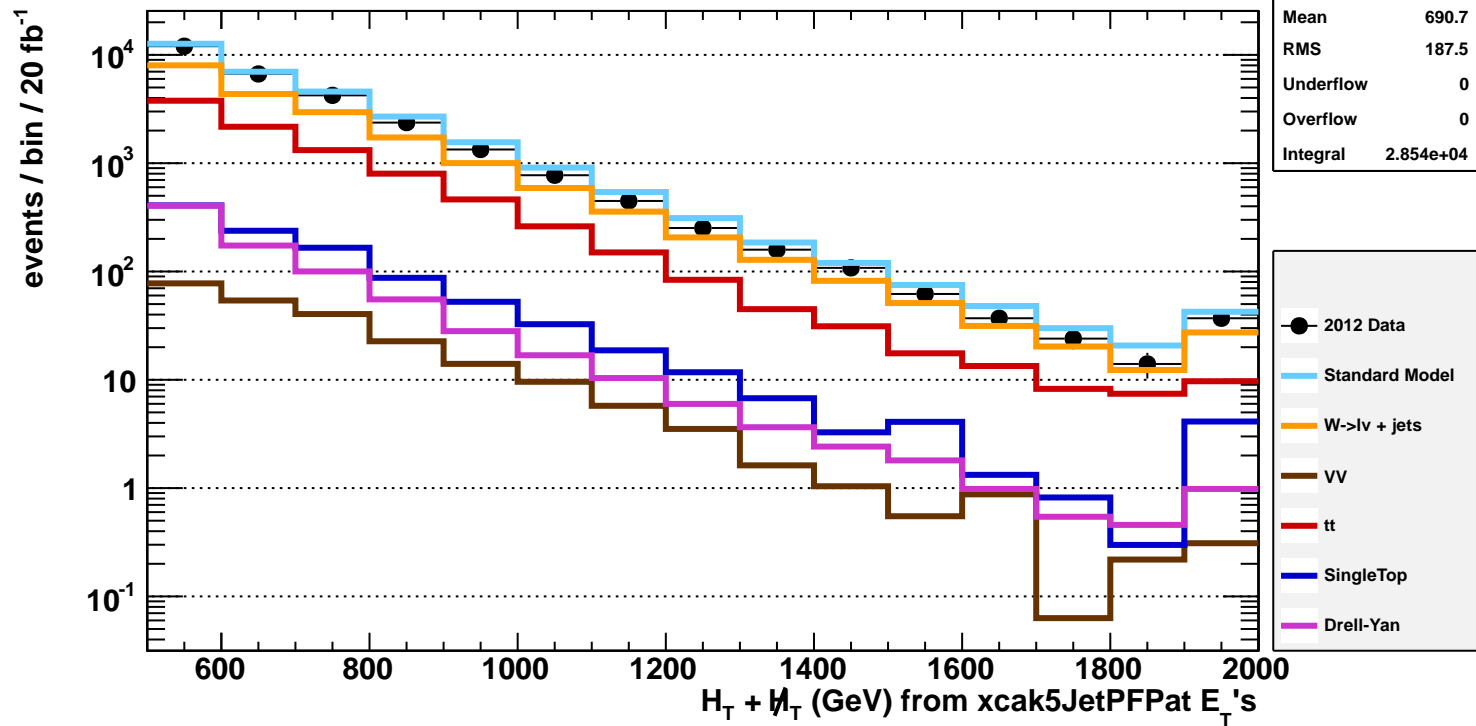
vertexIndicesMultiplicity	
Entries	28544
Mean	13.2
RMS	4.758
Underflow	0
Overflow	0
Integral	2.854e+04

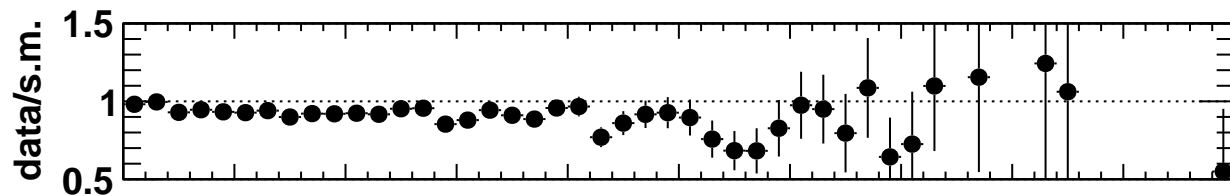
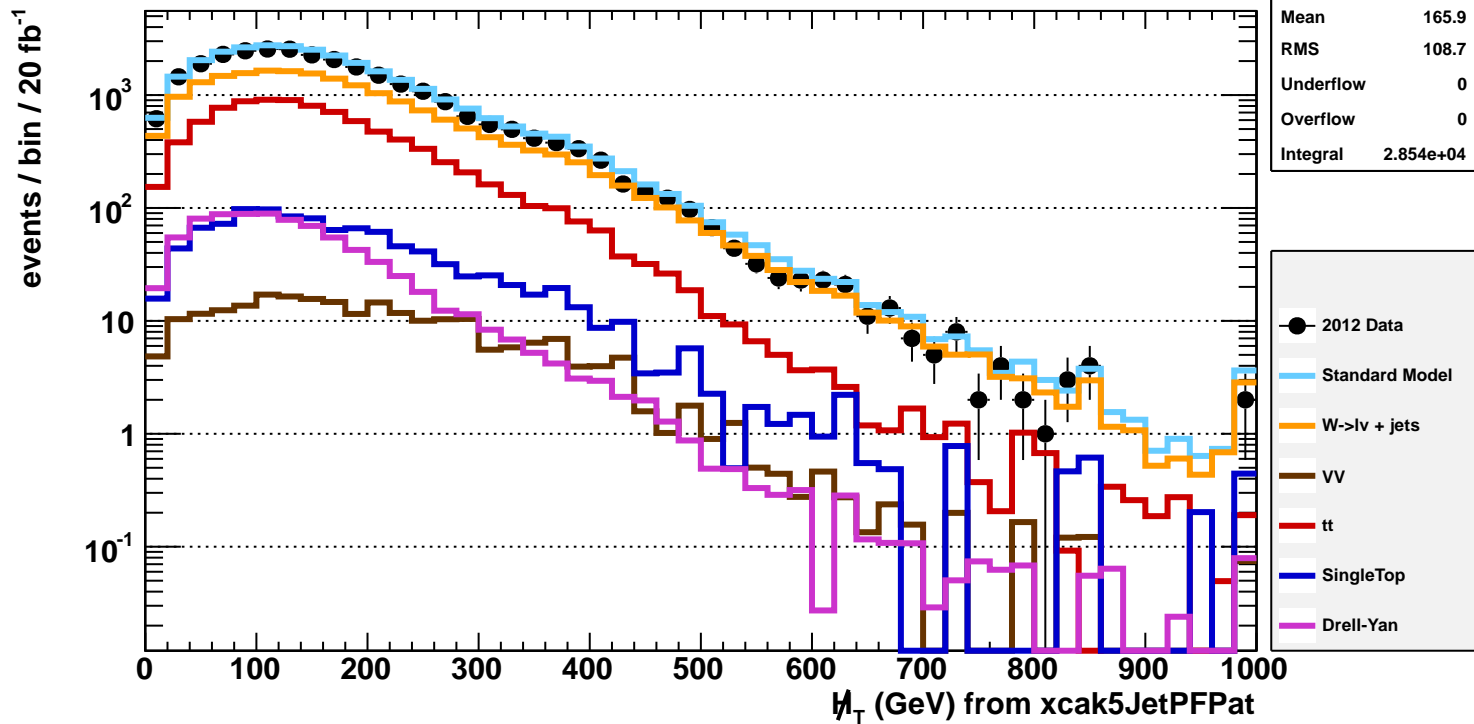


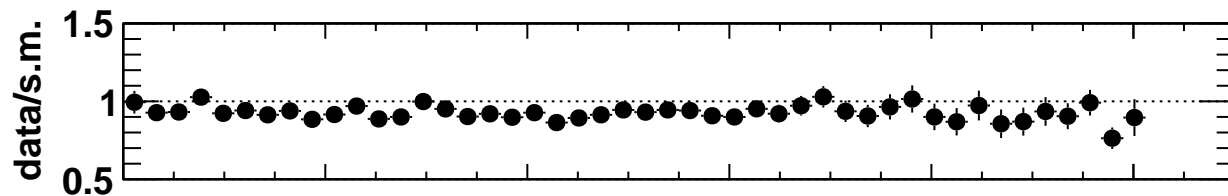
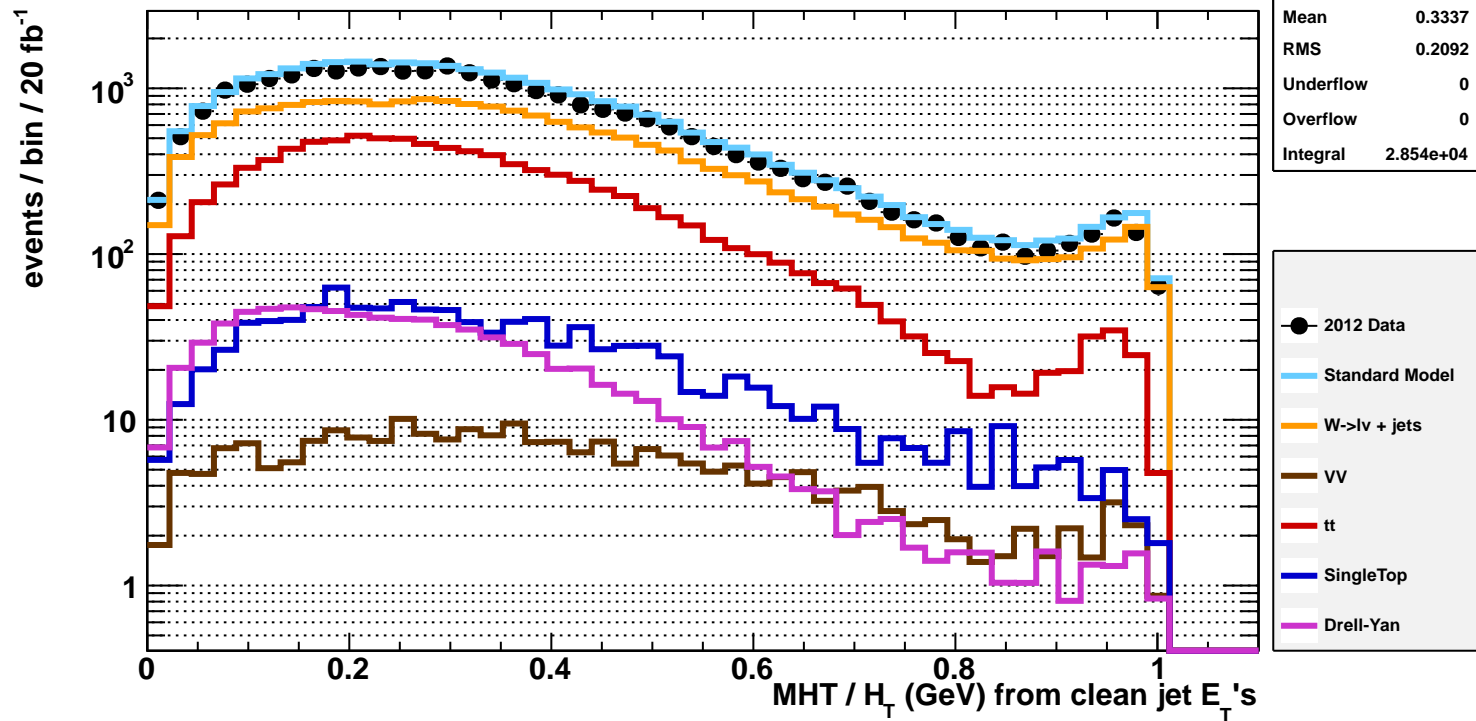


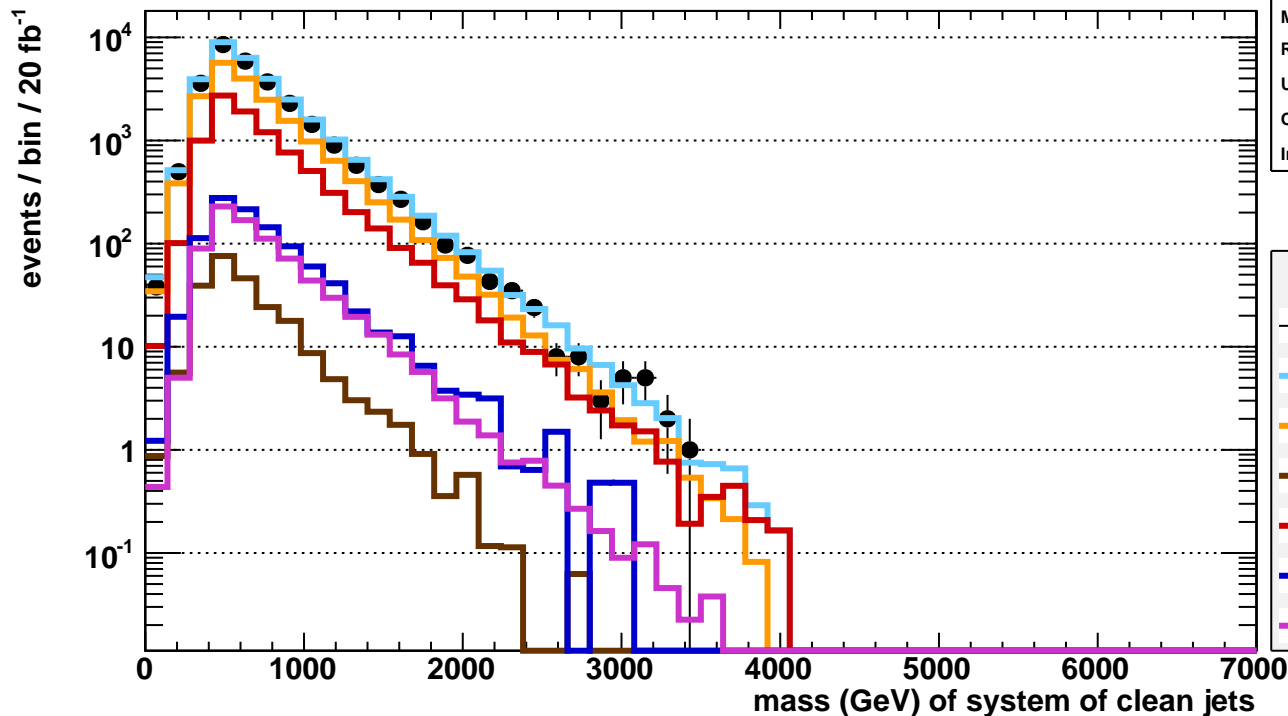




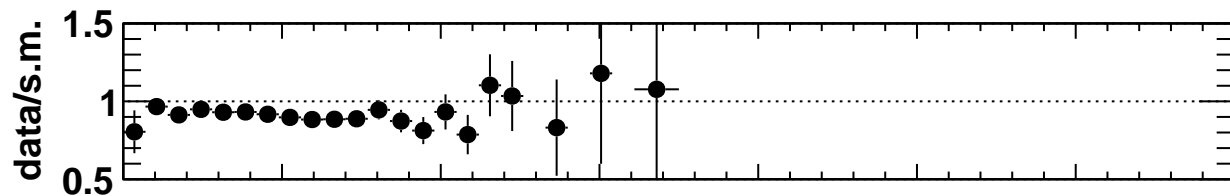
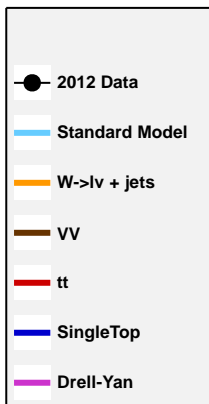


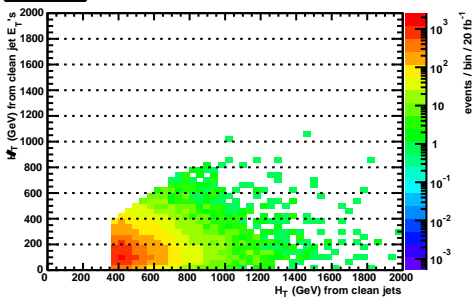
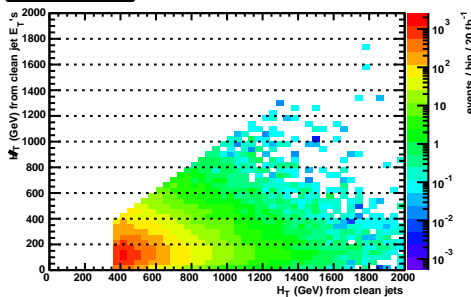
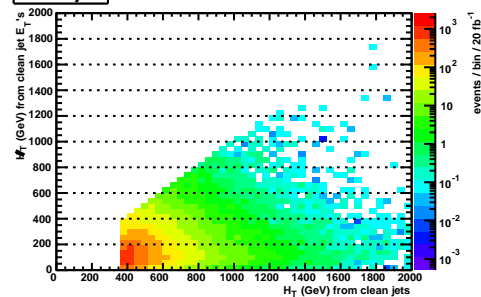
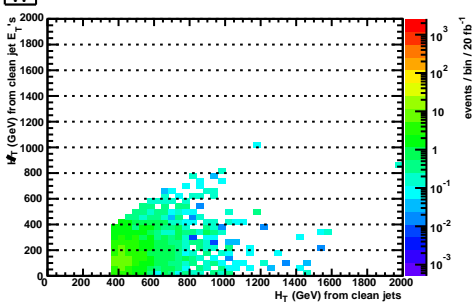
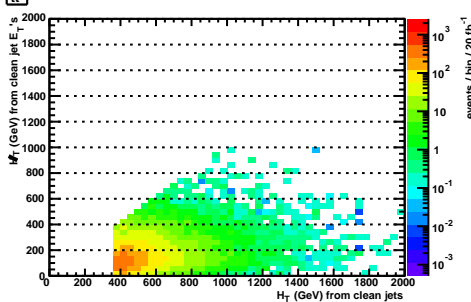
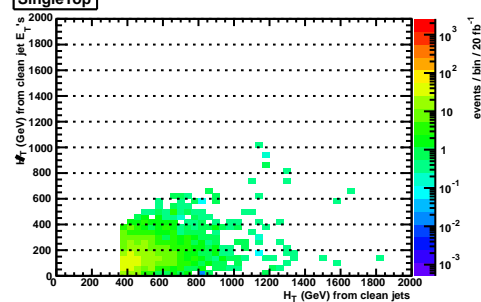
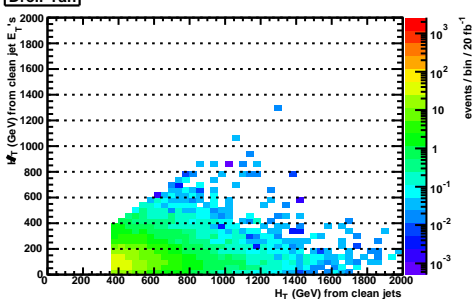


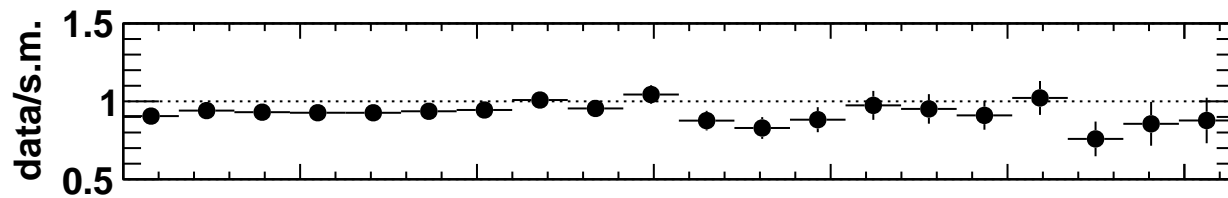
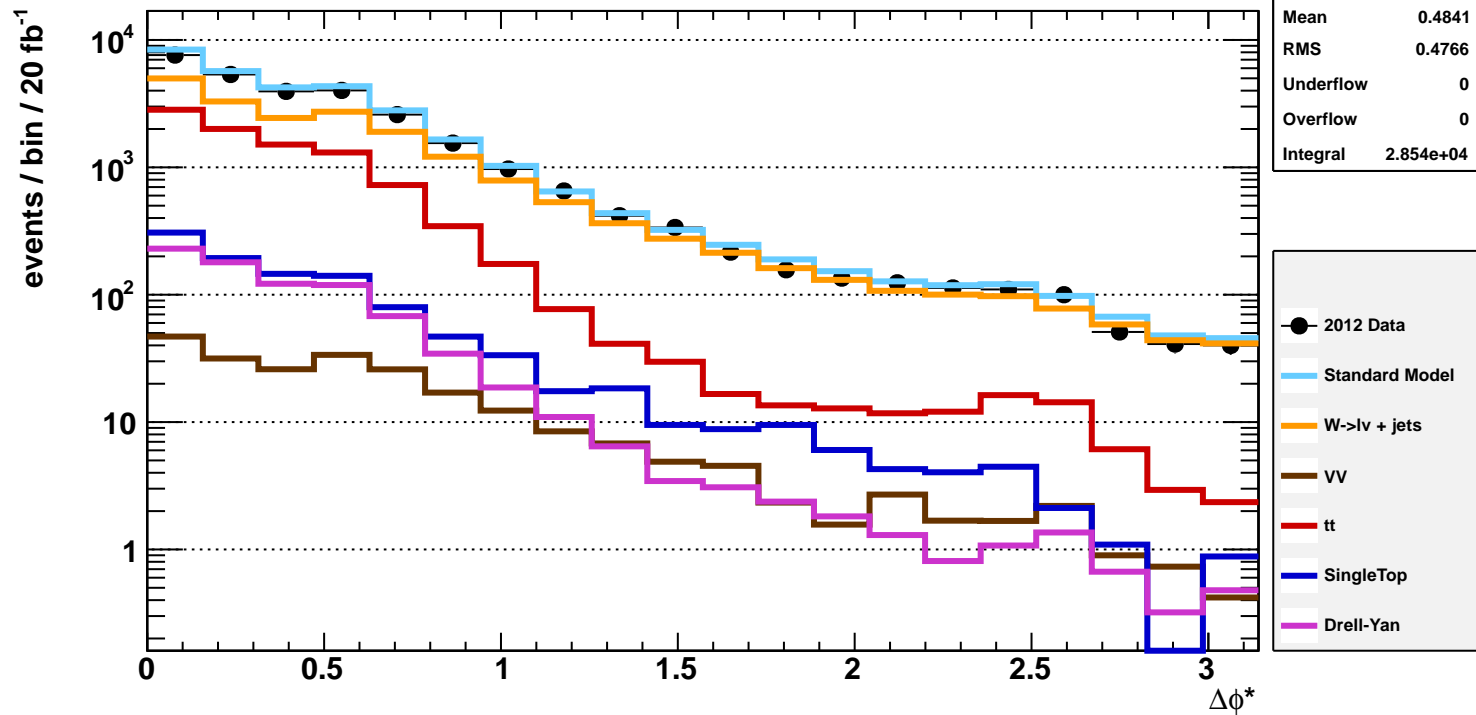


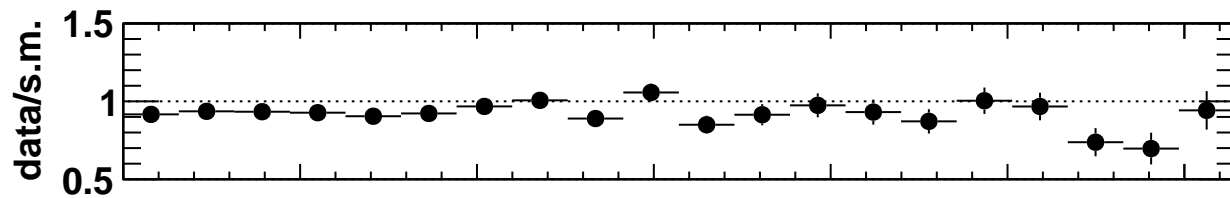
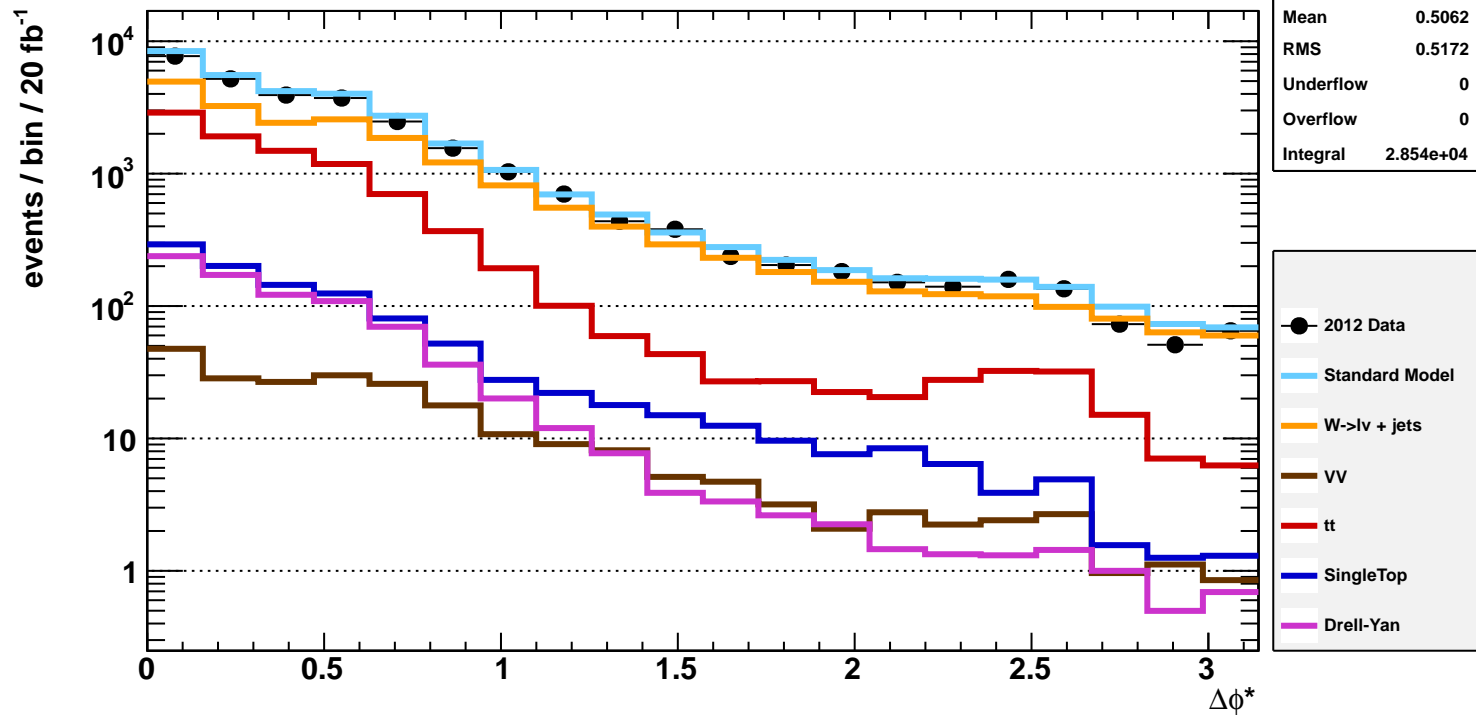


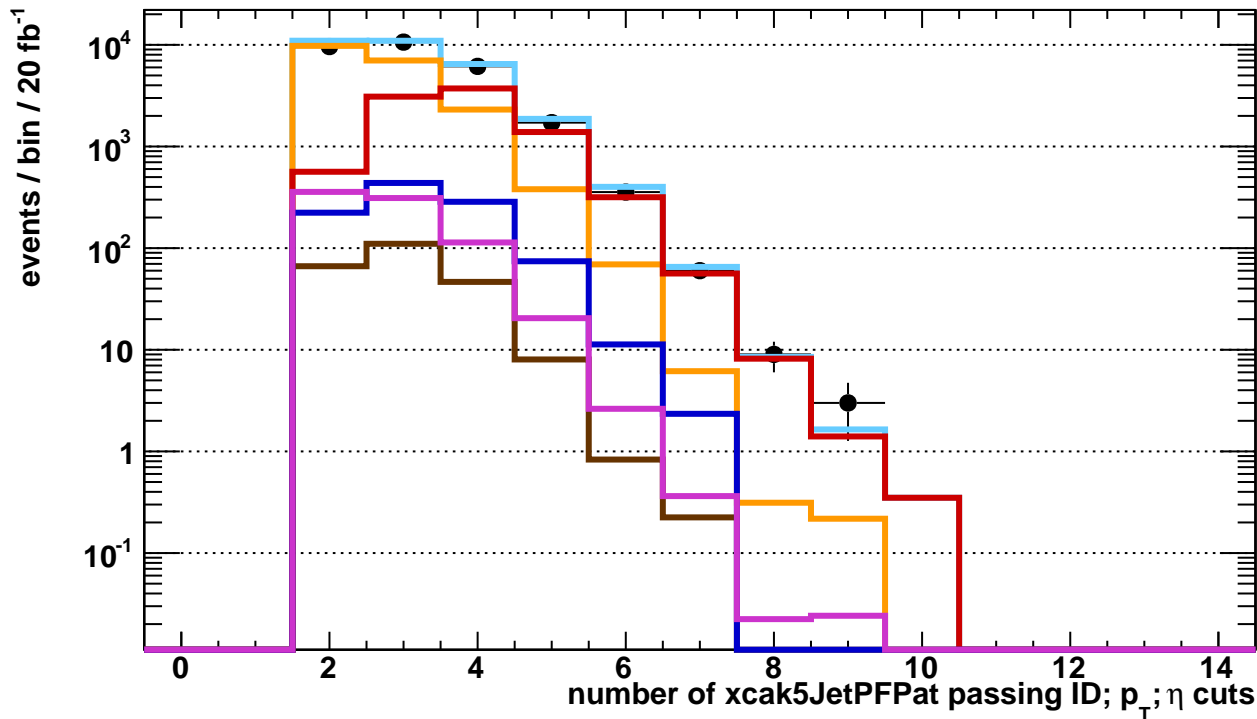
xcak5JetPFmPat	
Entries	28544
Mean	681.7
RMS	322
Underflow	0
Overflow	0
Integral	2.854e+04



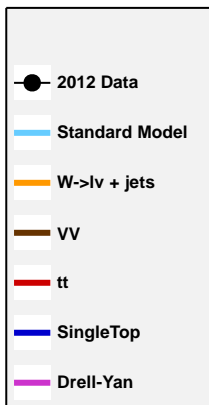
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**



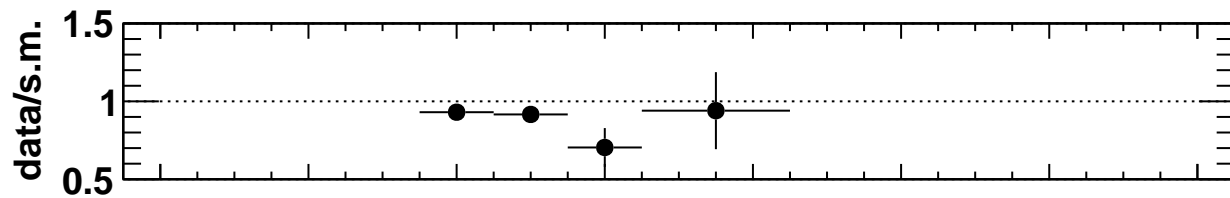
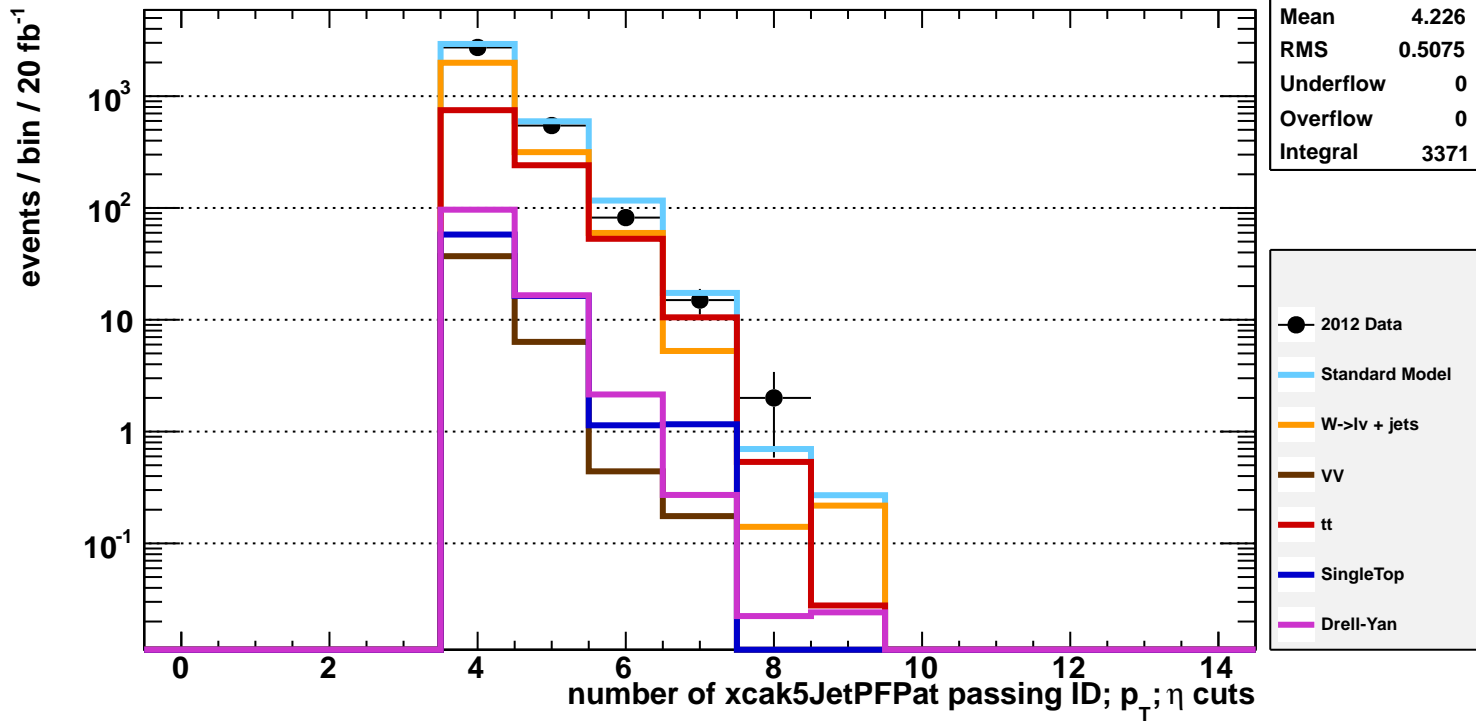


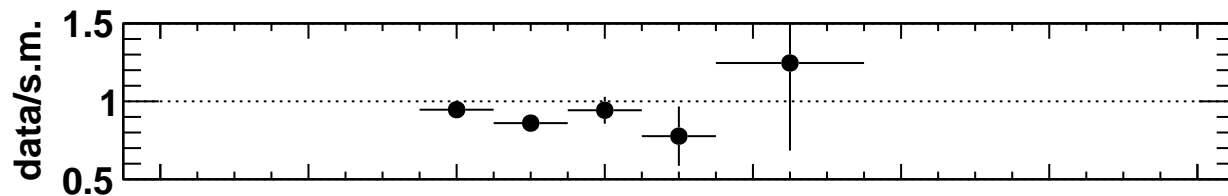
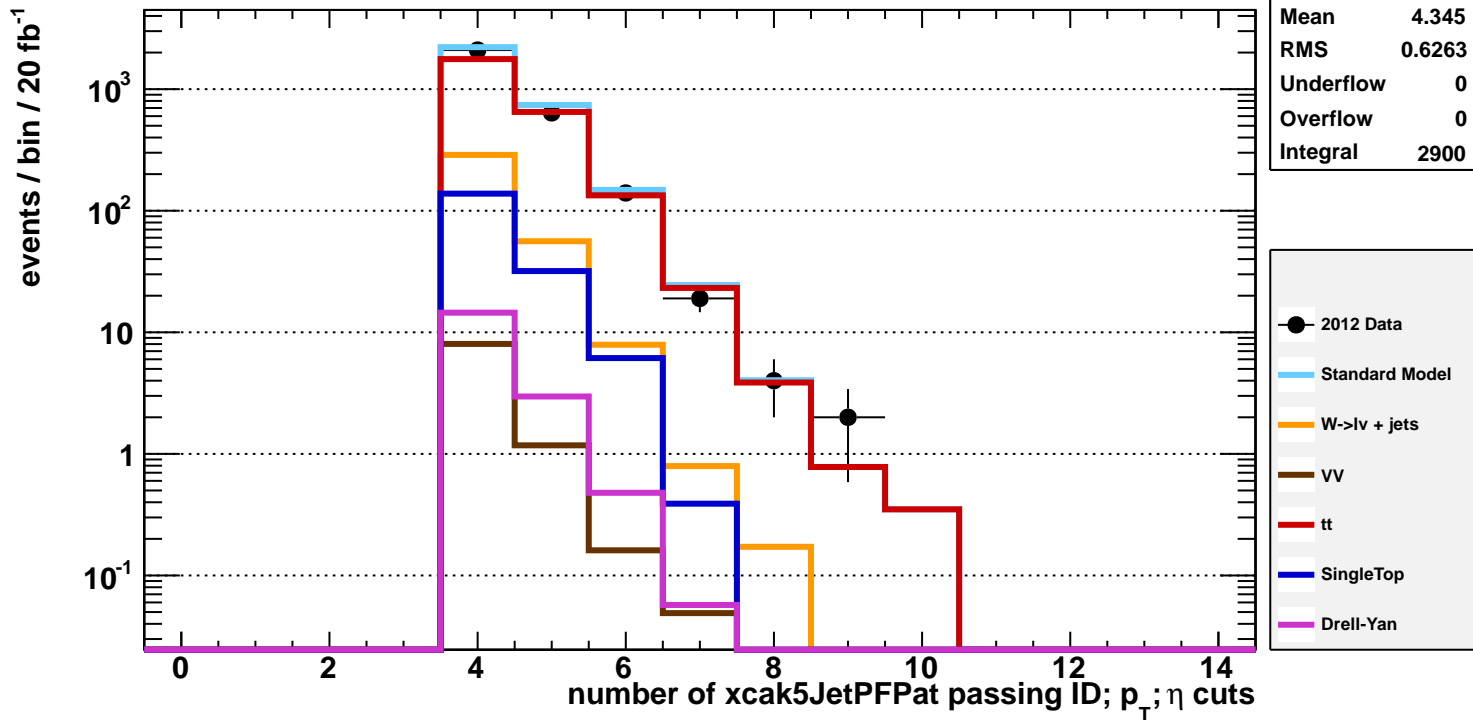


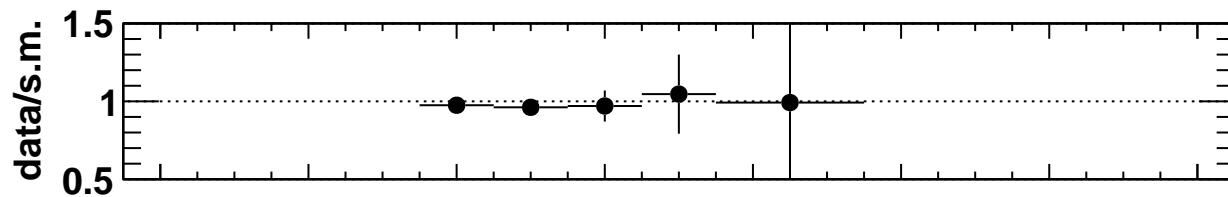
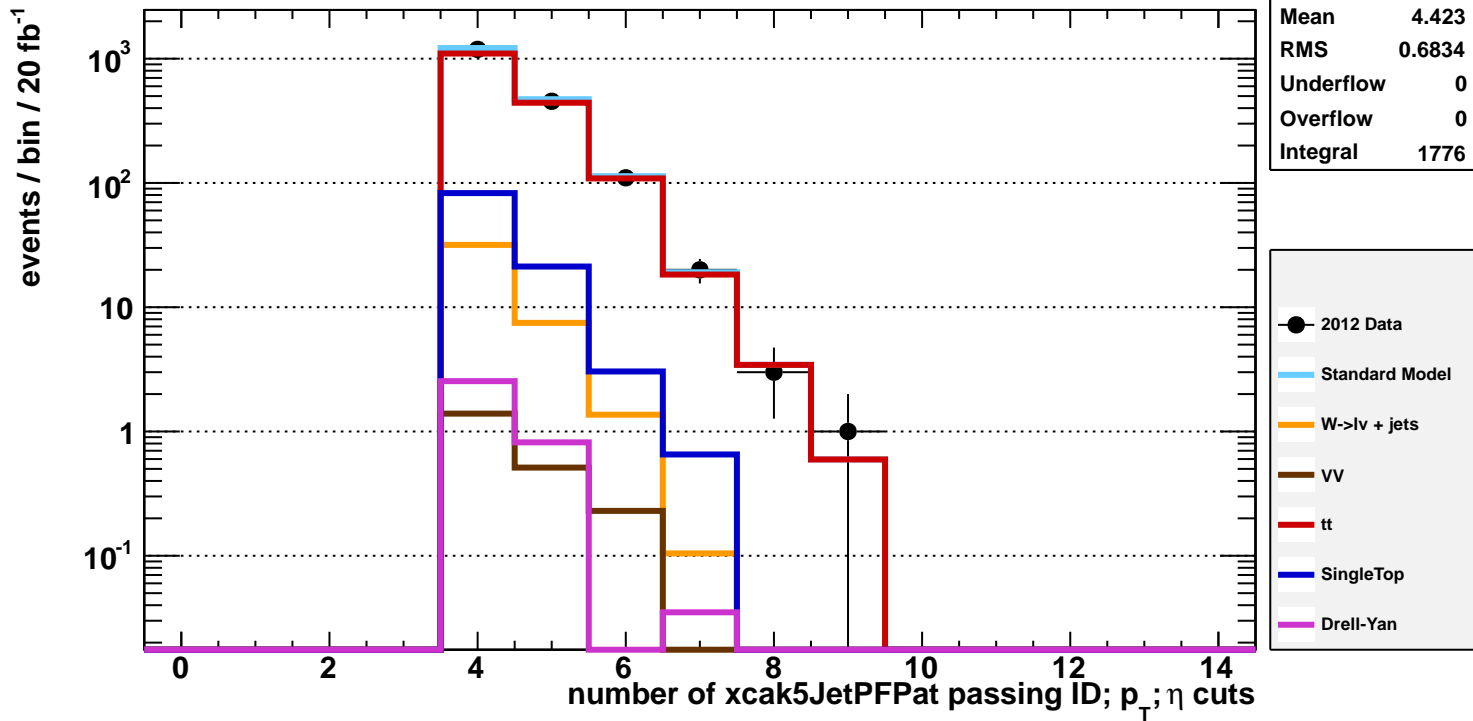
xcak5JetPFPIndicesPat	
Entries	28544
Mean	3.047
RMS	0.9737
Underflow	0
Overflow	0
Integral	2.854e+04

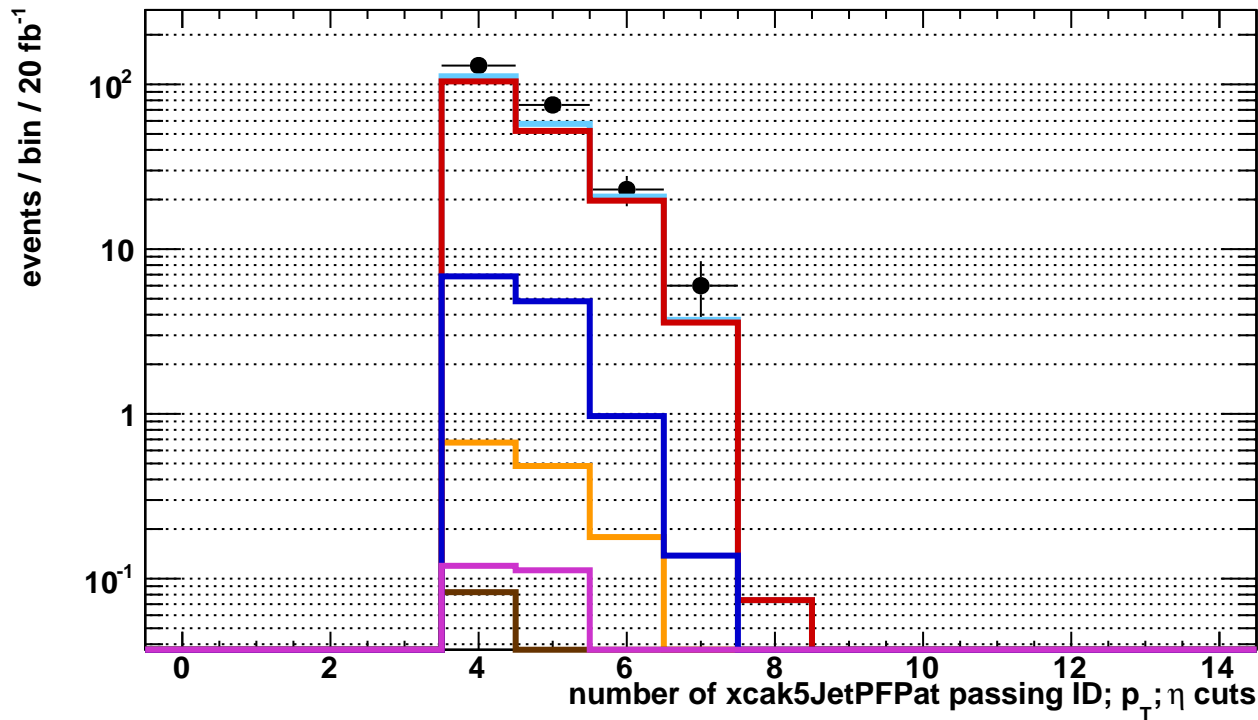




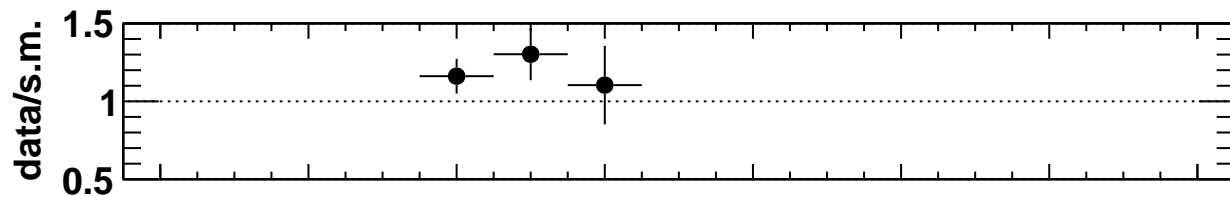
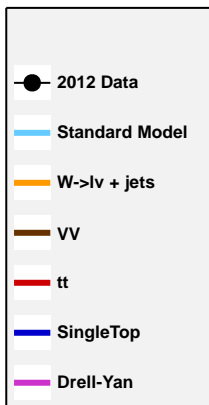


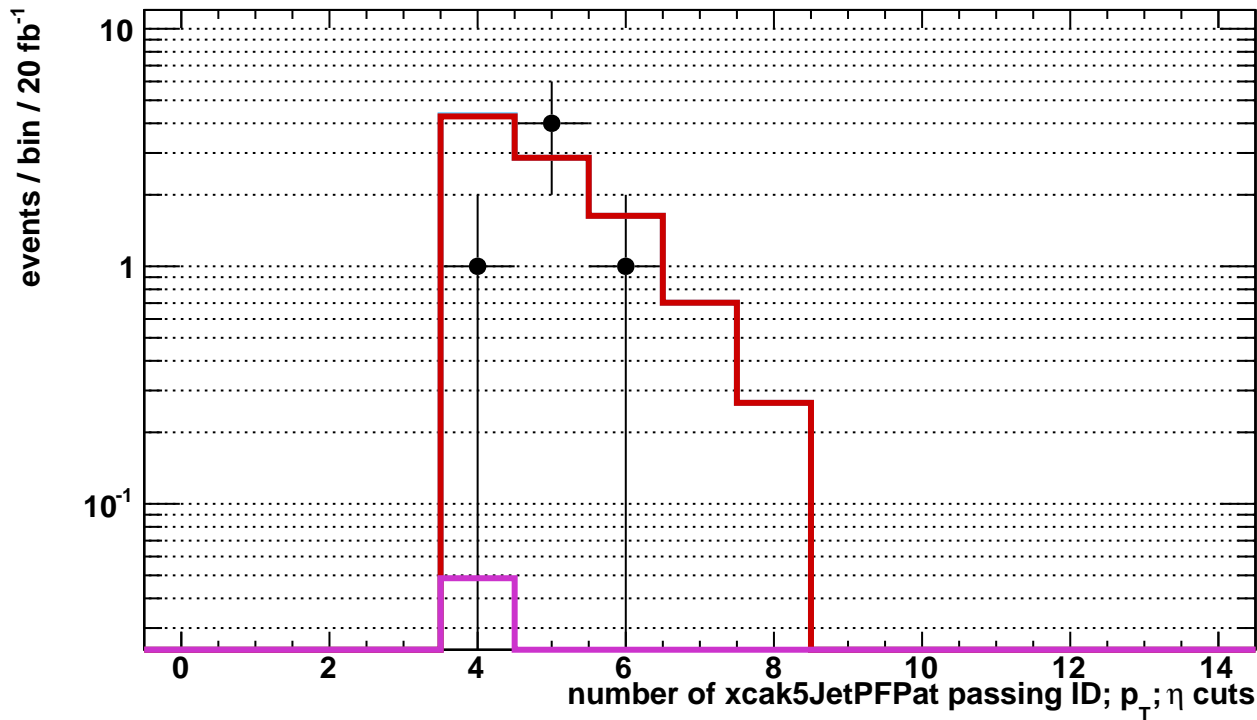




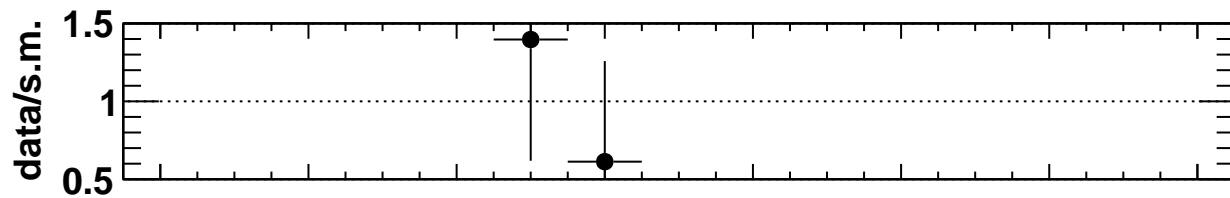
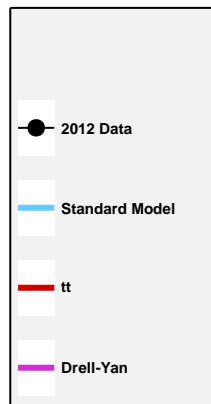


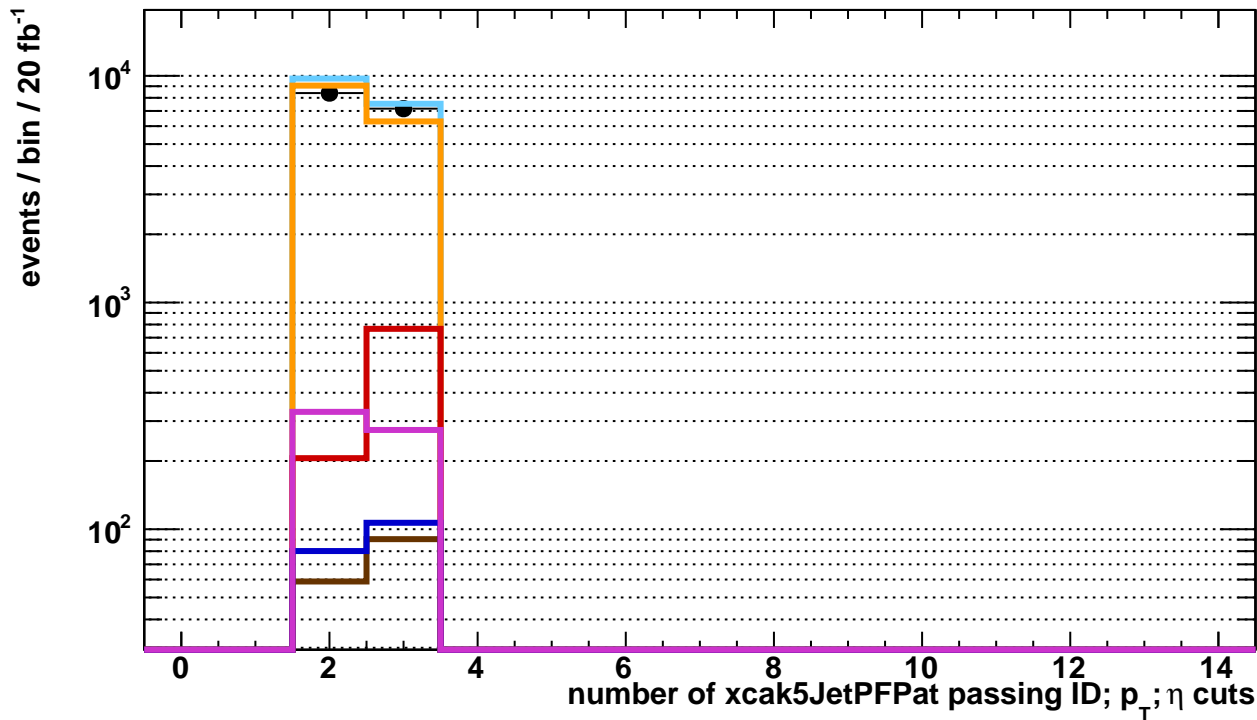
xcak5JetPFPIndicesPat_ge4j_eq3b	
Entries	234
Mean	4.594
RMS	0.7691
Underflow	0
Overflow	0
Integral	234



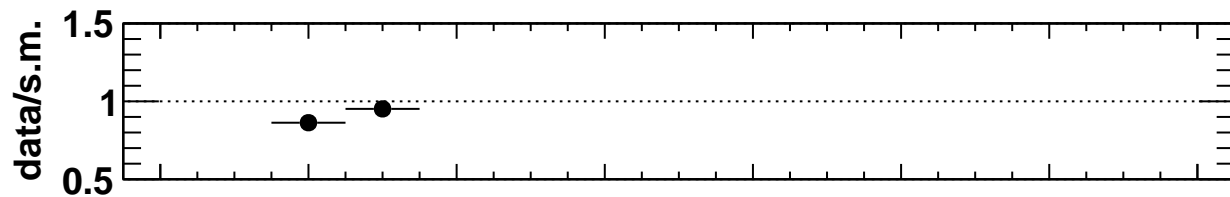
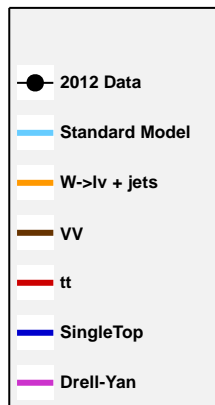


xcak5JetPFPIndicesPat_ge4j_ge4b	
Entries	6
Mean	5
RMS	0.5774
Underflow	0
Overflow	0
Integral	6

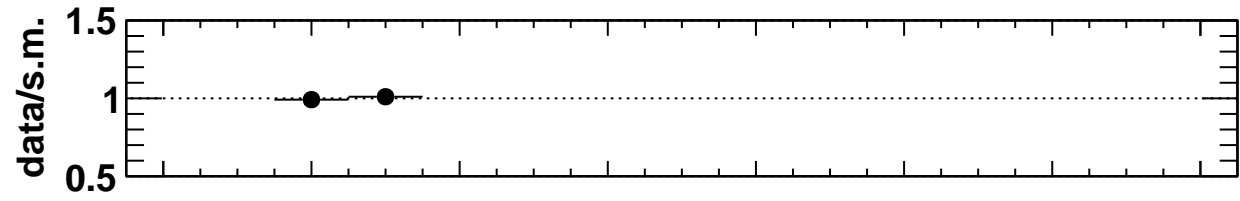
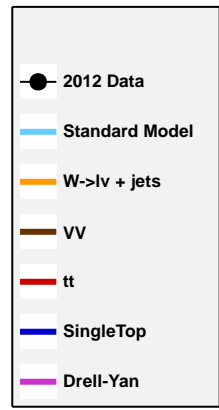
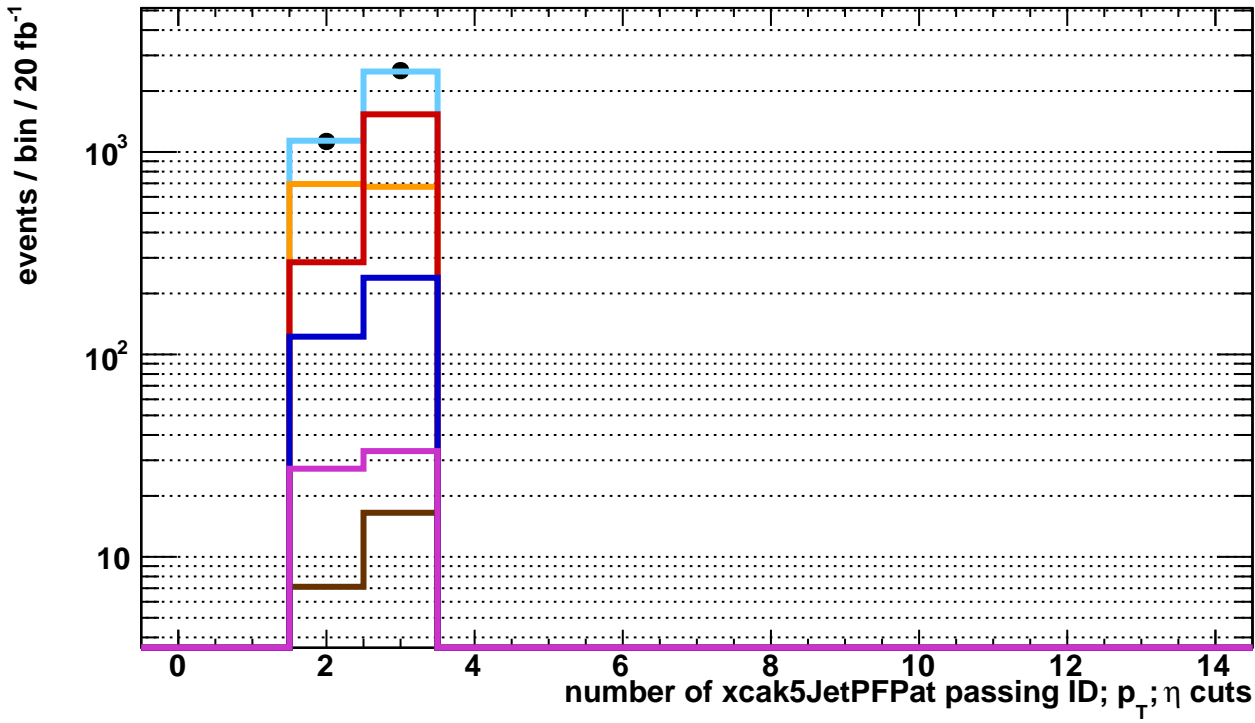




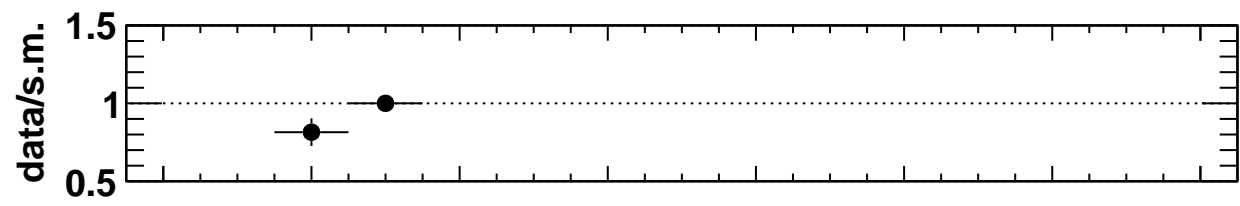
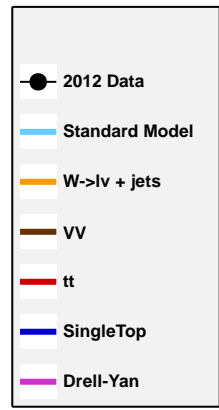
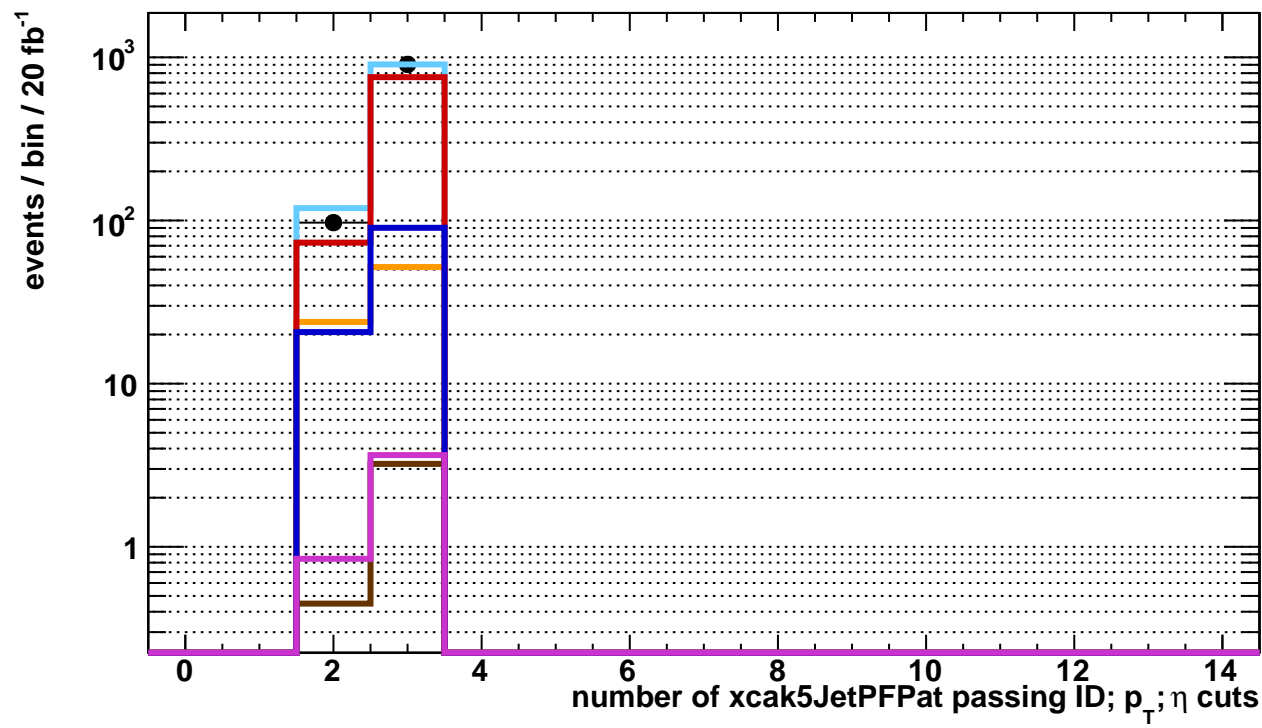
xcak5JetPFPIndicesPat_le3j_eq0b	
Entries	15561
Mean	2.461
RMS	0.4984
Underflow	0
Overflow	0
Integral	1.556e+04



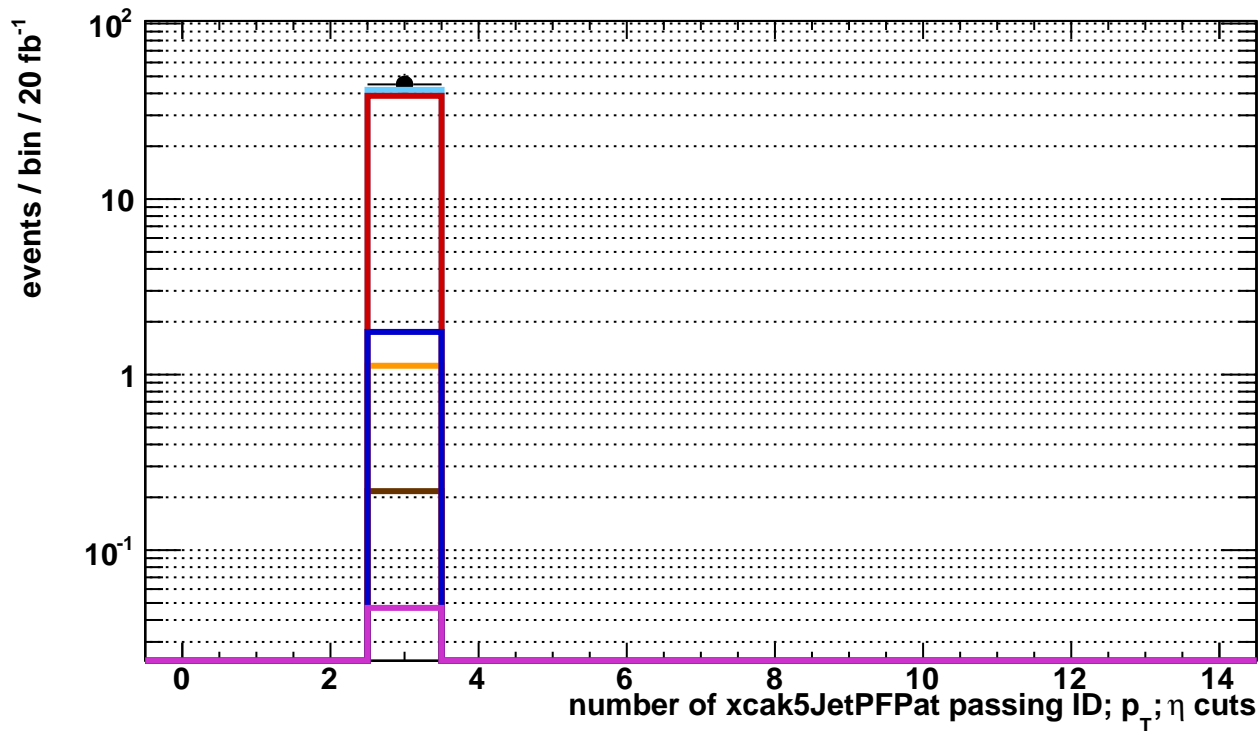
xcak5JetPFIndicesPat_le3j_eq1b	
Entries	3649
Mean	2.691
RMS	0.462
Underflow	0
Overflow	0
Integral	3649



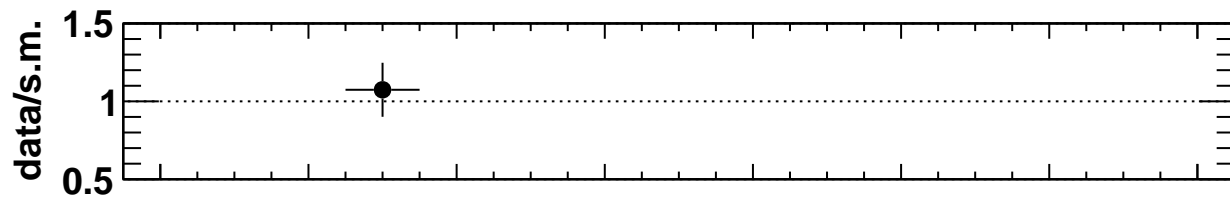
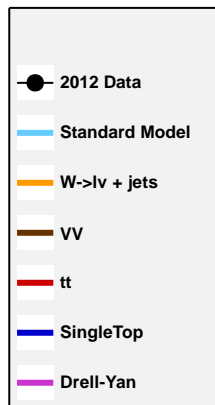
xcak5JetPFPIndicesPat_le3j_eq2b	
Entries	1002
Mean	2.903
RMS	0.2957
Underflow	0
Overflow	0
Integral	1002

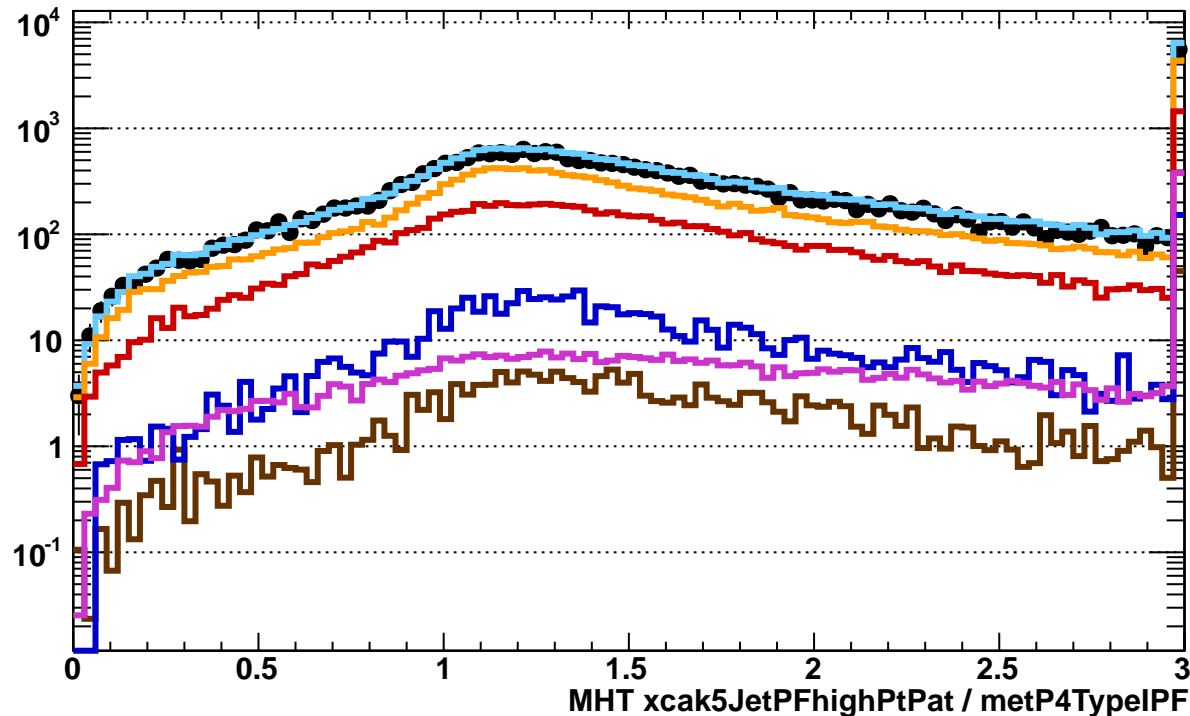




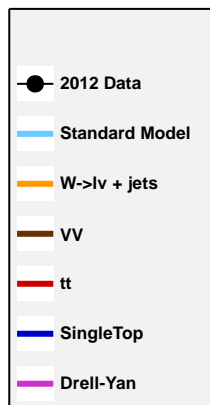


Entries	45
Mean	3
RMS	0
Underflow	0
Overflow	0
Integral	45

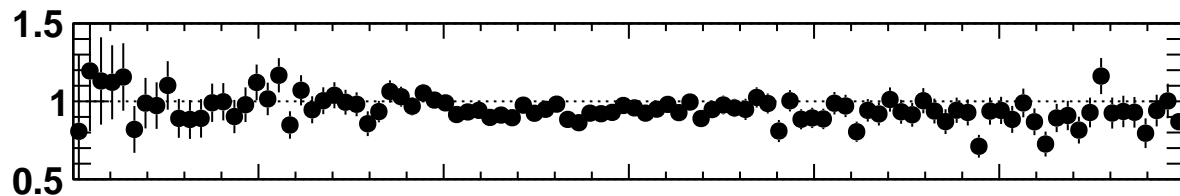


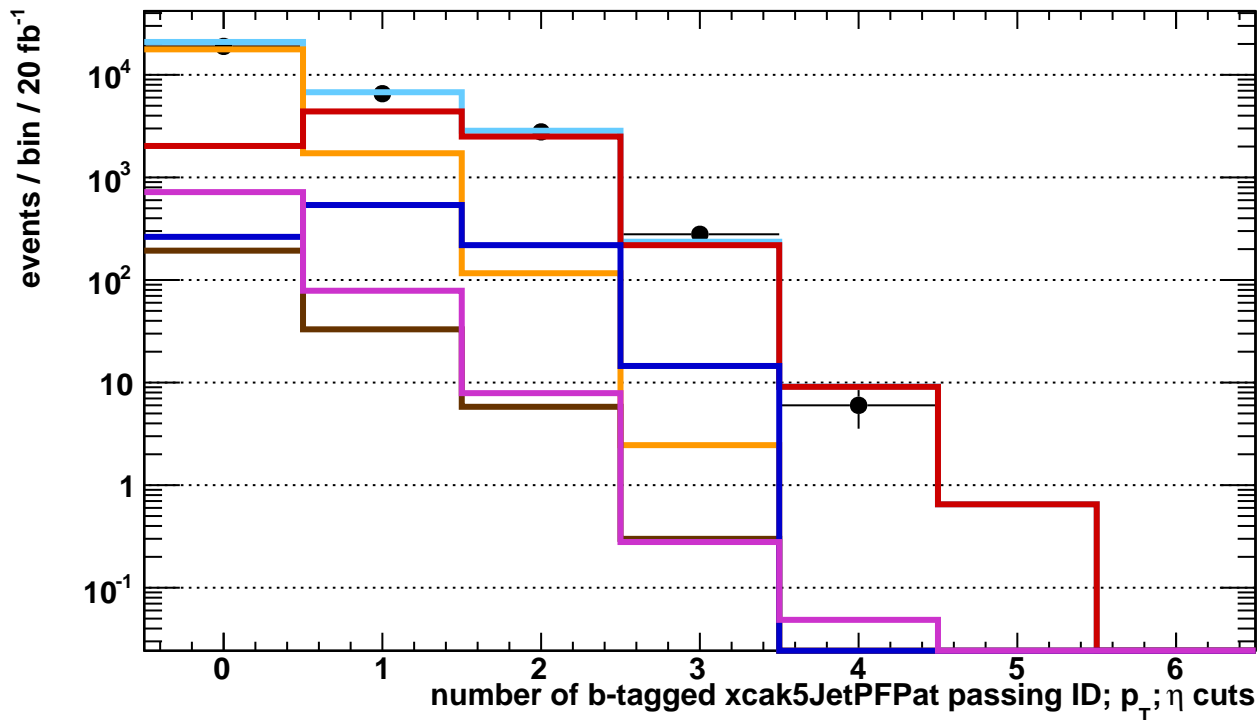
events / bin / 20 fb<sup>-1</sup>

xcak5JetPFhighPtPatOvermetP4TypePF	
Entries	28544
Mean	1.77
RMS	0.7983
Underflow	0
Overflow	0
Integral	2.854e+04

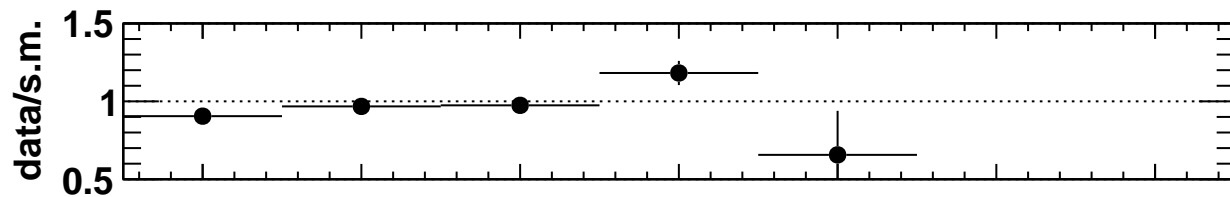
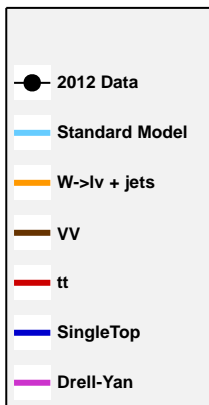


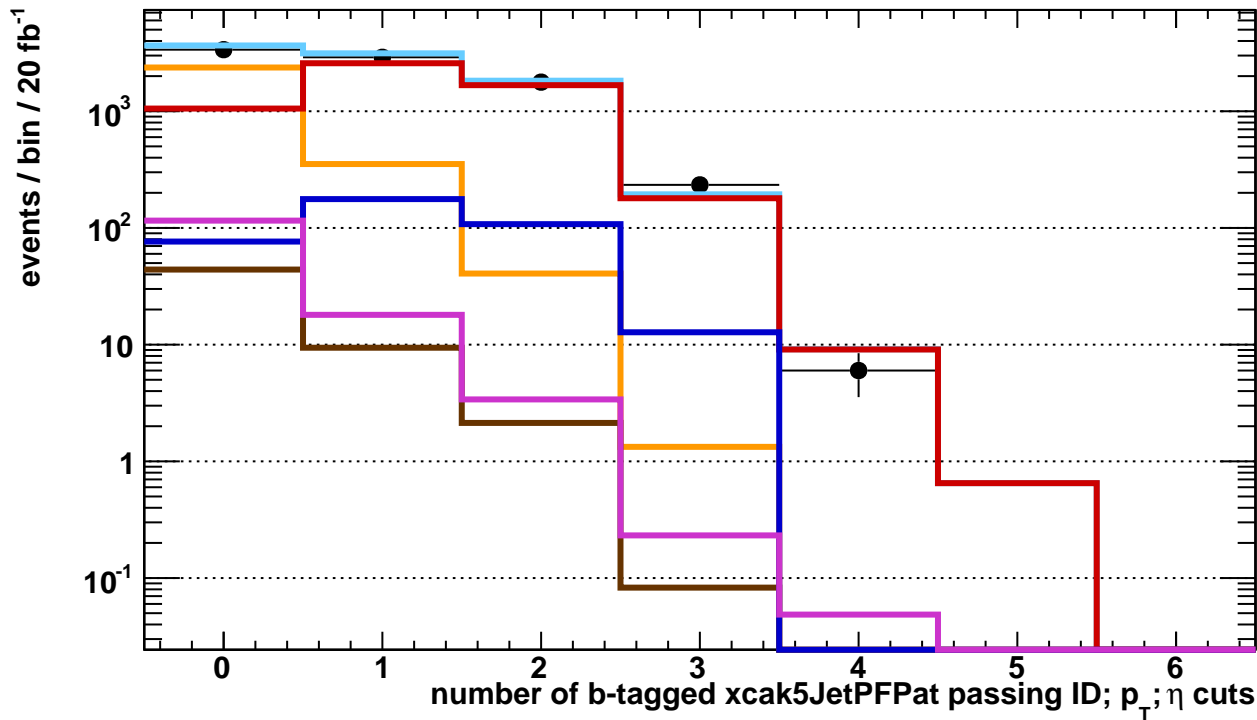
data/s.m.



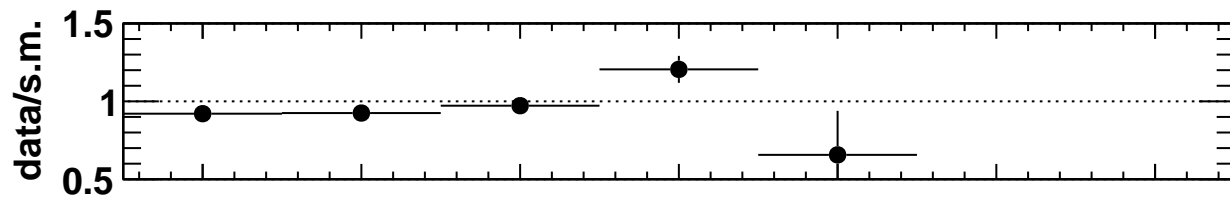
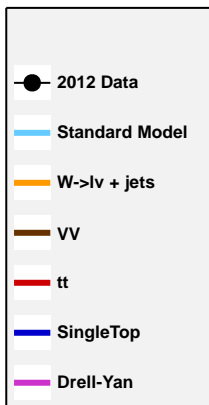


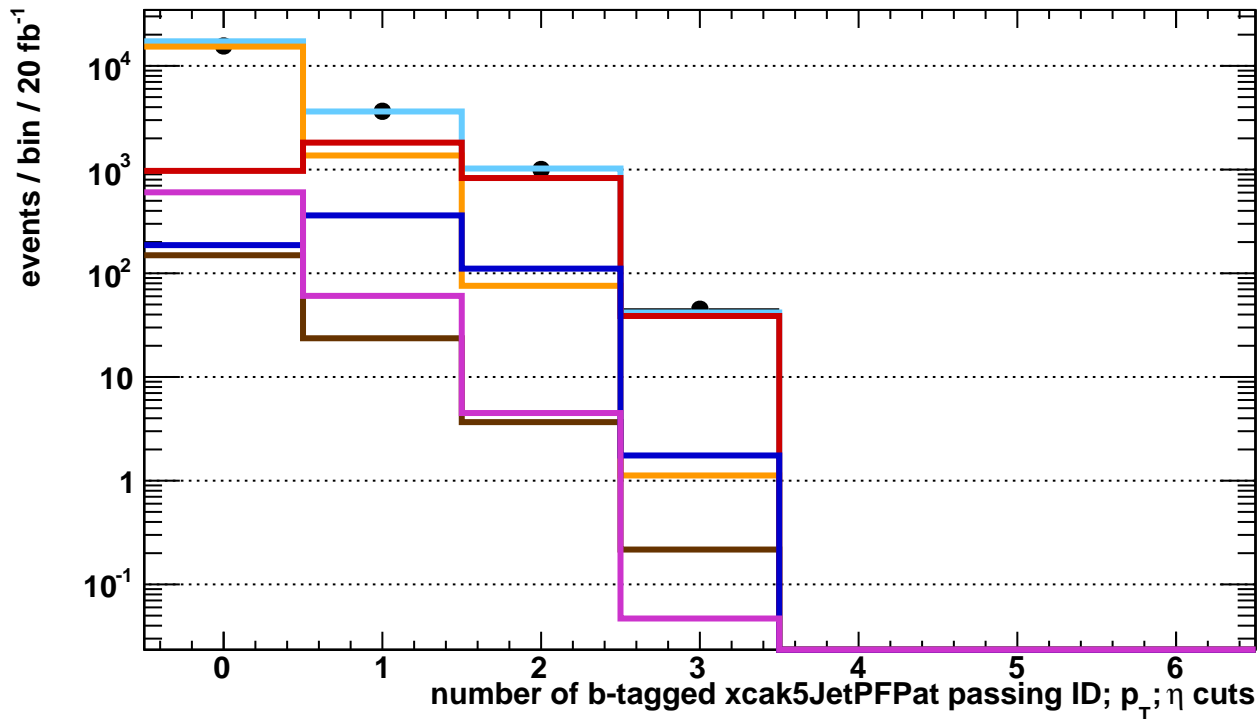
xcak5JetPFPIndicesBtagged2Pat	
Entries	28544
Mean	0.4542
RMS	0.7097
Underflow	0
Overflow	0
Integral	2.854e+04



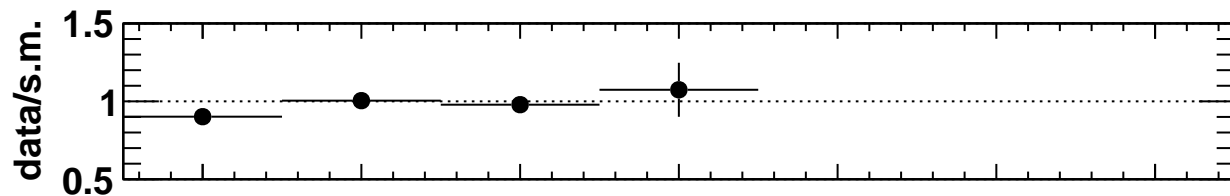


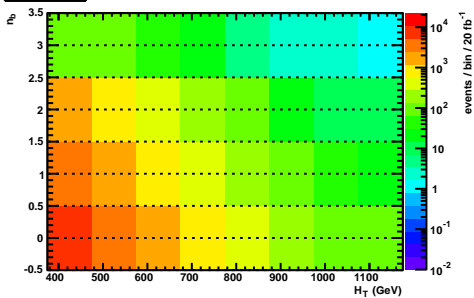
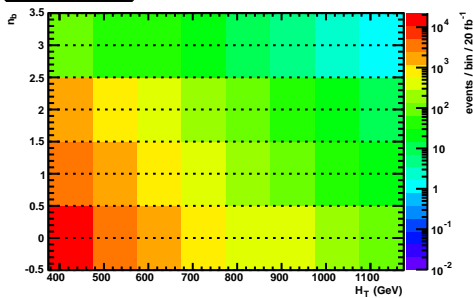
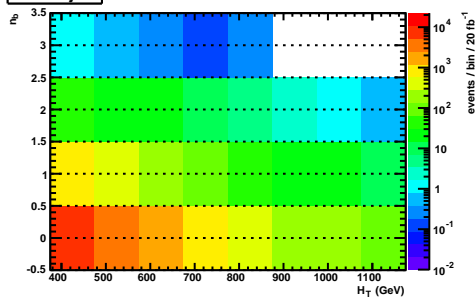
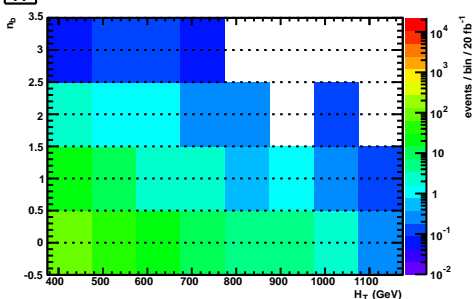
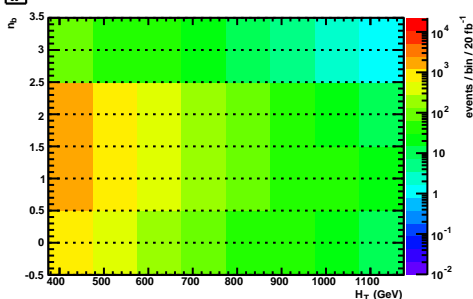
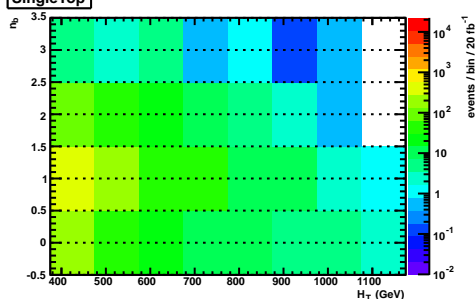
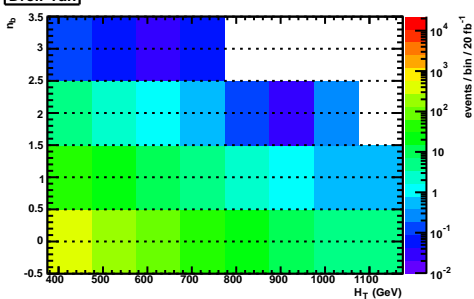
xcak5JetPFPIndicesBtagged2Pat_ge4J	
Entries	8287
Mean	0.8662
RMS	0.8501
Underflow	0
Overflow	0
Integral	8287

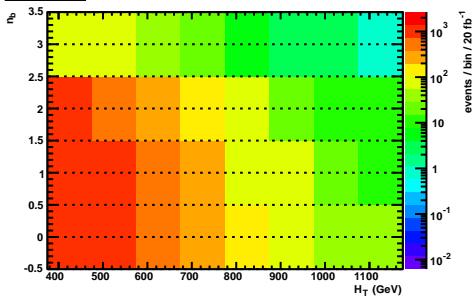
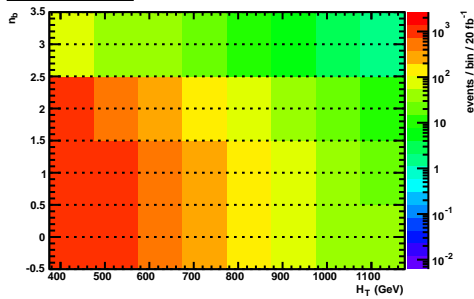
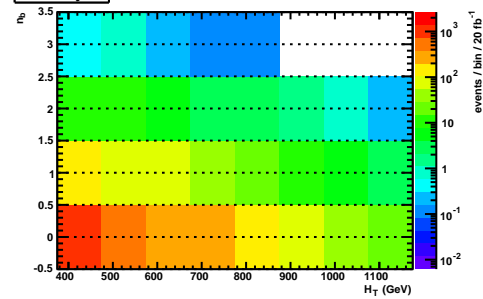
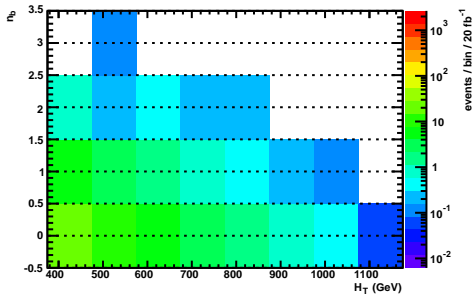
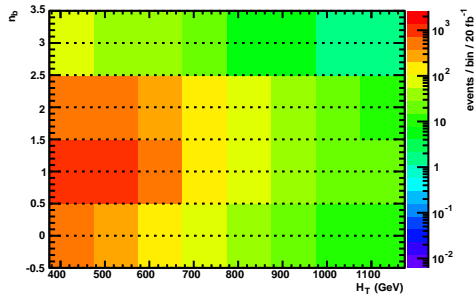
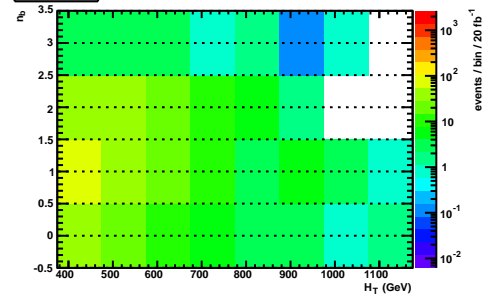
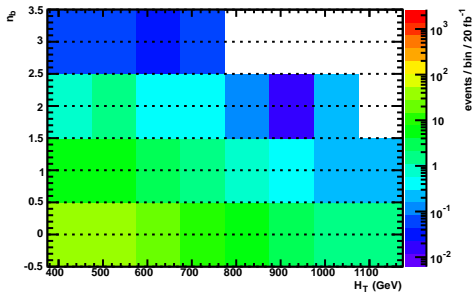


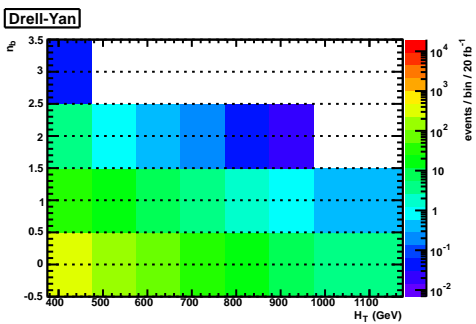
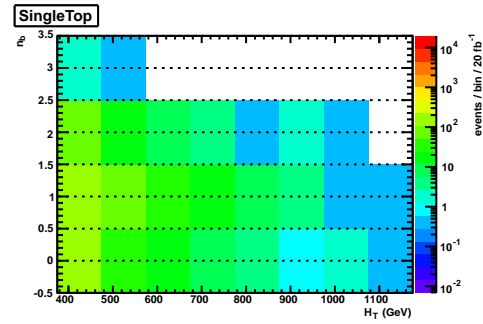
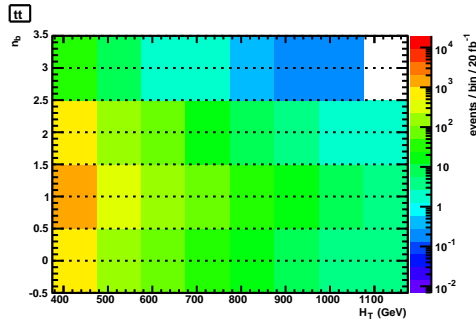
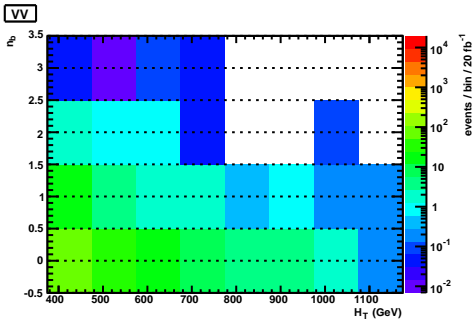
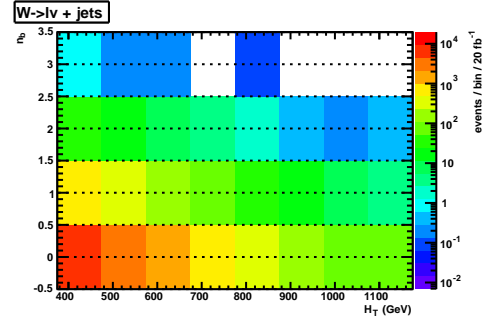
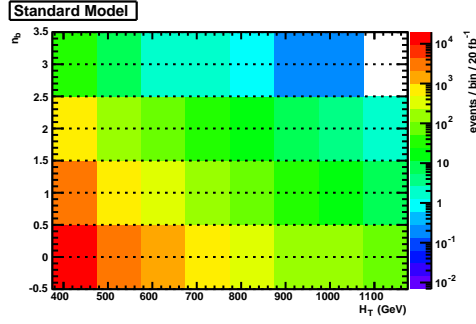
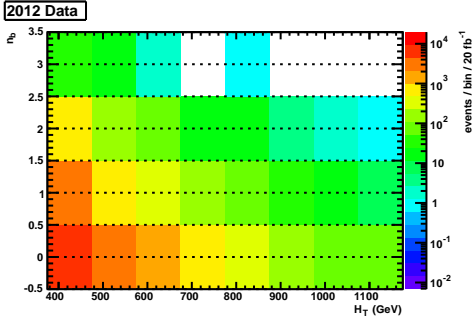


xcak5JetPFPIndicesBtagged2Pat_le3j	
Entries	20257
Mean	0.2857
RMS	0.5624
Underflow	0
Overflow	0
Integral	2.026e+04

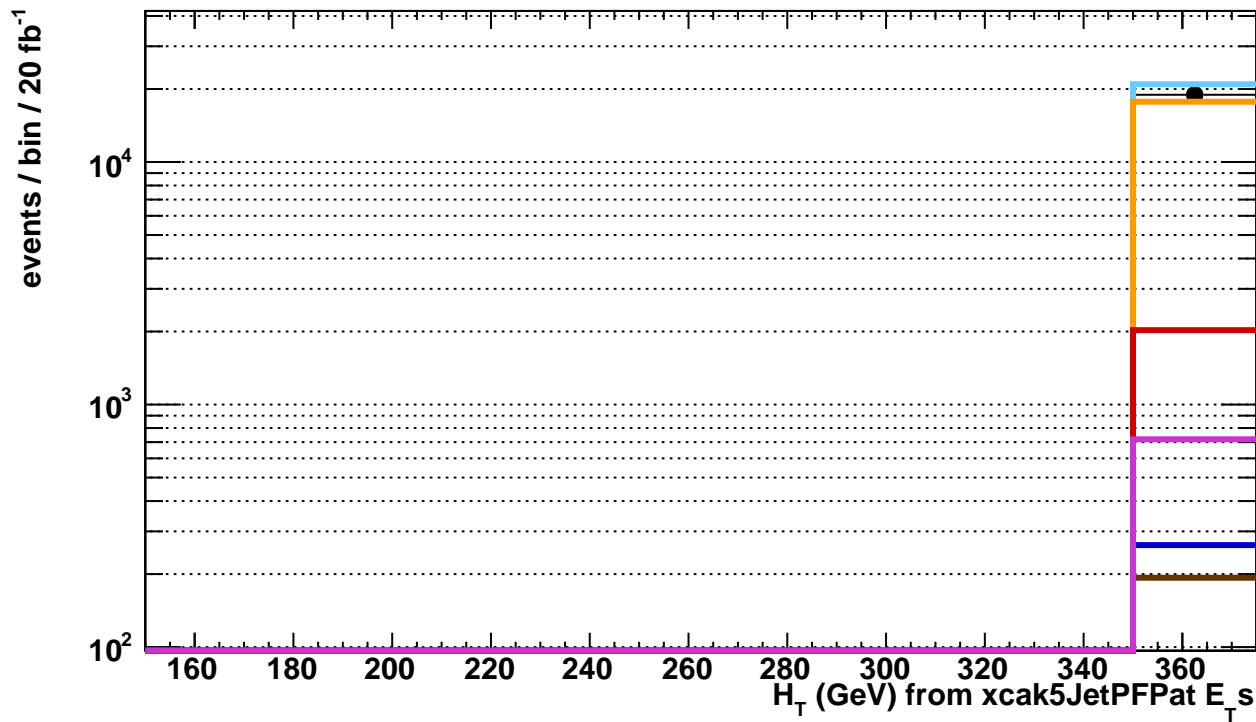


**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

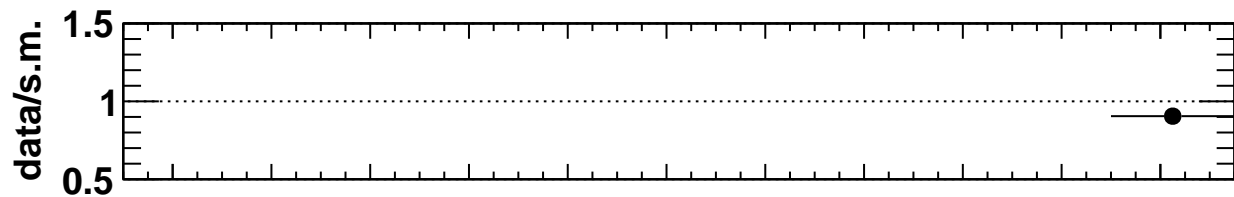
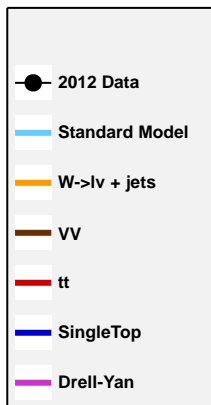
**2012 Data****Standard Model****W->lv + jets****VV****tt****SingleTop****Drell-Yan**

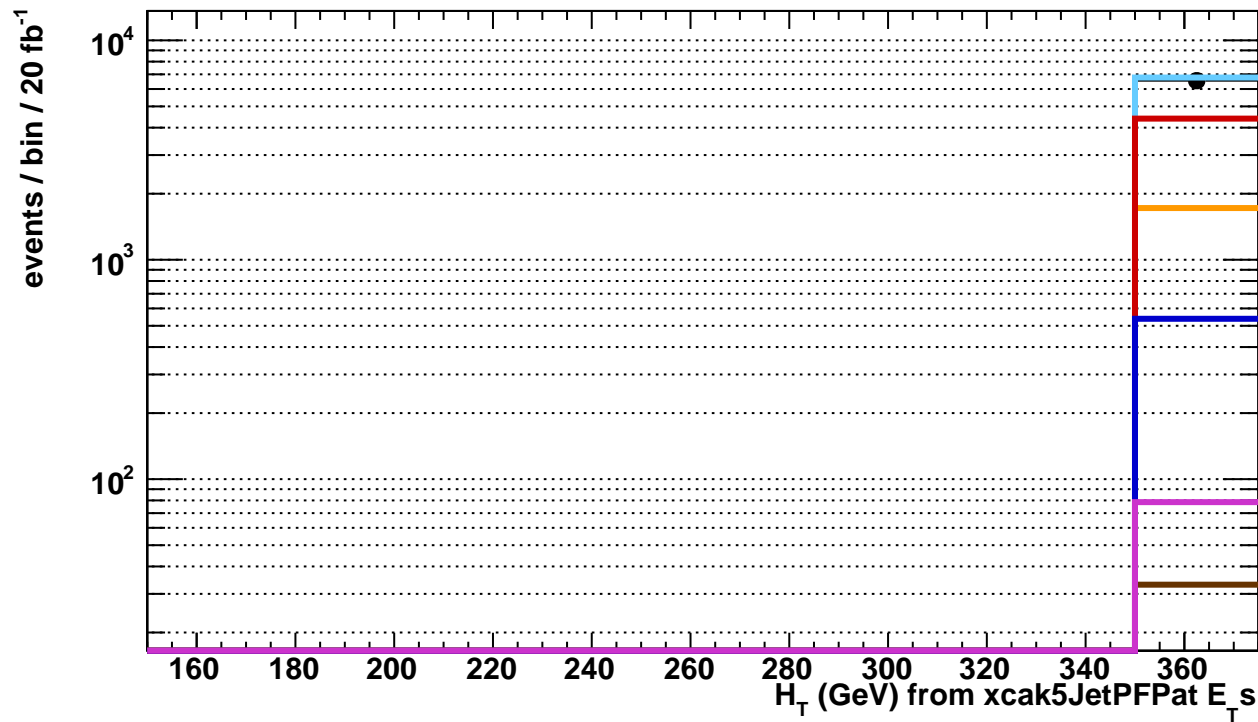




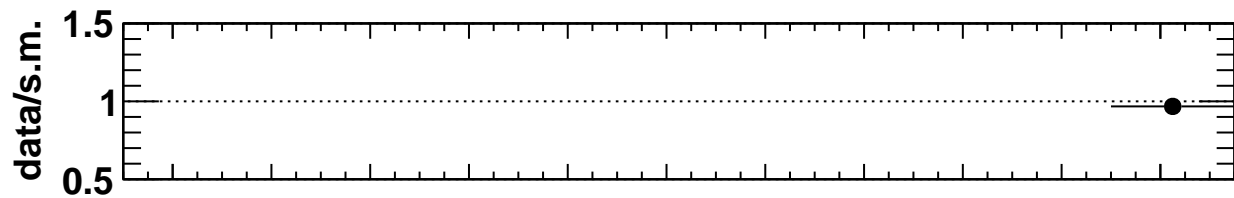
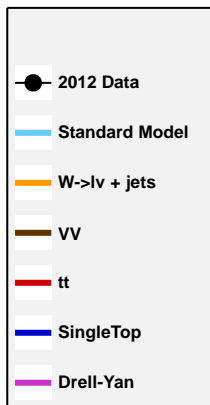


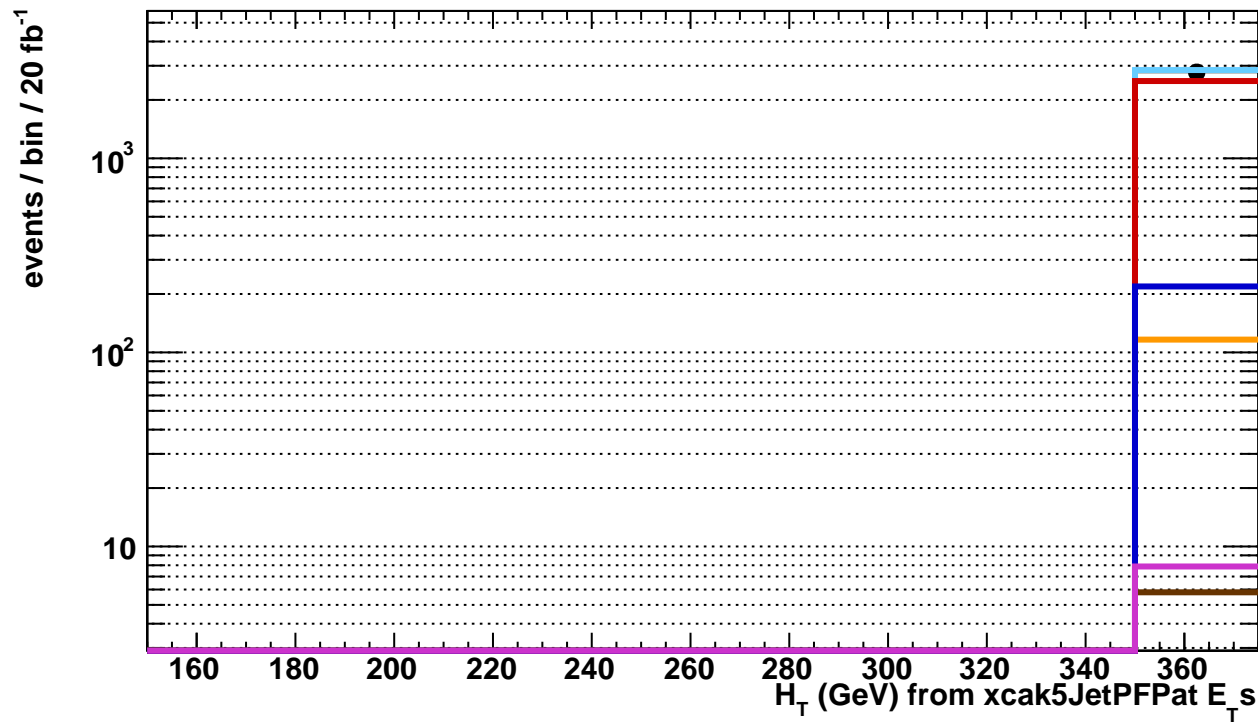
xcak5JetPFSumETPat_eq0b	
Entries	18932
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1.893e+04



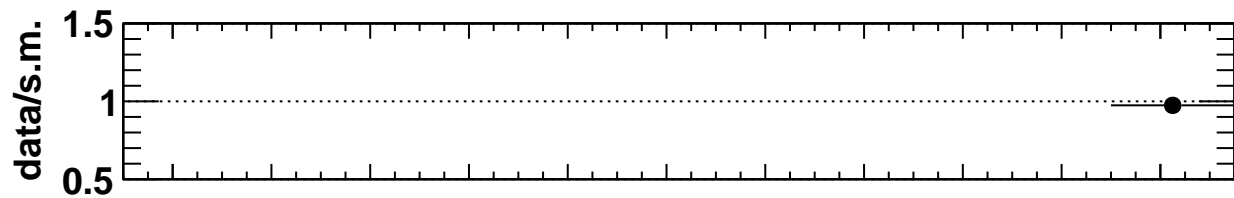
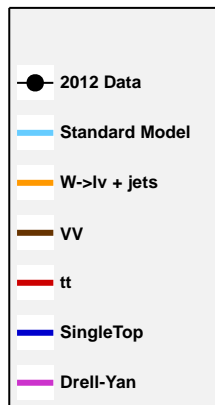


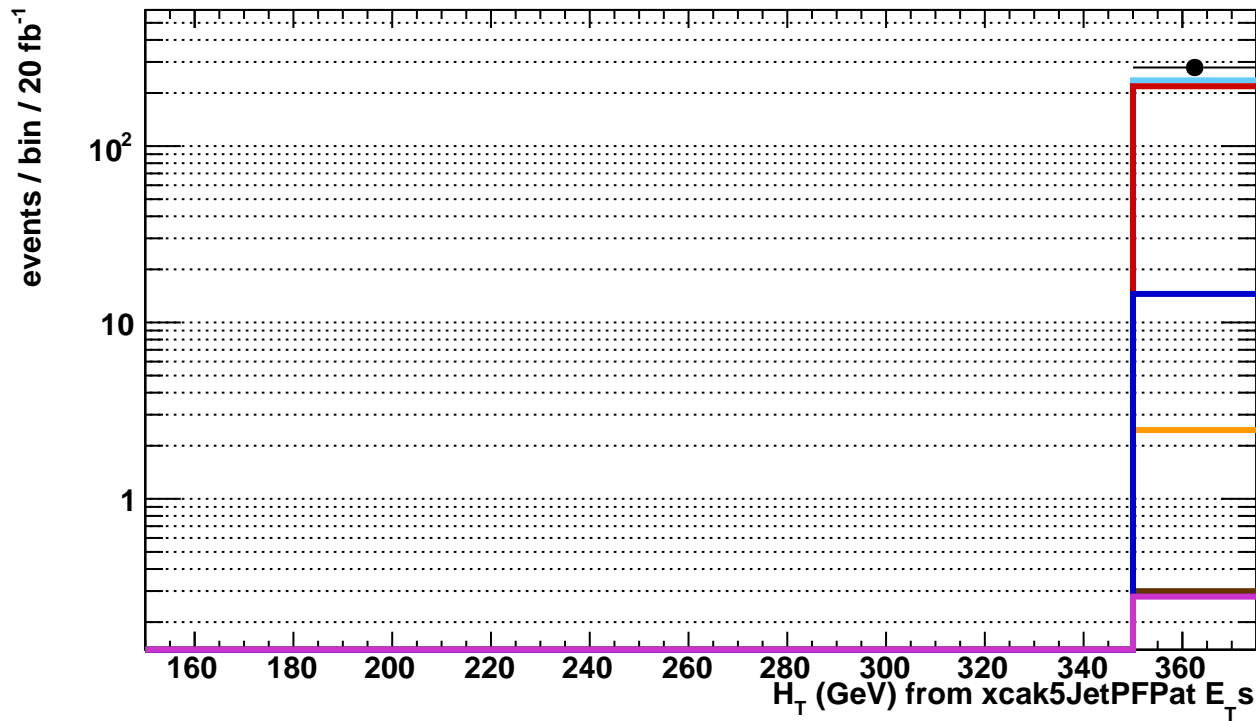
xcak5JetPFSumETPat_eq1b	
Entries	6549
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6549



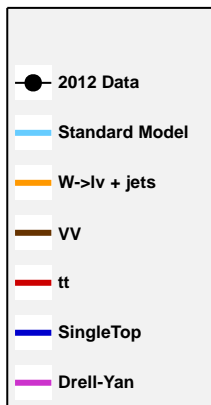


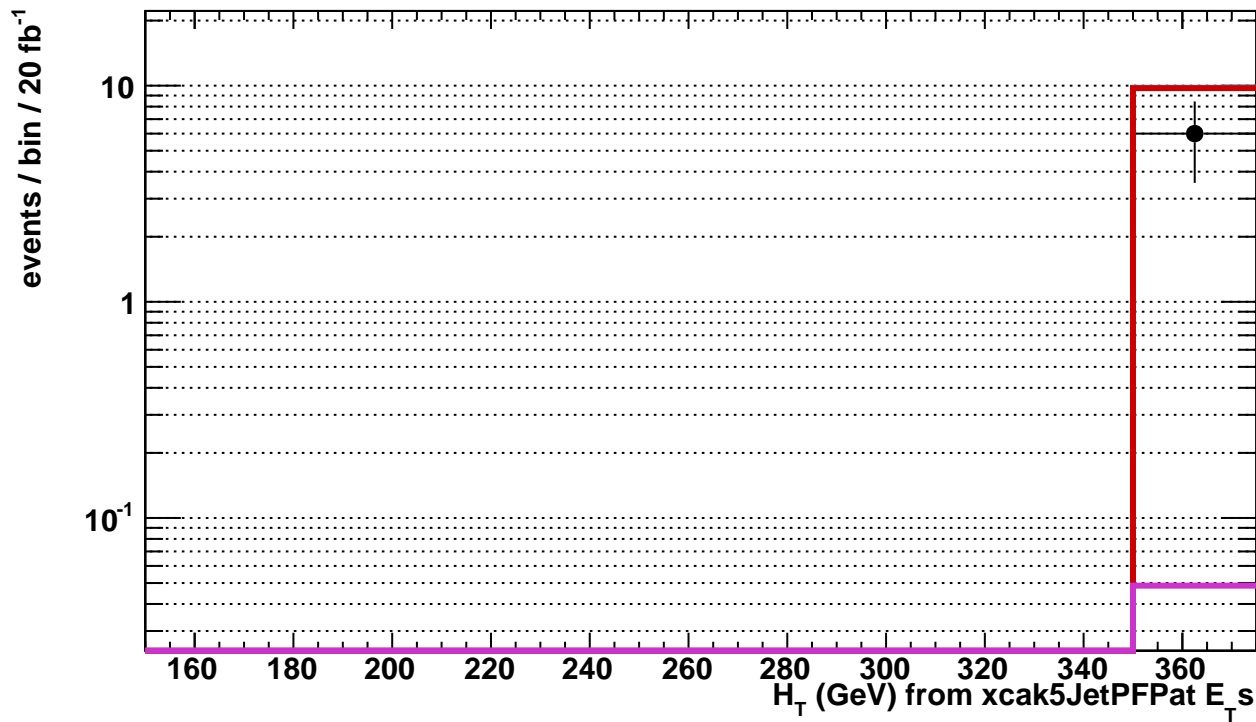
xcak5JetPFSumEtPat_eq2b	
Entries	2778
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	2778



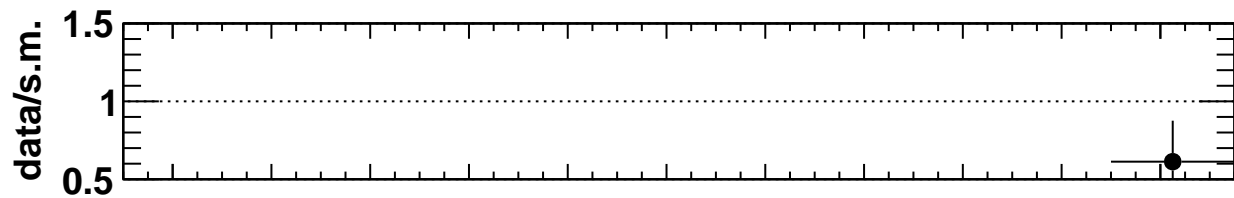
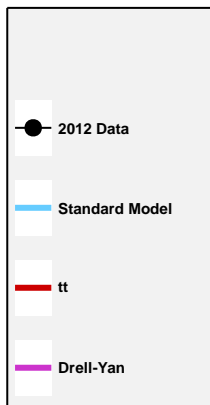


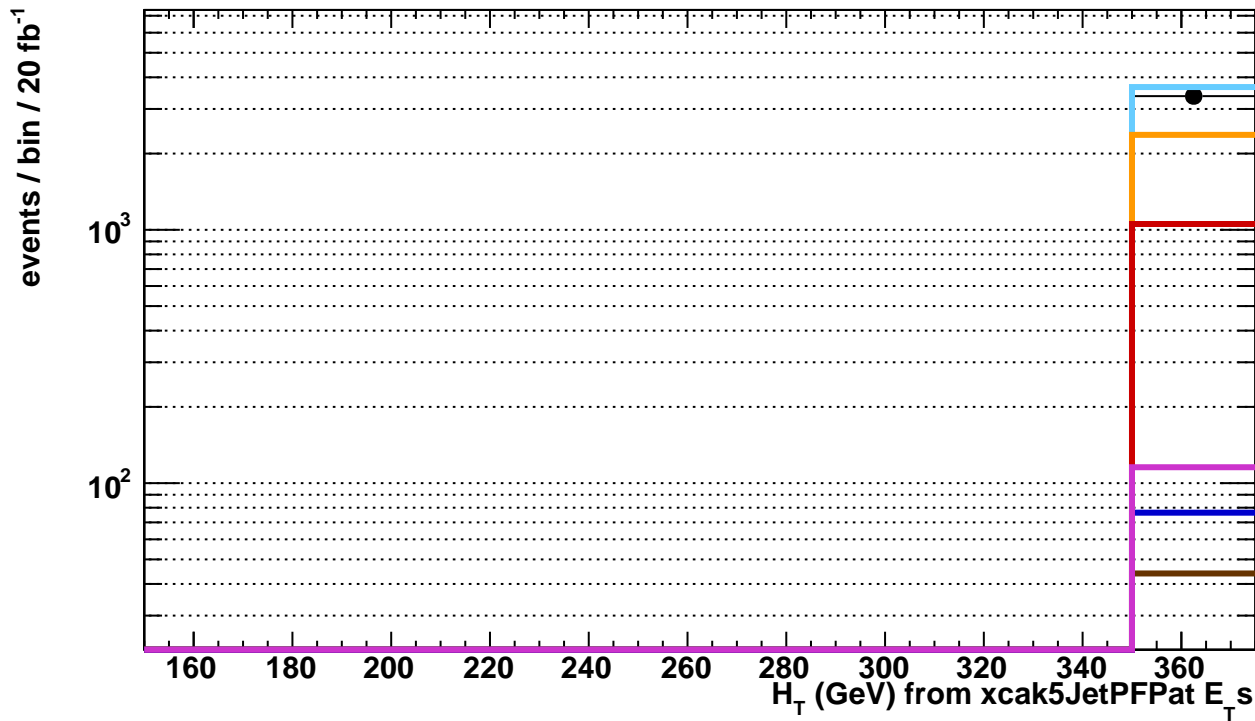
xcak5JetPFSumETPat_eq3b	
Entries	279
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	279





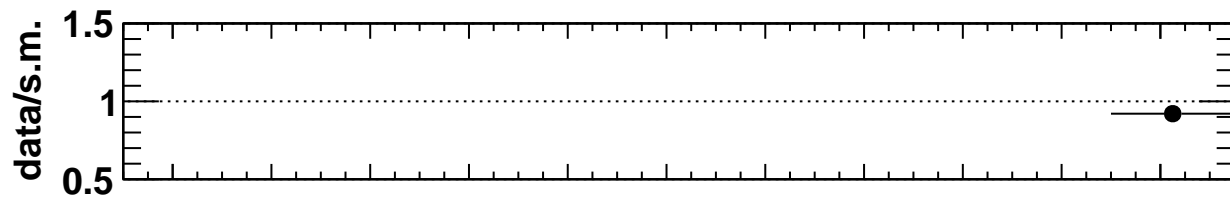
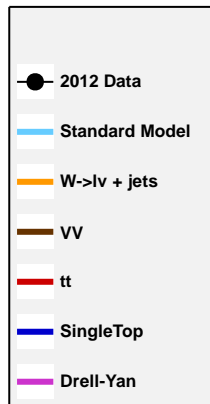
xcak5JetPFSumETPat_ge4b	
Entries	6
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6

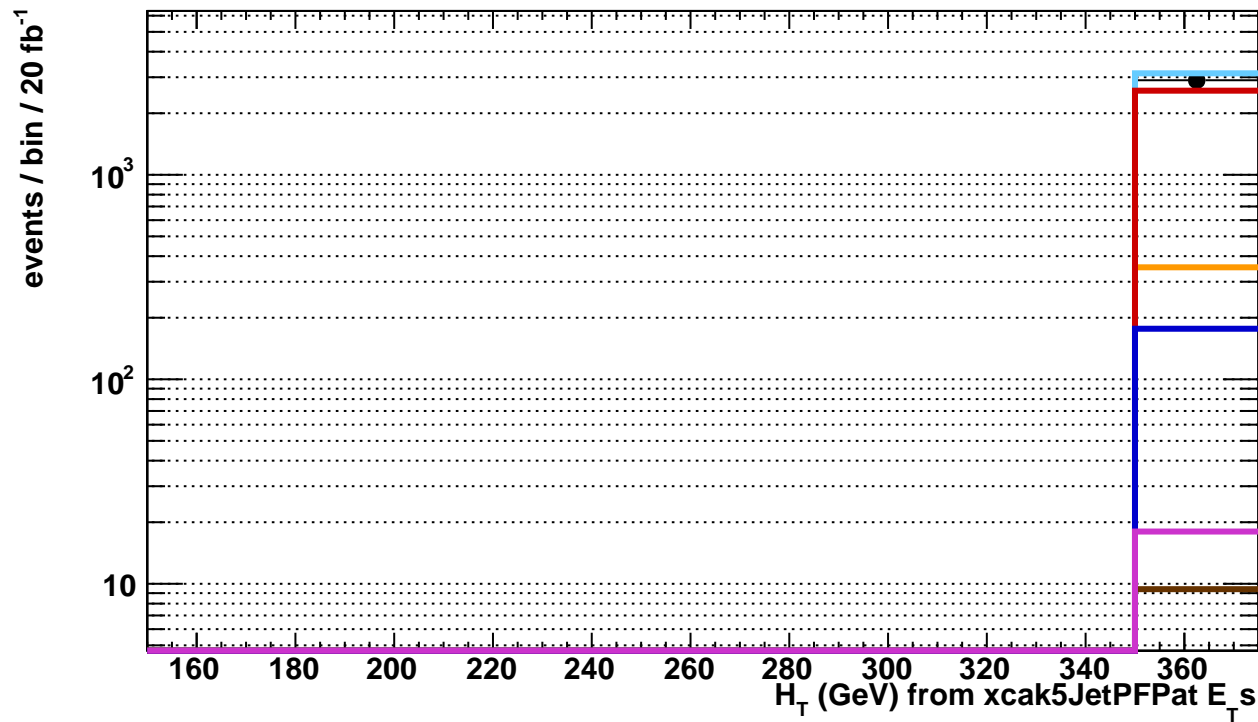




xcak5JetPFSumEtPat\_ge4j\_eq0b

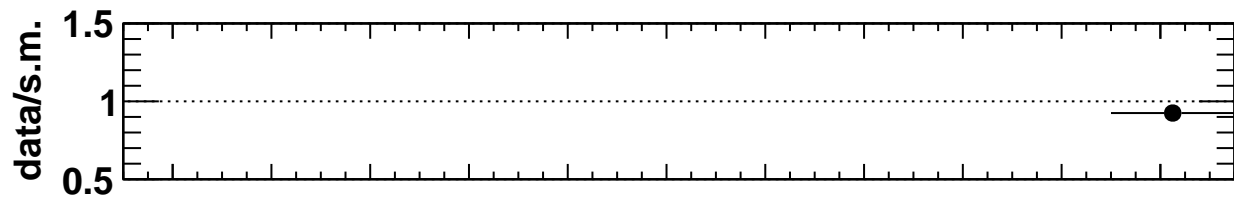
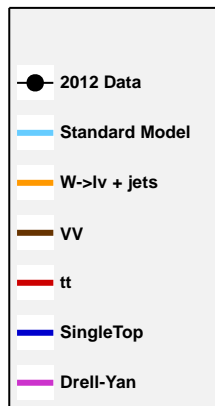
Entries	3371
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	3371

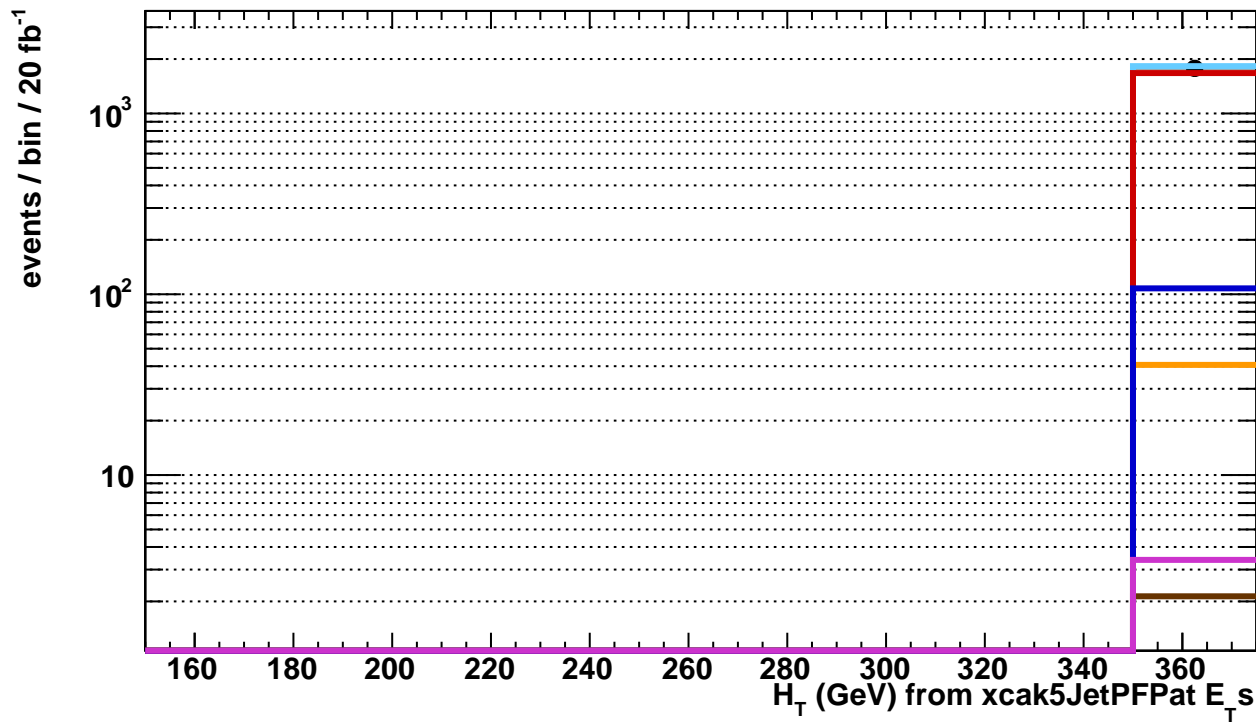




xcak5JetPFSumEtPat\_ge4j\_eq1b

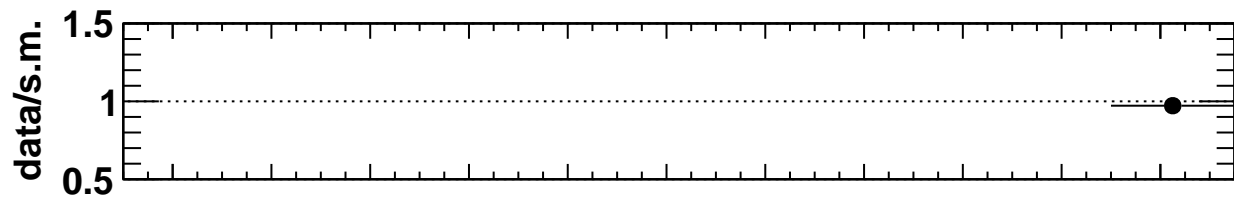
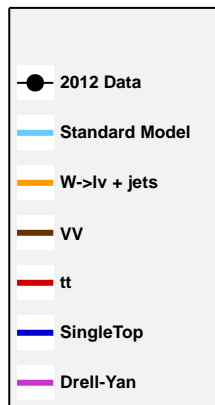
Entries	2900
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	2900





xcak5JetPFSumEtPat\_ge4j\_eq2b

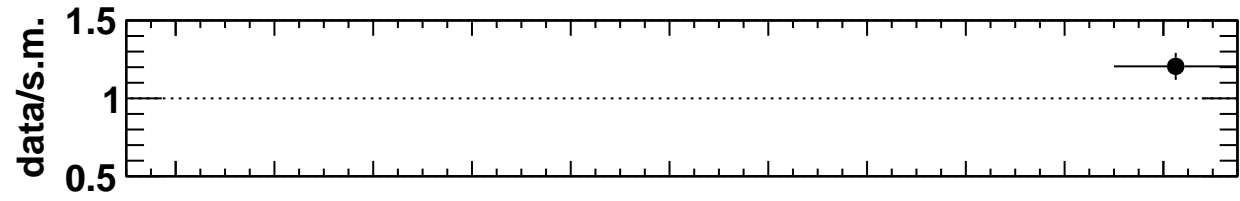
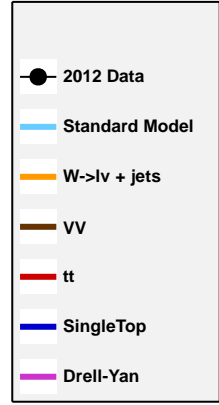
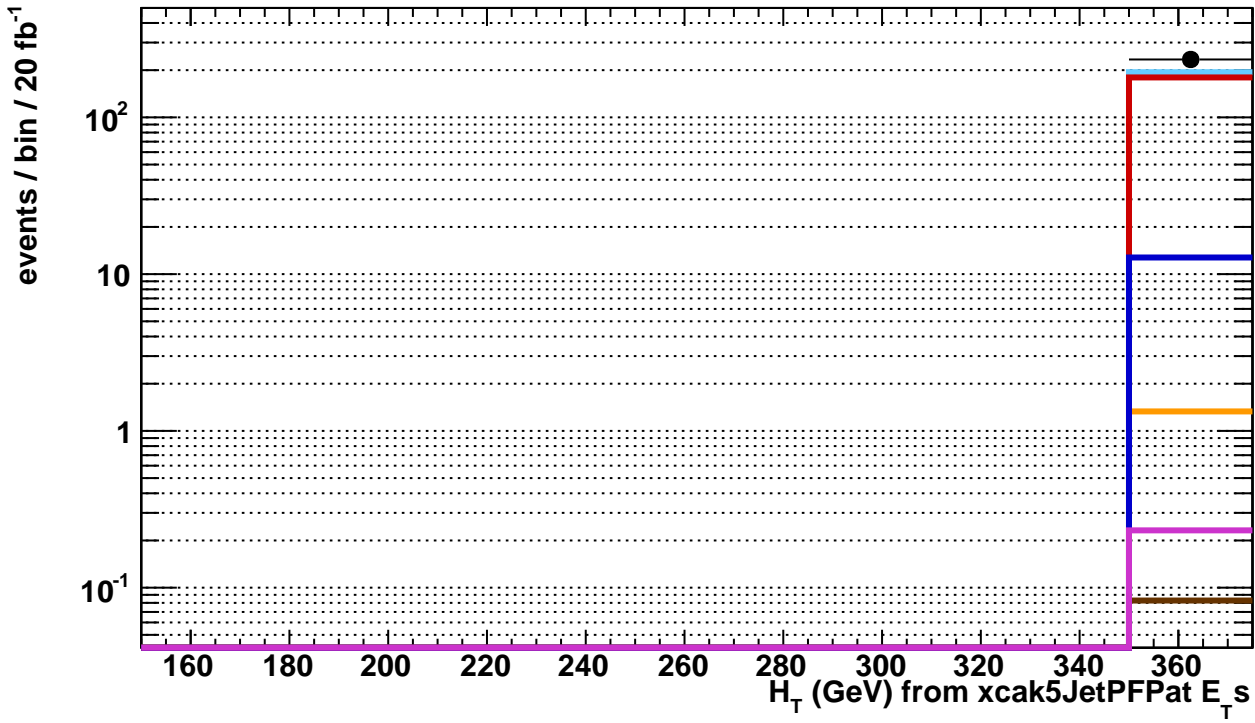
Entries	1776
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1776

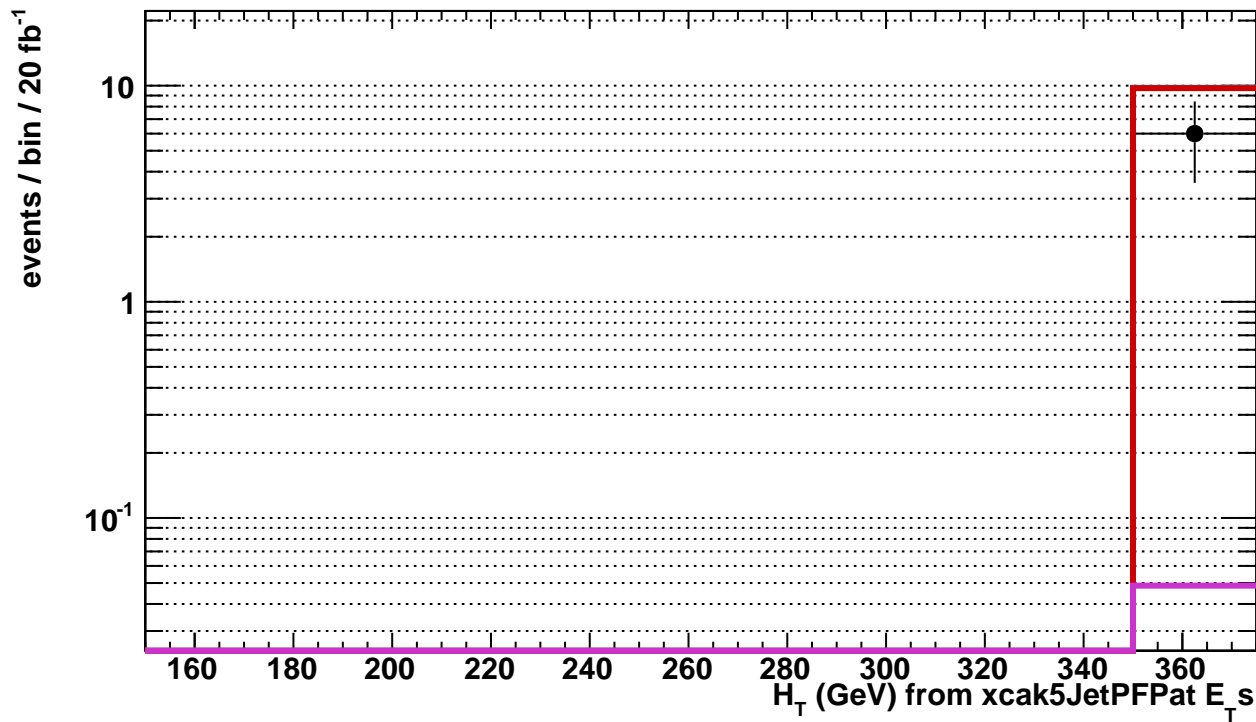




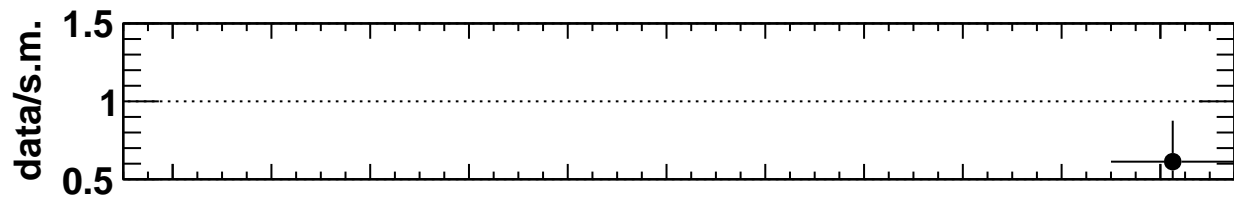
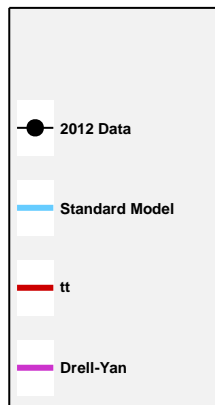
xcak5JetPFSumEtPat\_ge4j\_eq3b

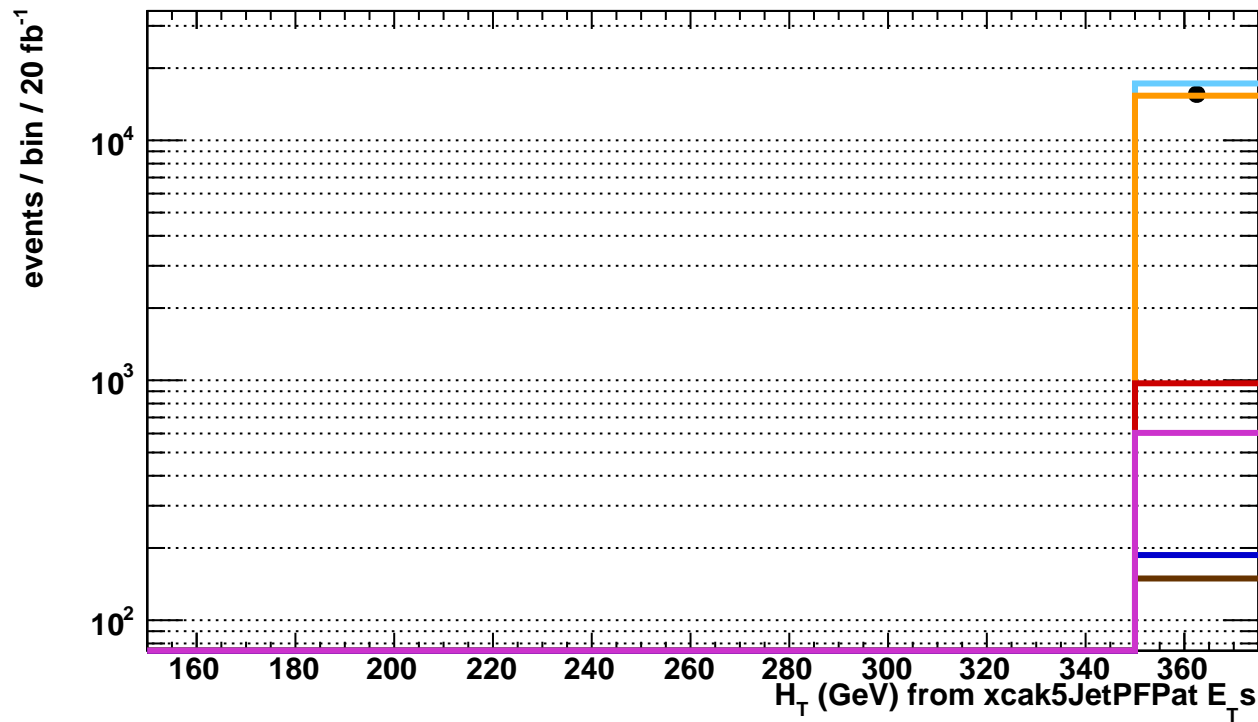
Entries	234
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	234



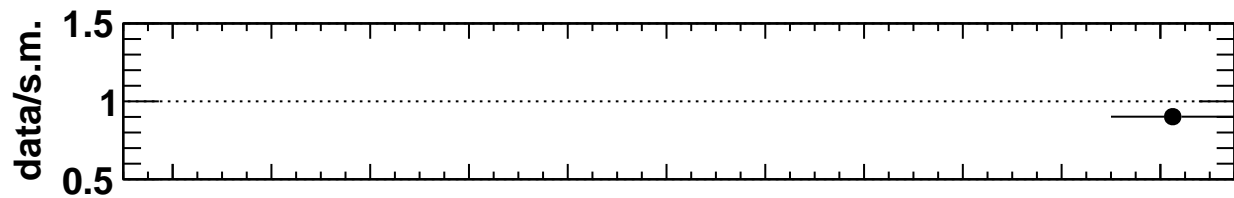
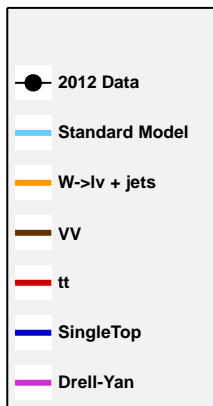


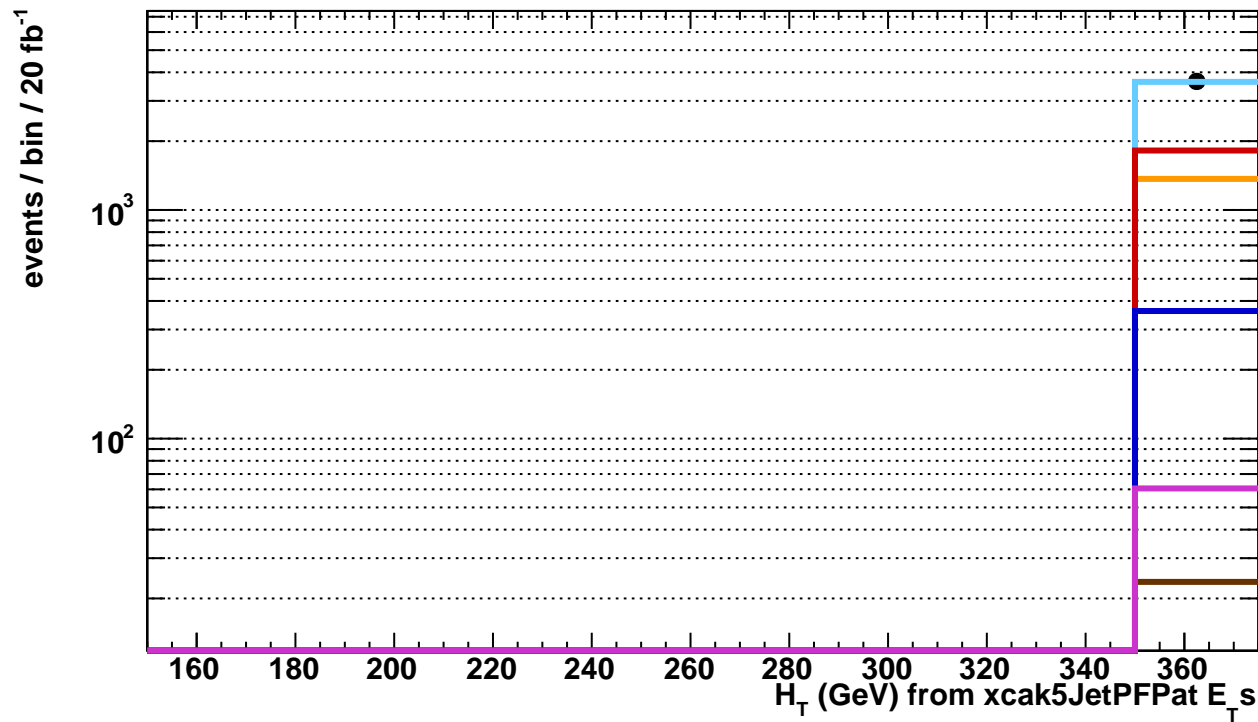
xcak5JetPFSumEtPat_ge4j_ge4b	
Entries	6
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6



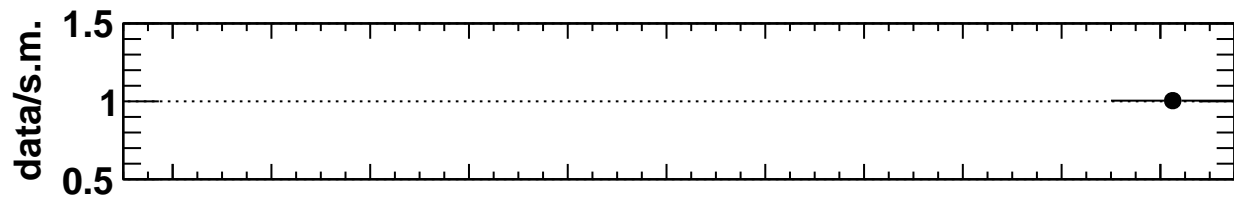
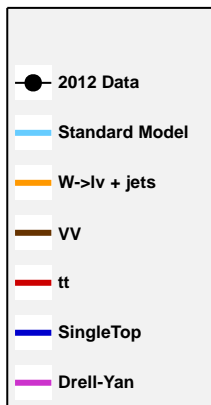


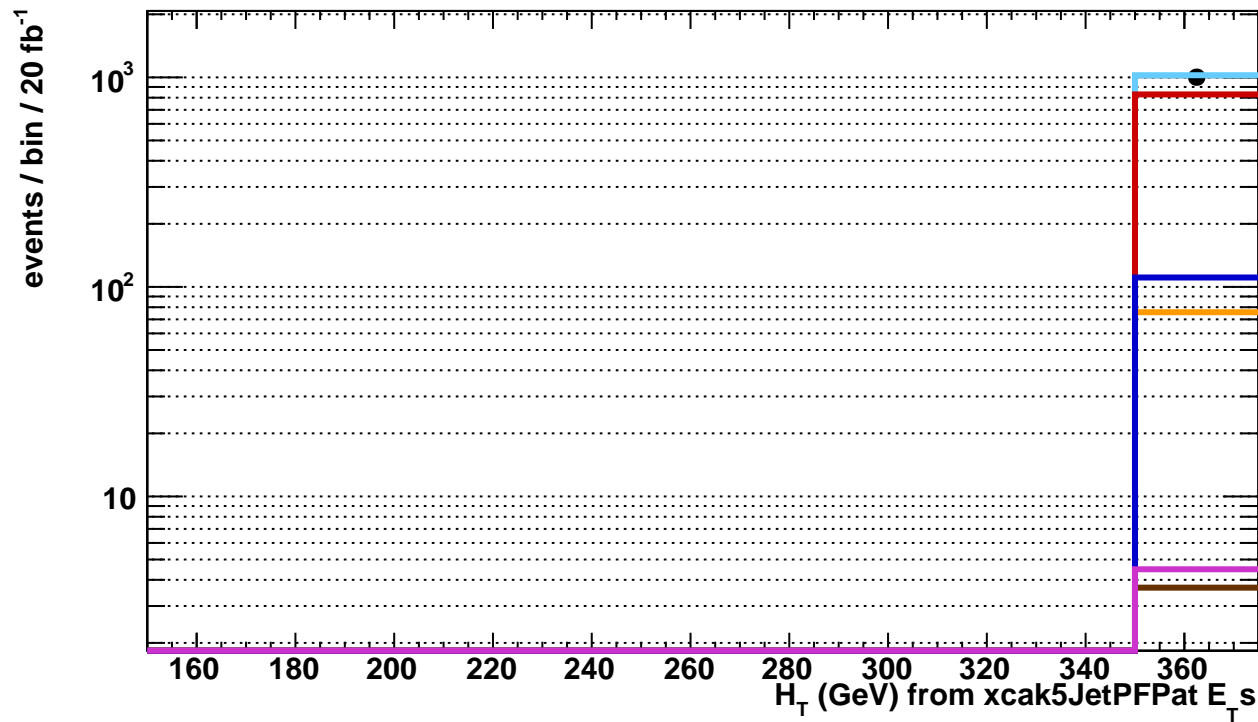
xcak5JetPFSumEtPat_le3j_eq0b	
Entries	15561
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1.556e+04



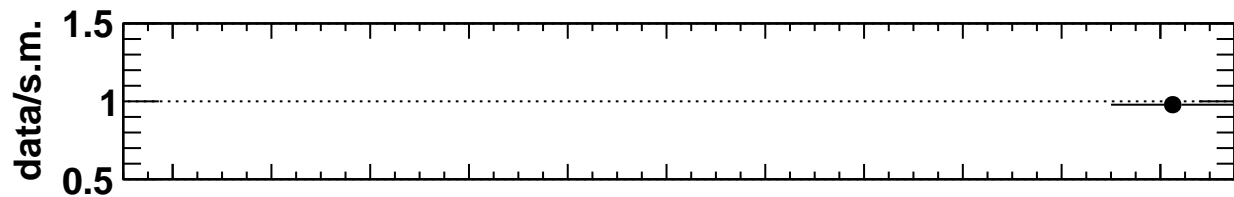
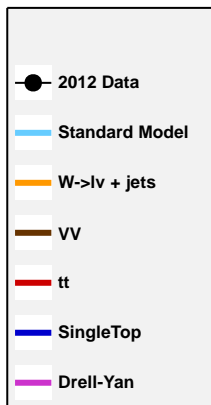


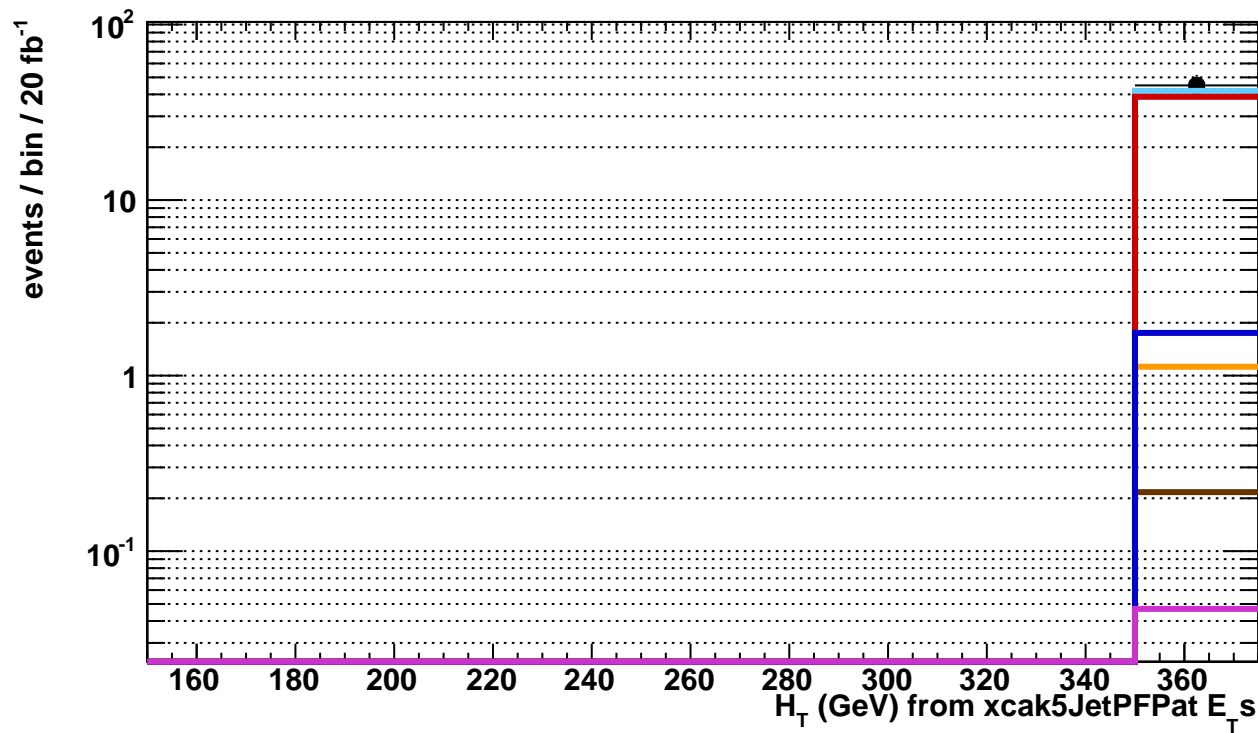
xcak5JetPFSumEtPat_le3j_eq1b	
Entries	3649
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	3649



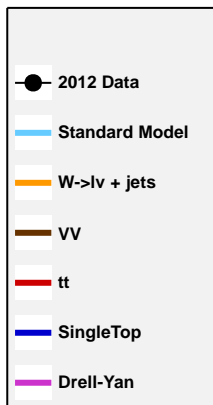


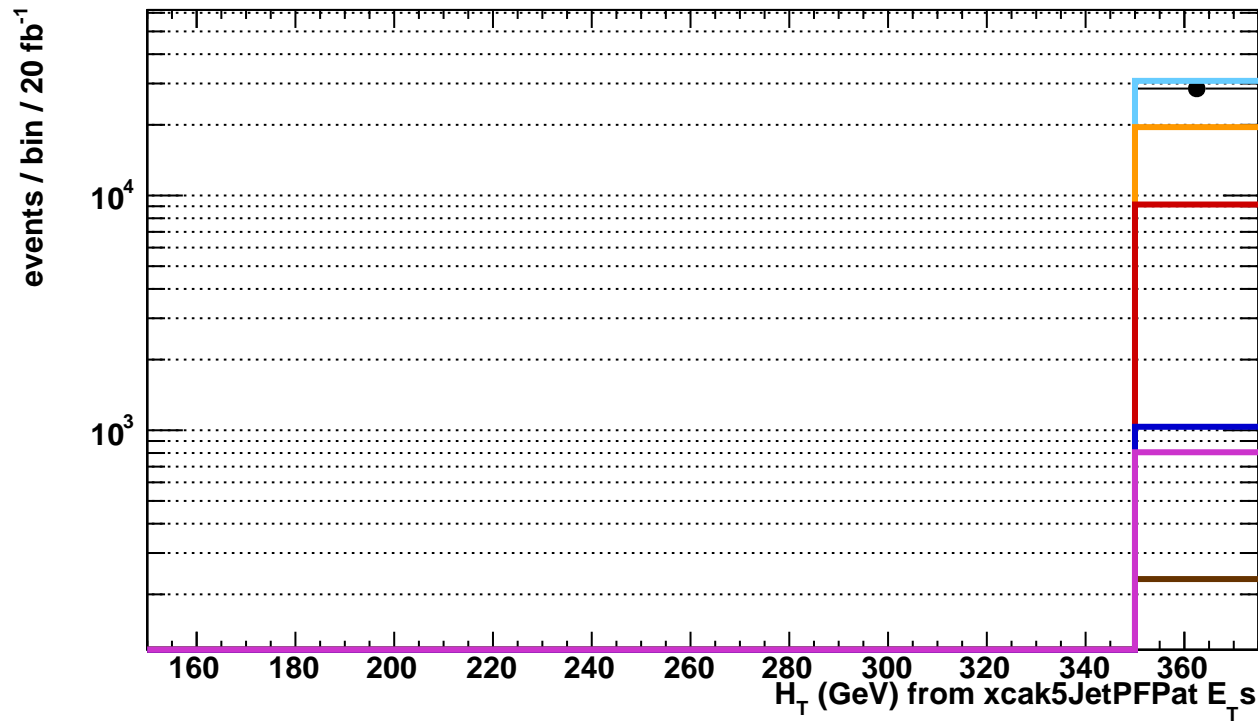
xcak5JetPFSumEtPat_le3j_eq2b	
Entries	1002
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	1002



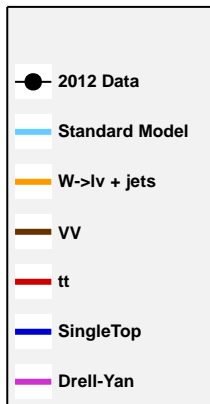


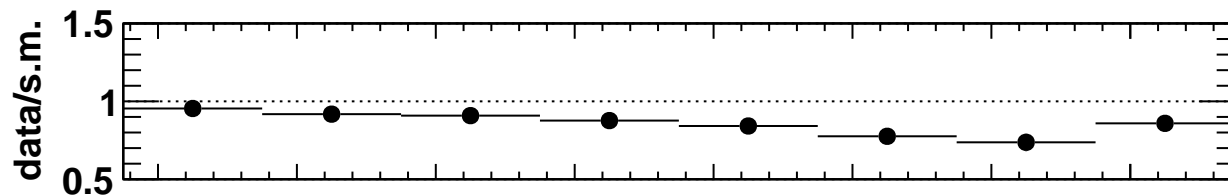
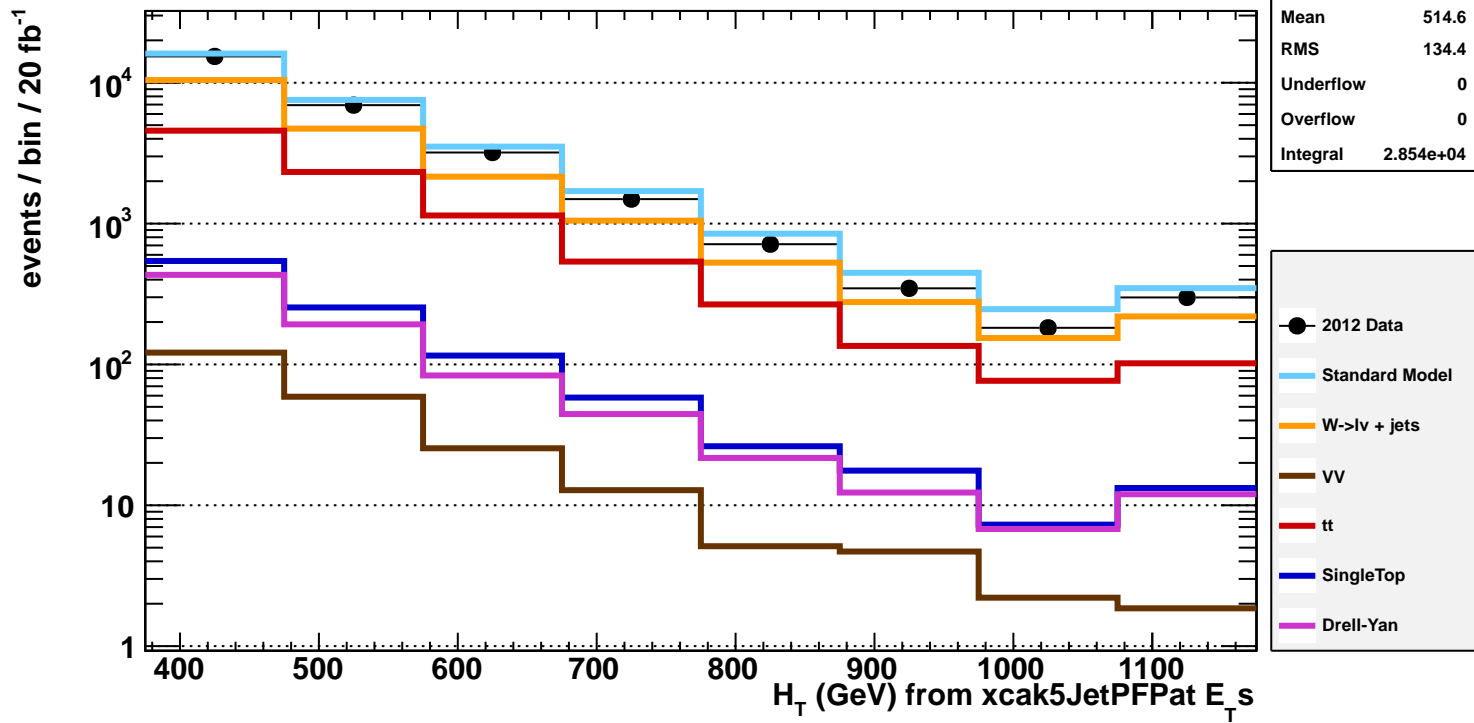
xcak5JetPFSumEtPat_le3j_eq3b	
Entries	45
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	45



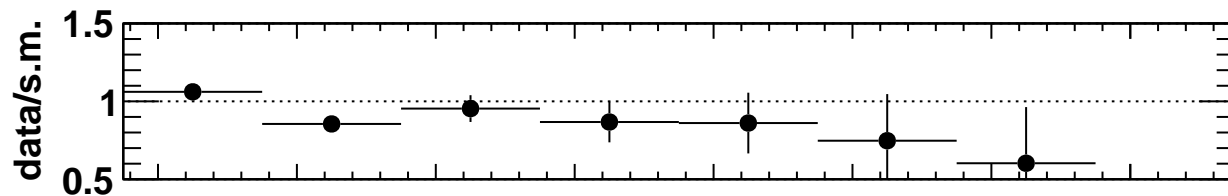
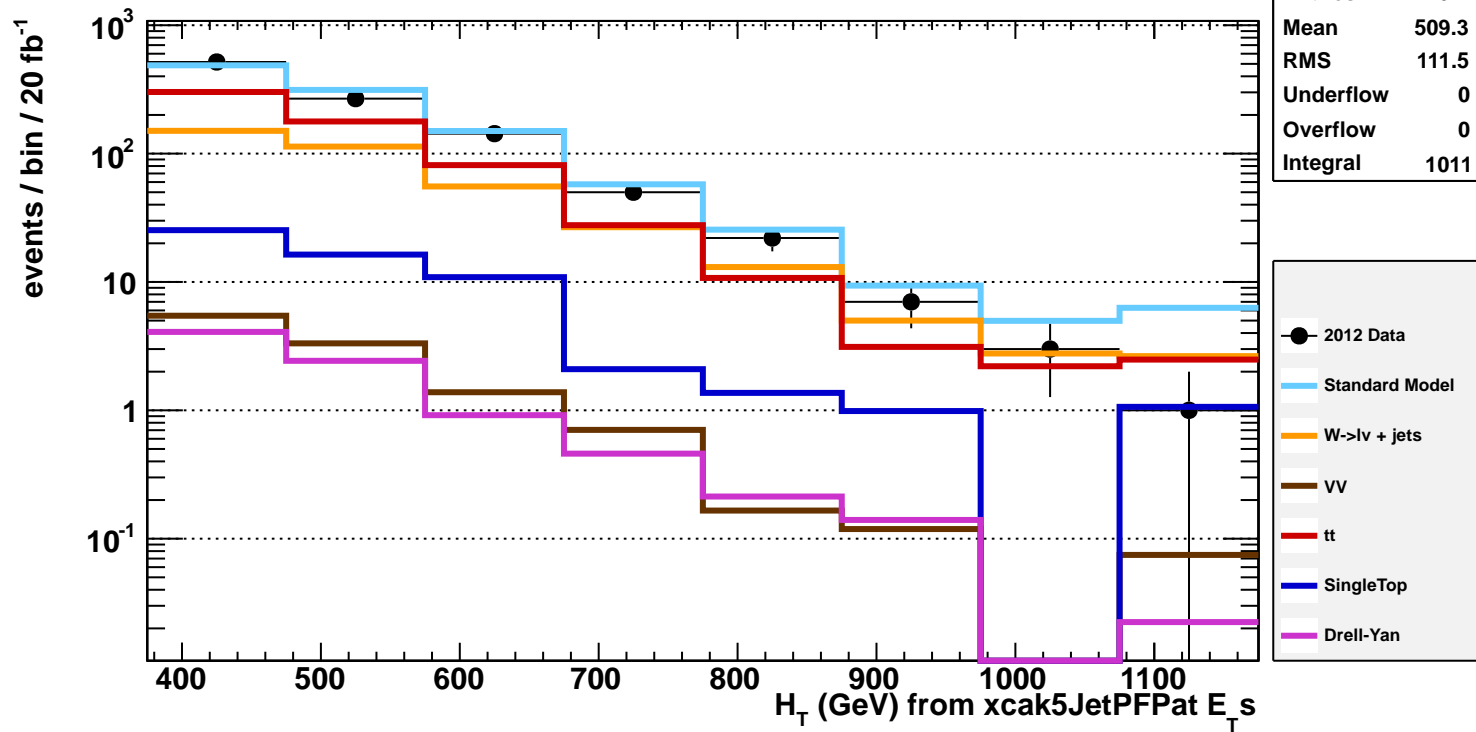


xcak5JetPFSumEtPat	
Entries	28544
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	2.854e+04

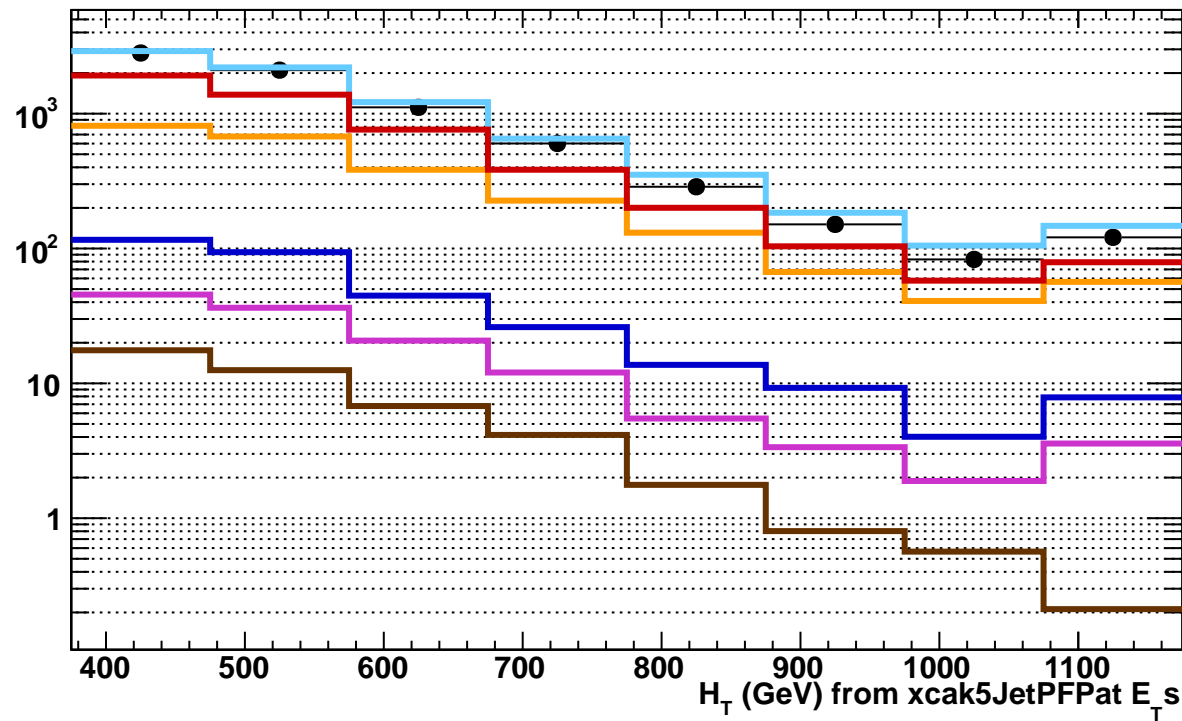




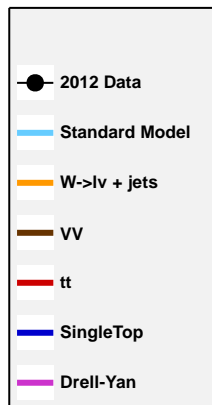




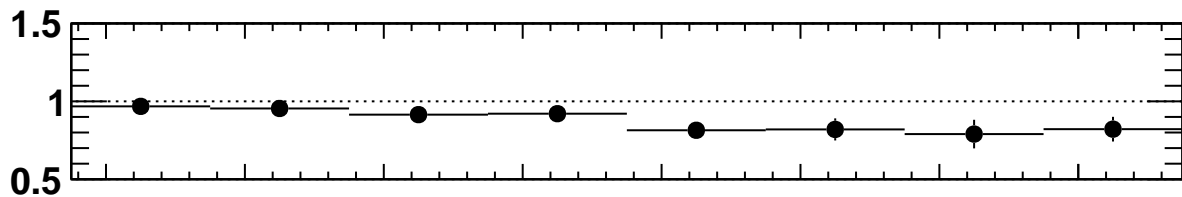
events / bin / 20 fb<sup>-1</sup>

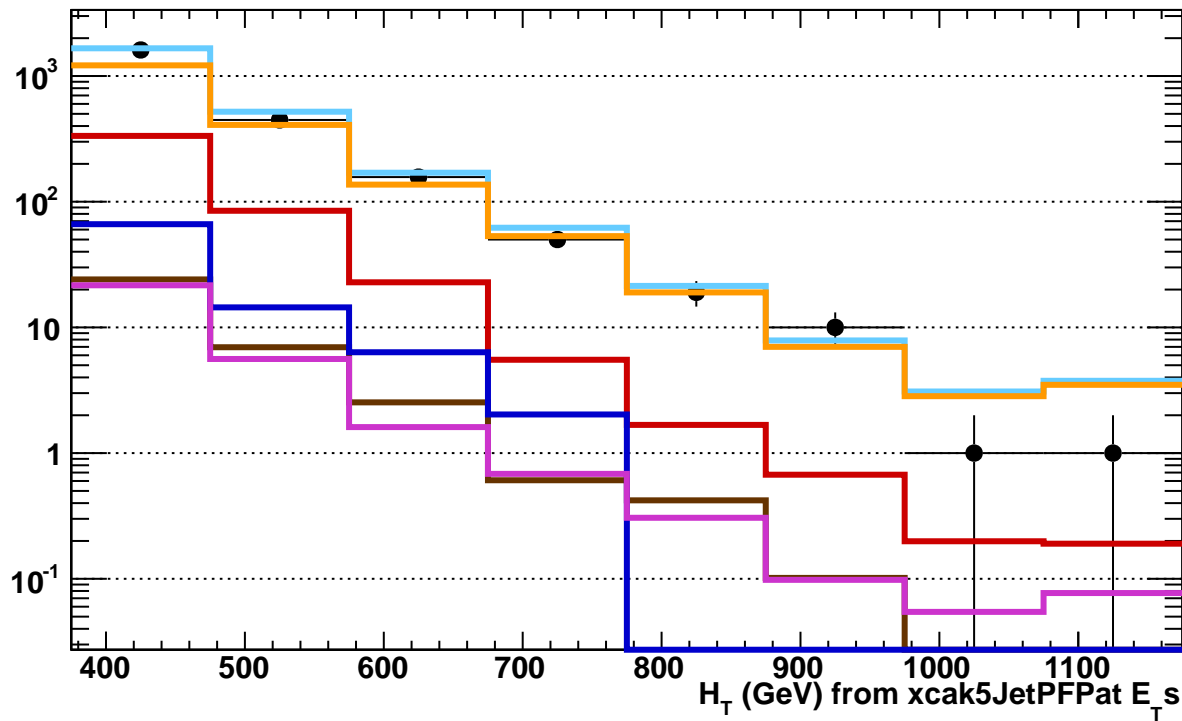


xcak5JetPFSumEIPat_ge4j_at155	
Entries	7276
Mean	553.9
RMS	153.6
Underflow	0
Overflow	0
Integral	7276



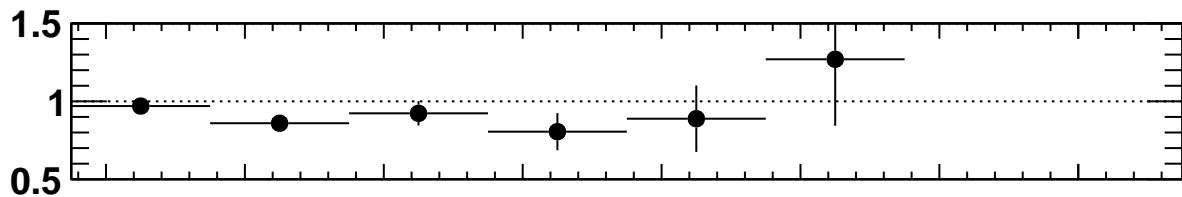
data/s.m.

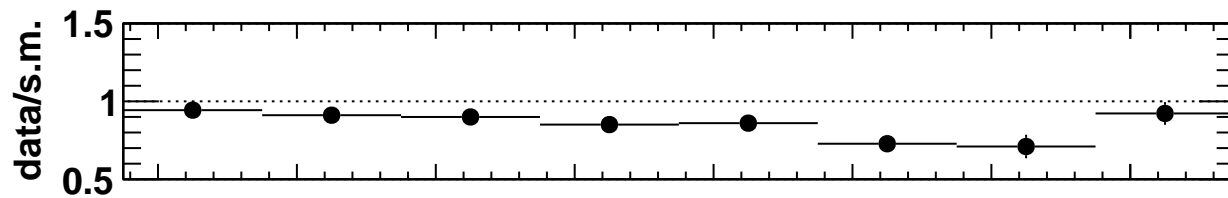
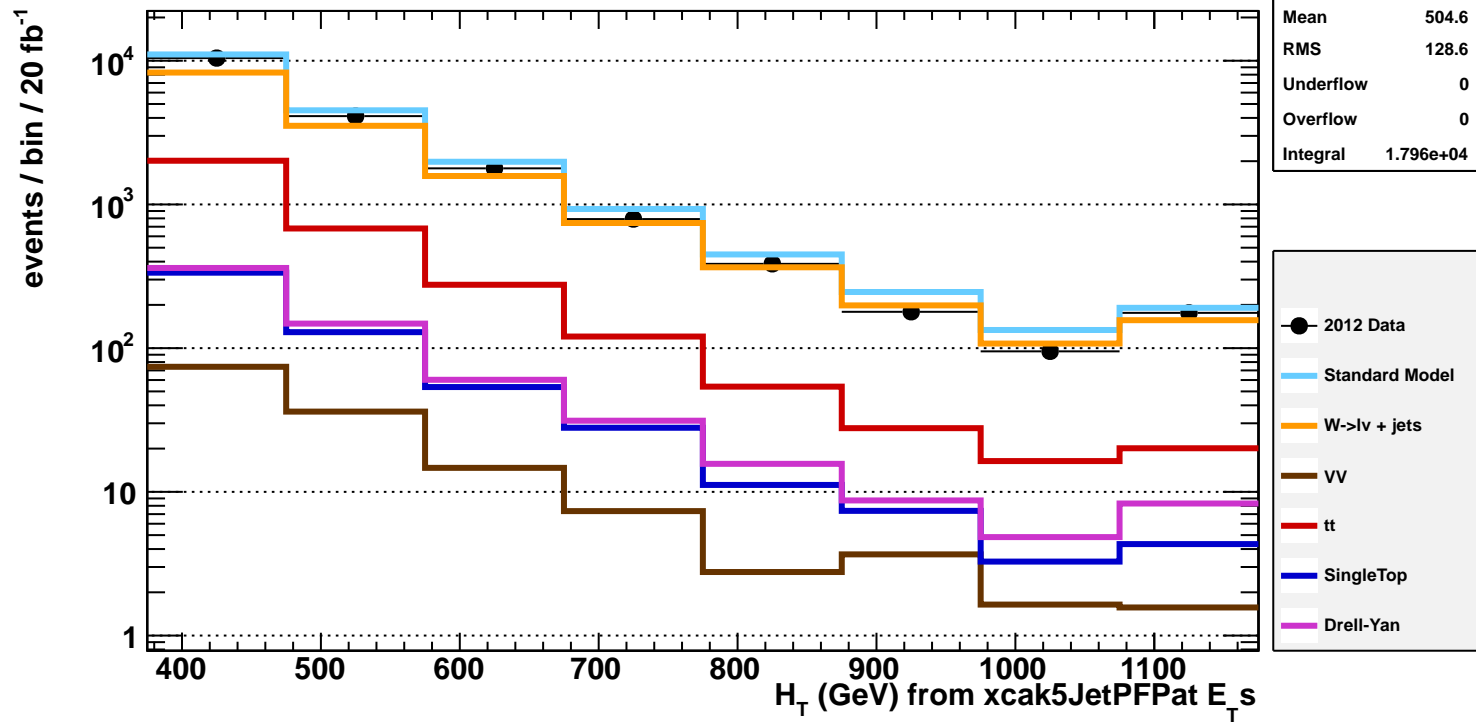


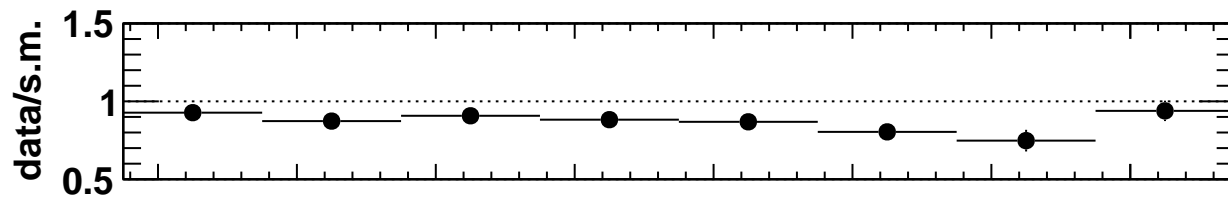
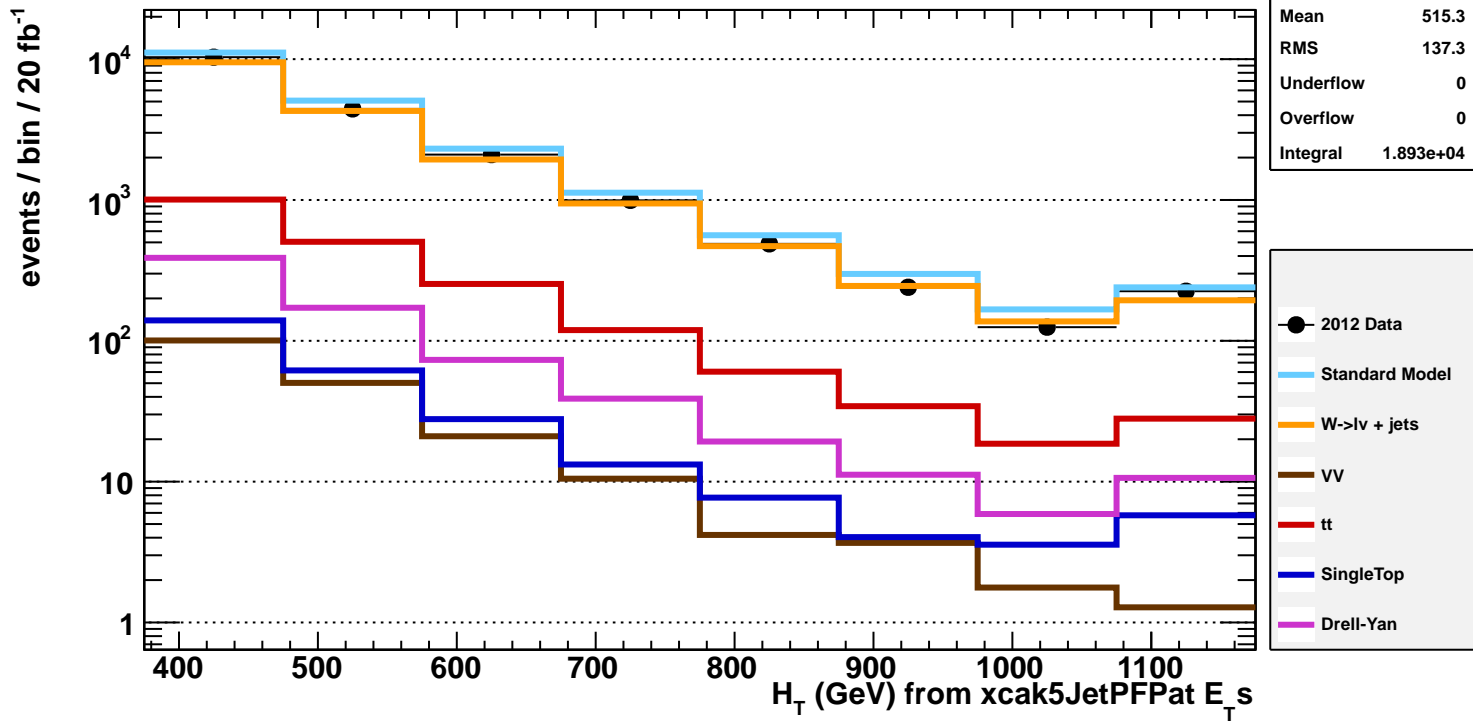
events / bin / 20 fb<sup>-1</sup>

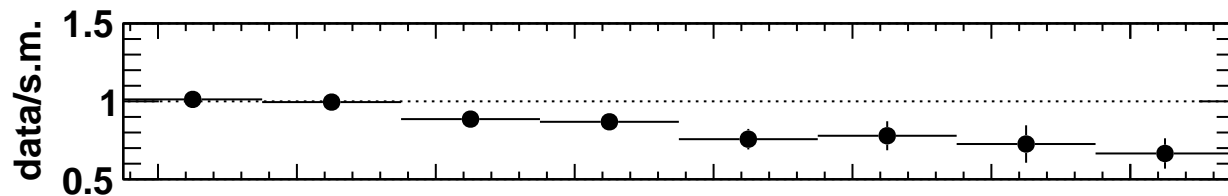
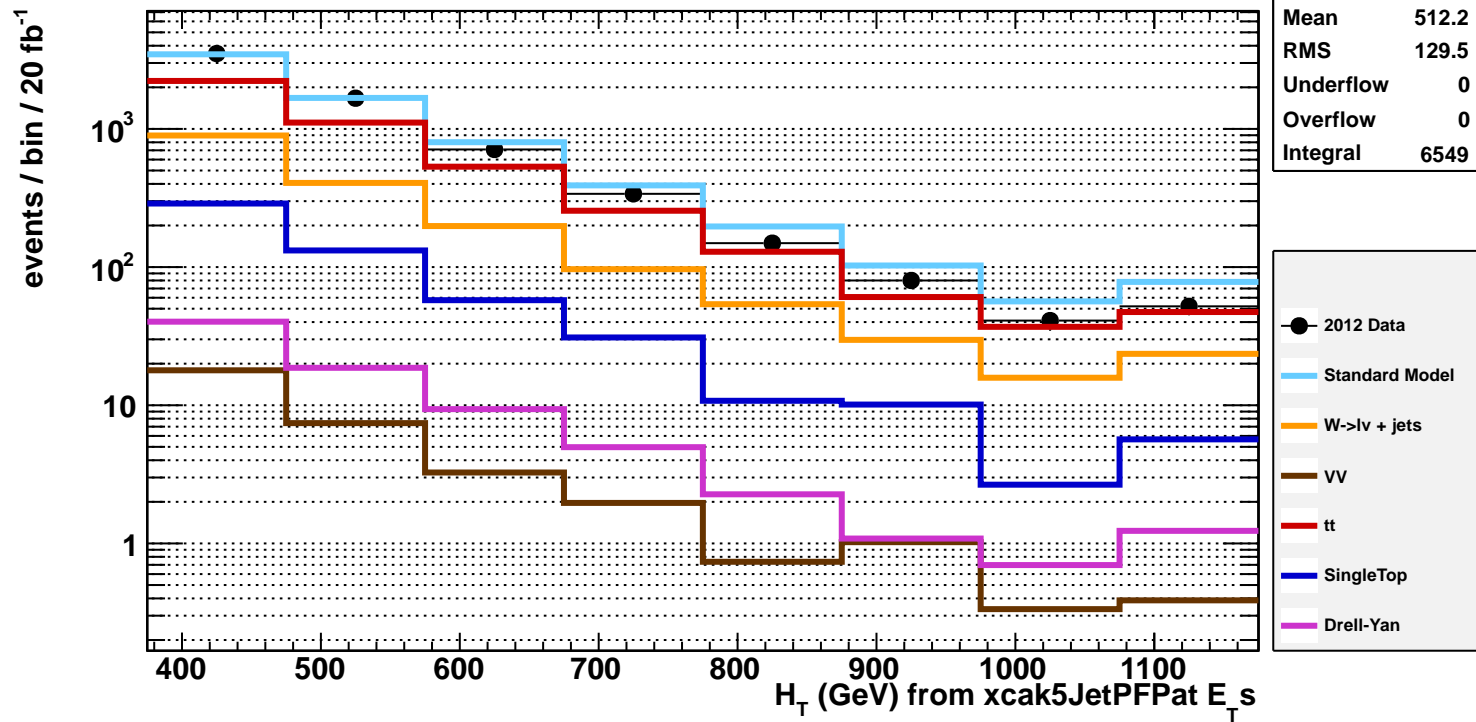
xcak5JetPFSumEtPat_le3j_aTge55	
Entries	2296
Mean	470.7
RMS	85.64
Underflow	0
Overflow	0
Integral	2296

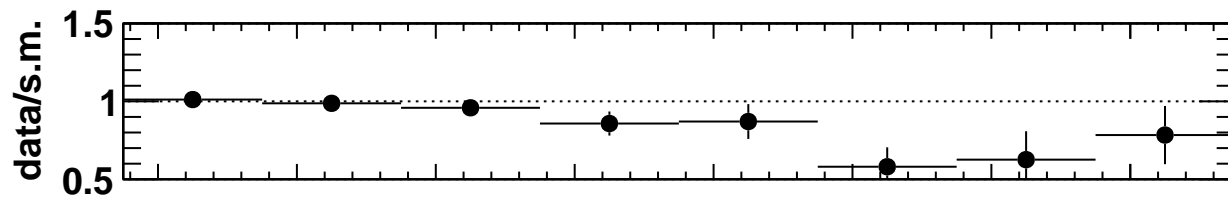
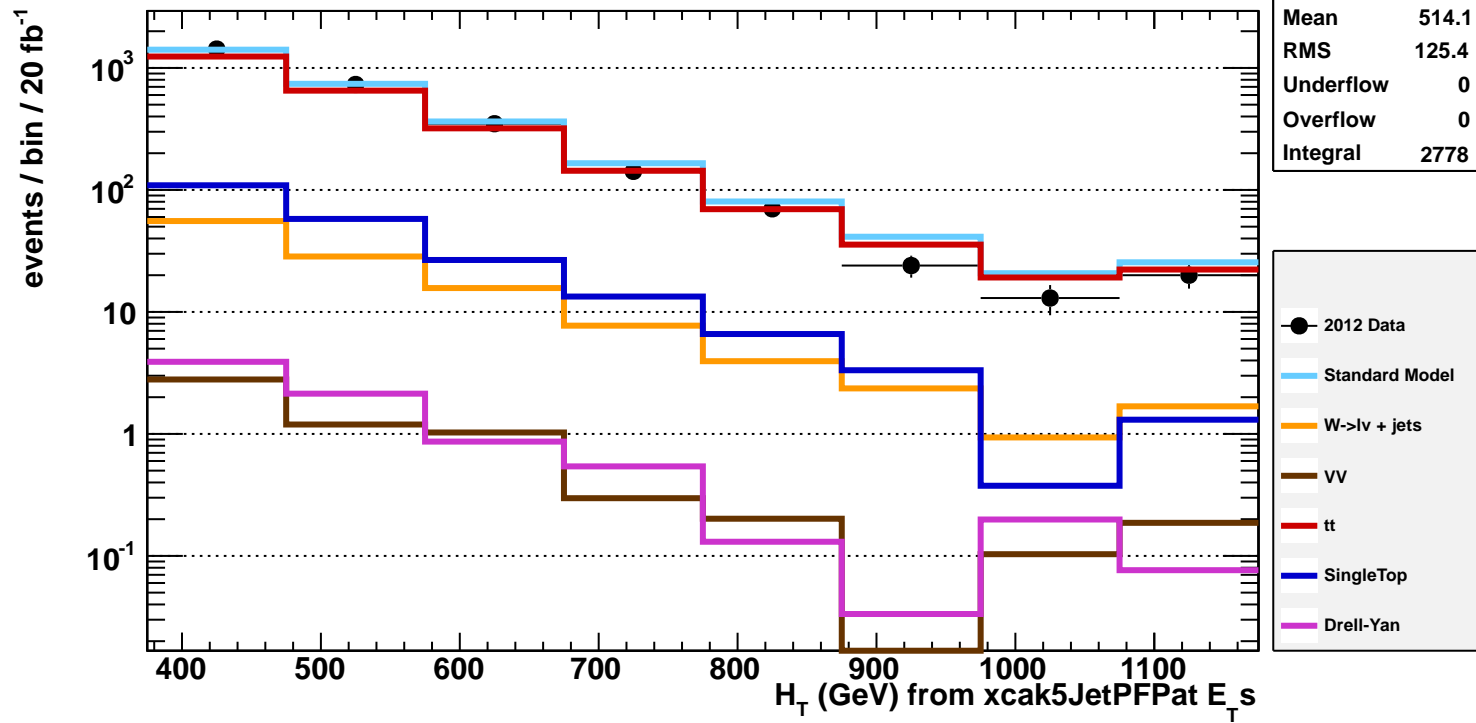
data/s.m.

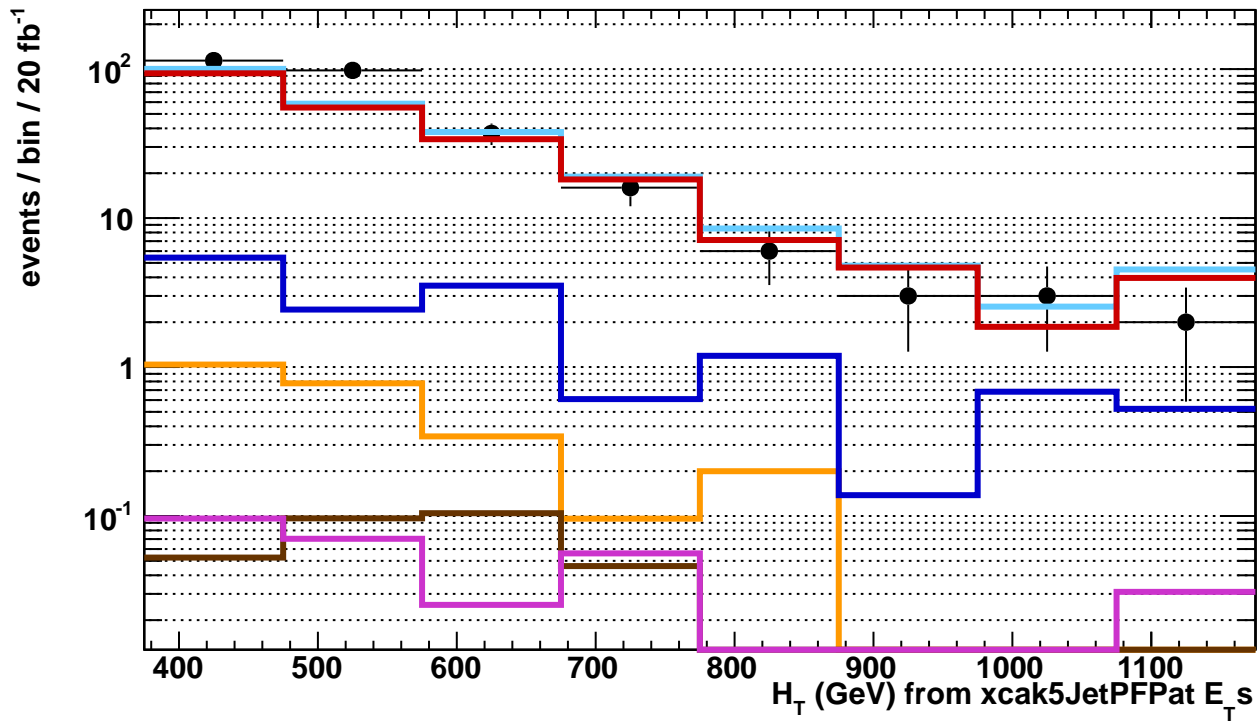




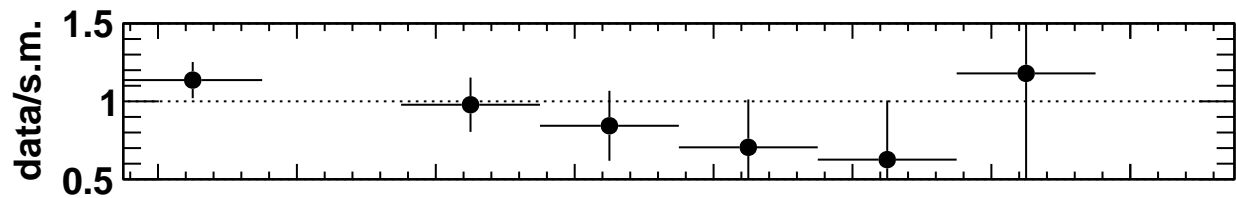
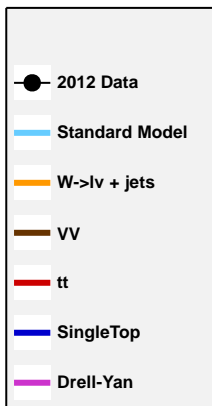




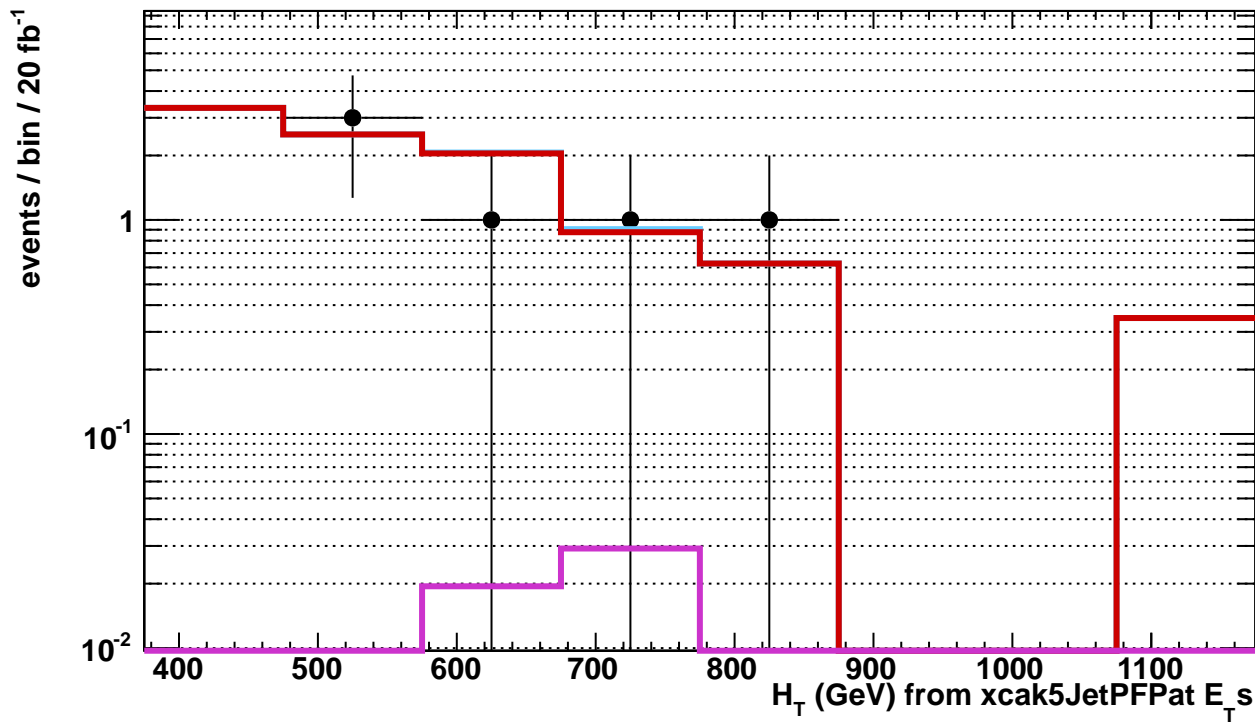




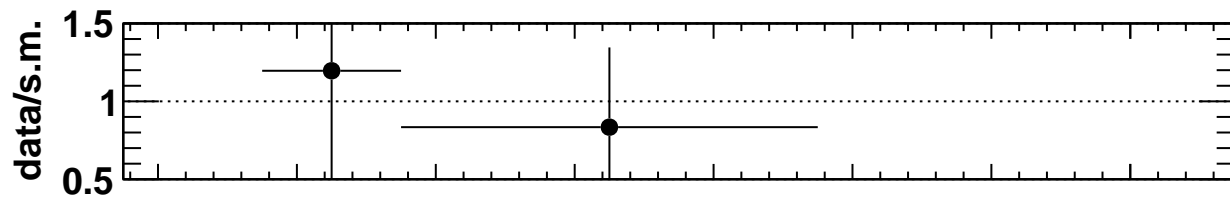
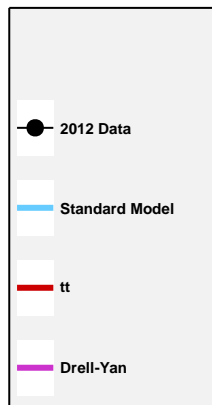
xcak5JetPFSumEIPat_eq3b	
Entries	279
Mean	529.3
RMS	128.9
Underflow	0
Overflow	0
Integral	279





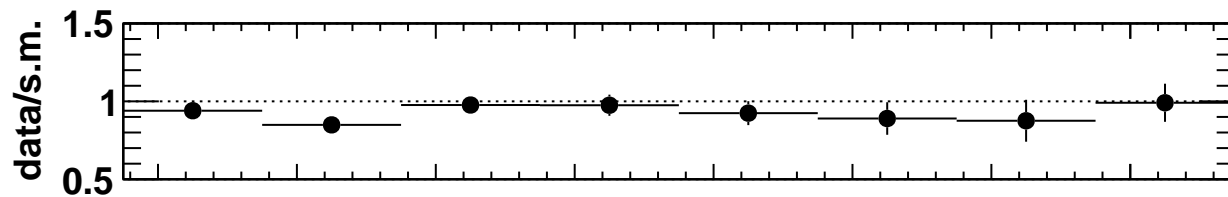
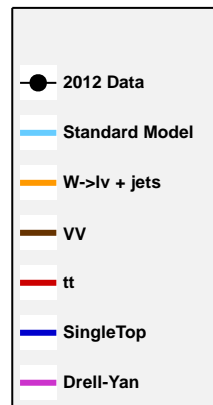
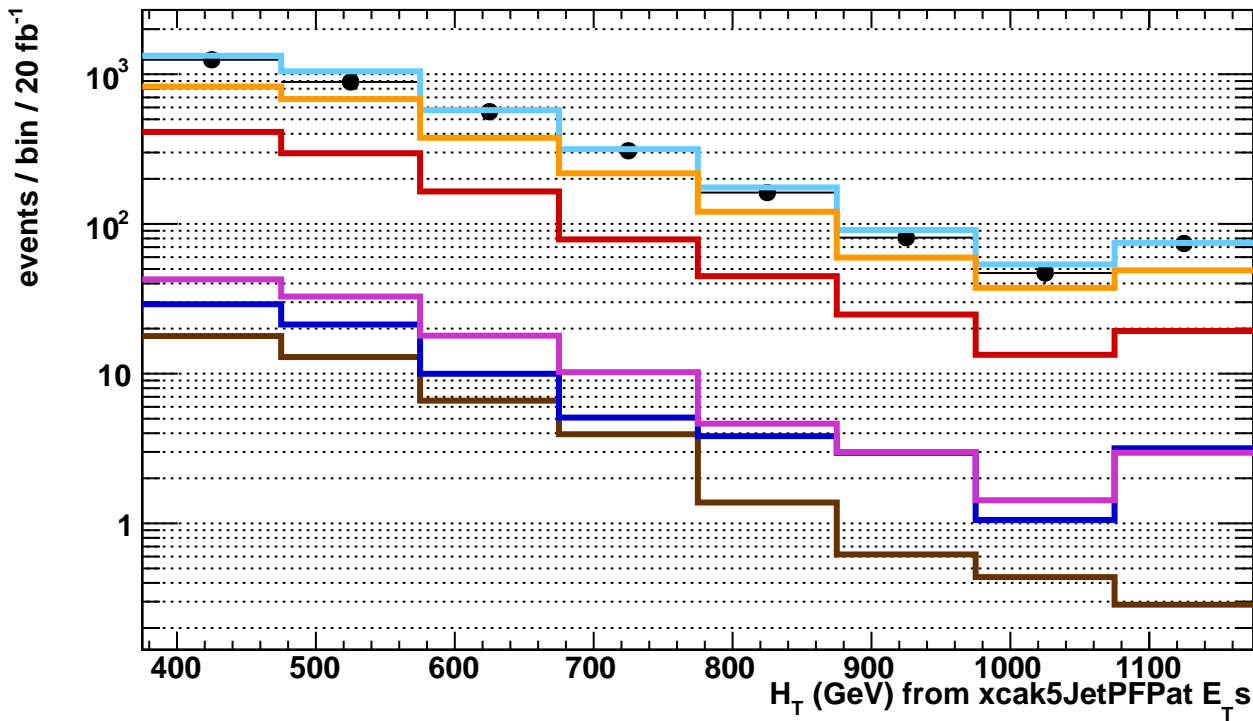


xcak5JetPFSumETPat_ge4b	
Entries	6
Mean	637.8
RMS	105.7
Underflow	0
Overflow	0
Integral	6



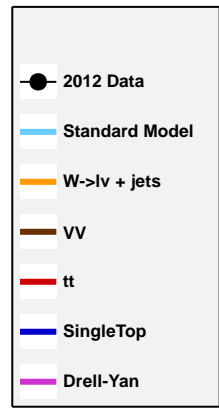
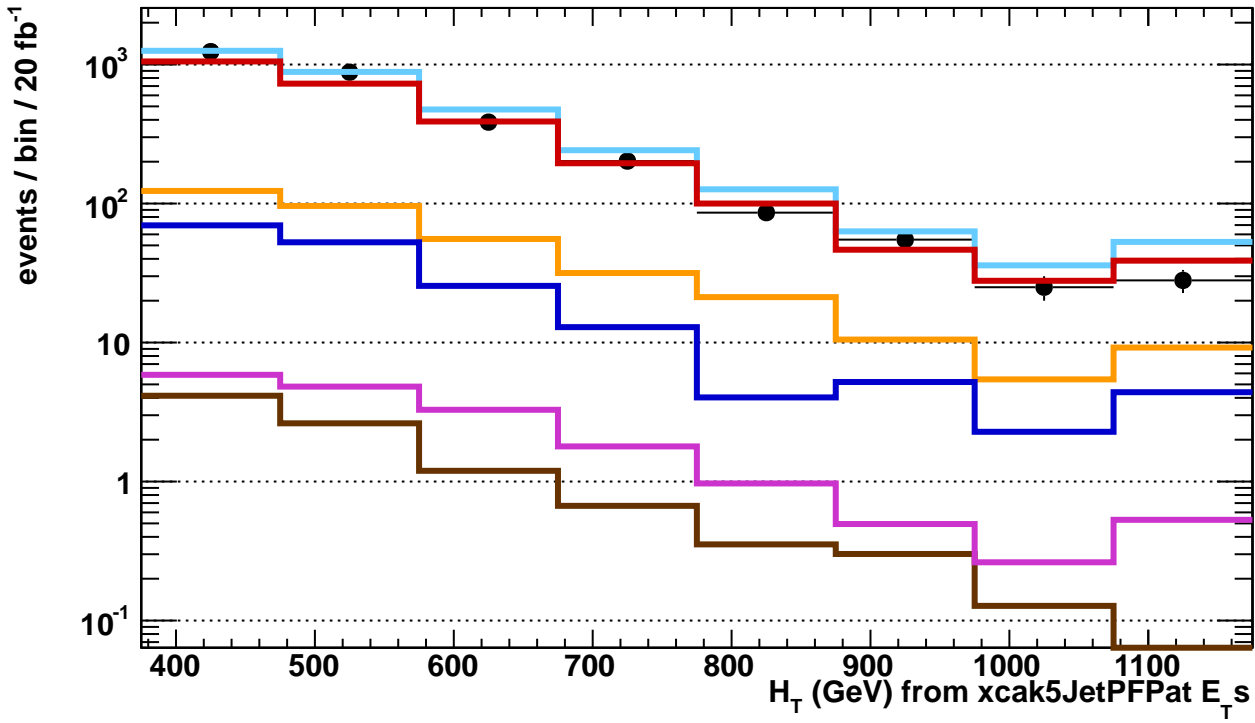
xcak5JetPFSumEtPat\_ge4j\_eq0b

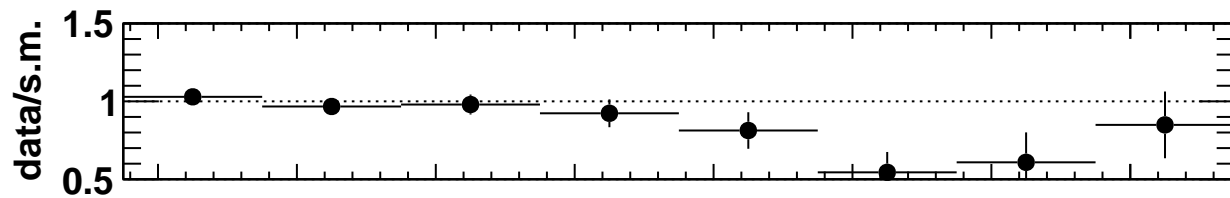
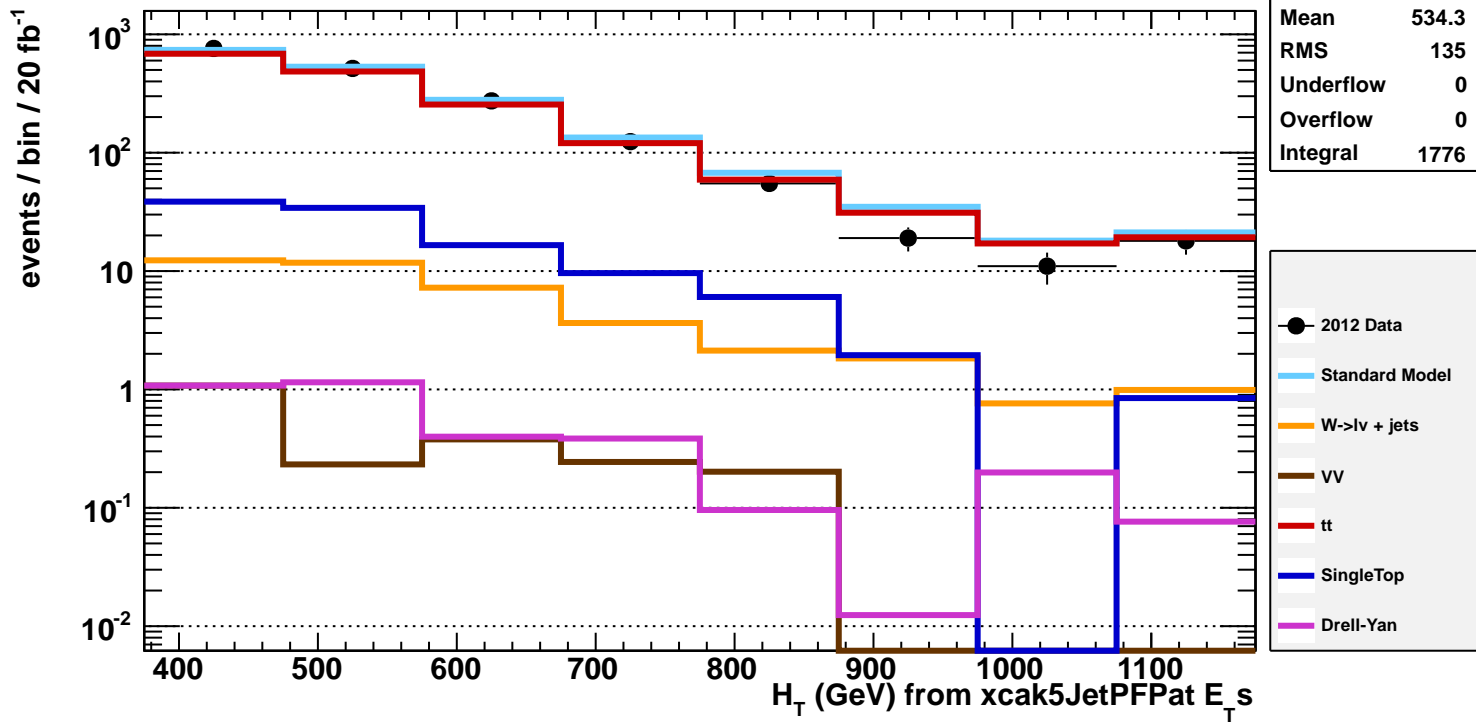
Entries	3371
Mean	567.1
RMS	163.8
Underflow	0
Overflow	0
Integral	3371

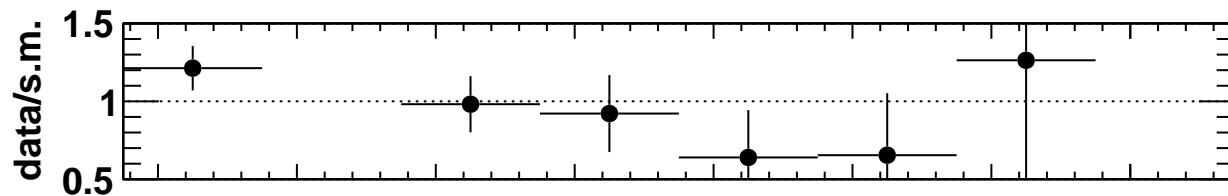
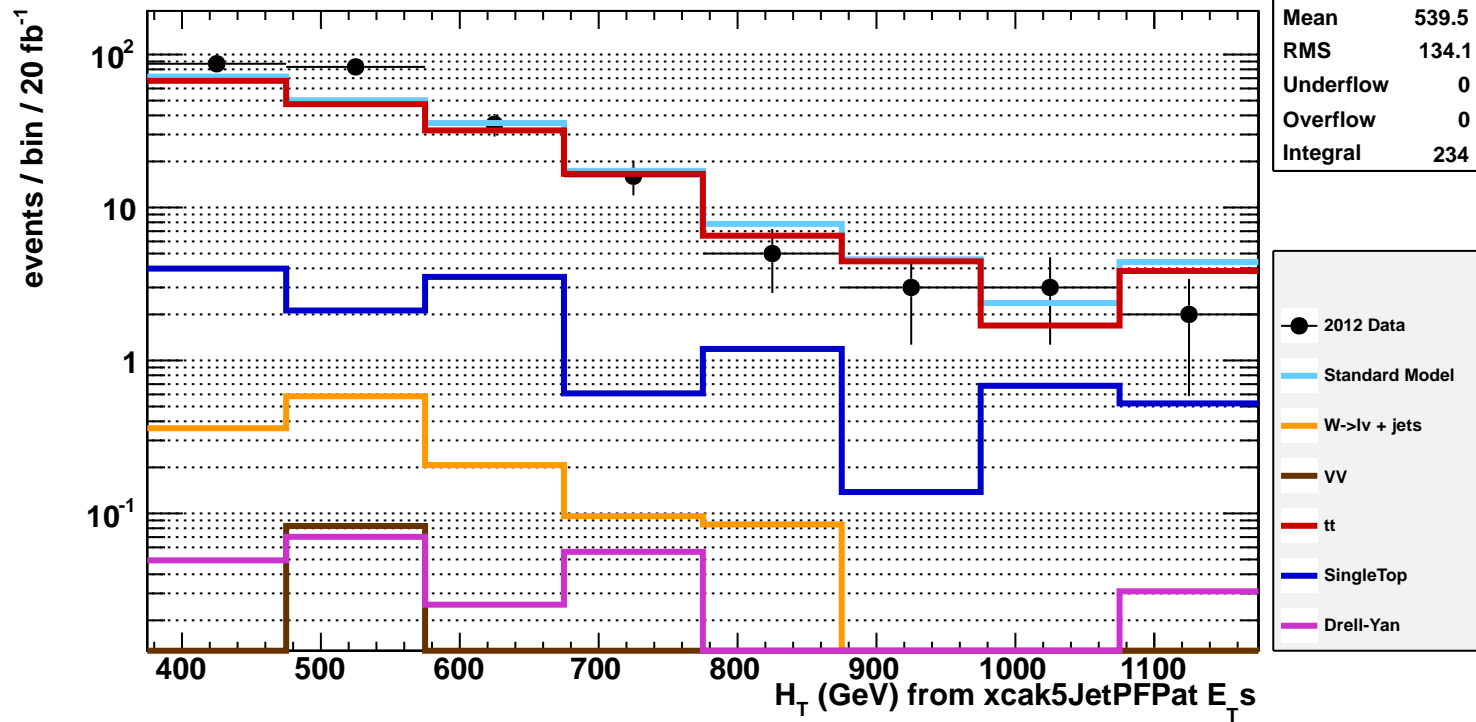


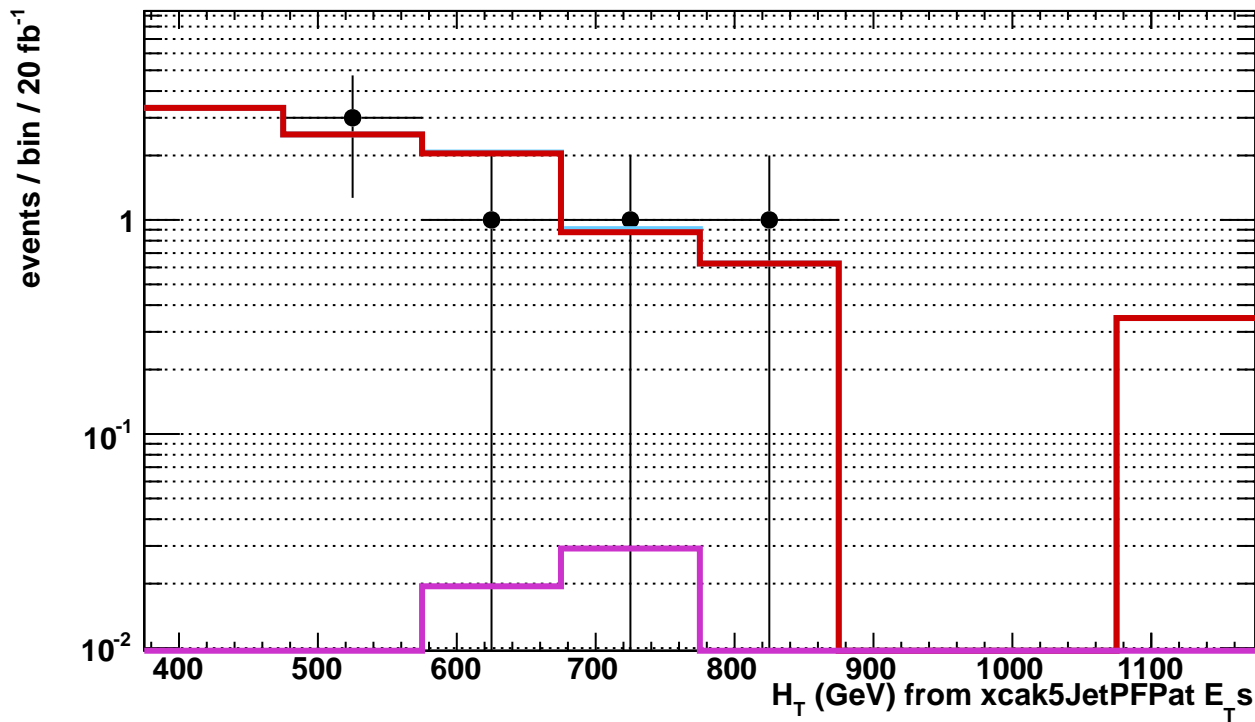
xcak5JetPFSumEtPat\_ge4j\_eq1b

Entries	2900
Mean	536.1
RMS	140
Underflow	0
Overflow	0
Integral	2900

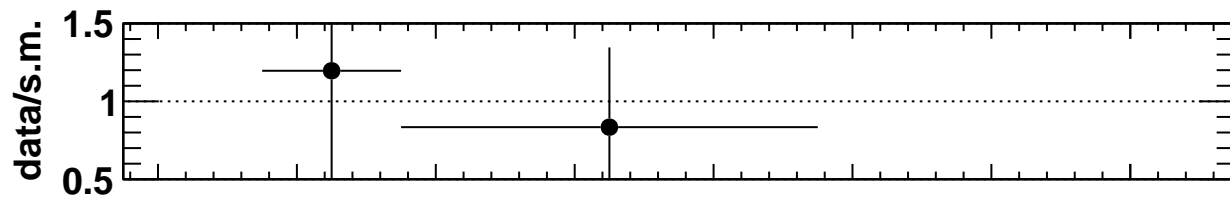
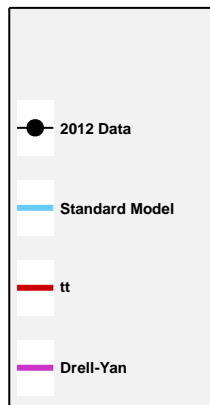


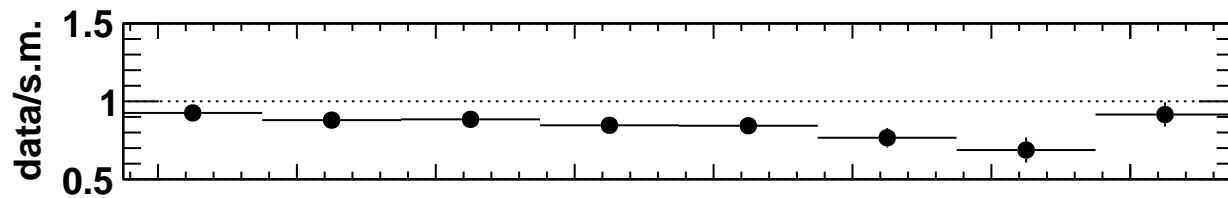
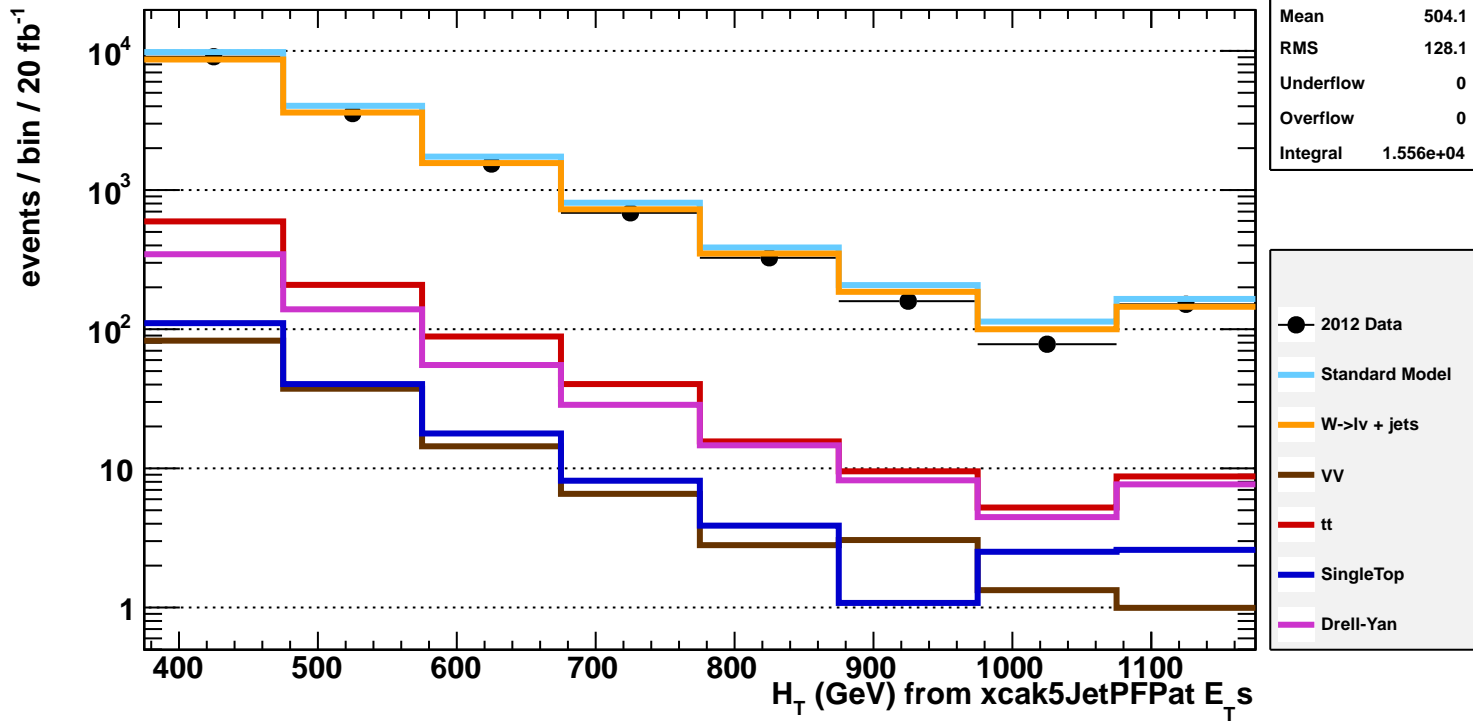




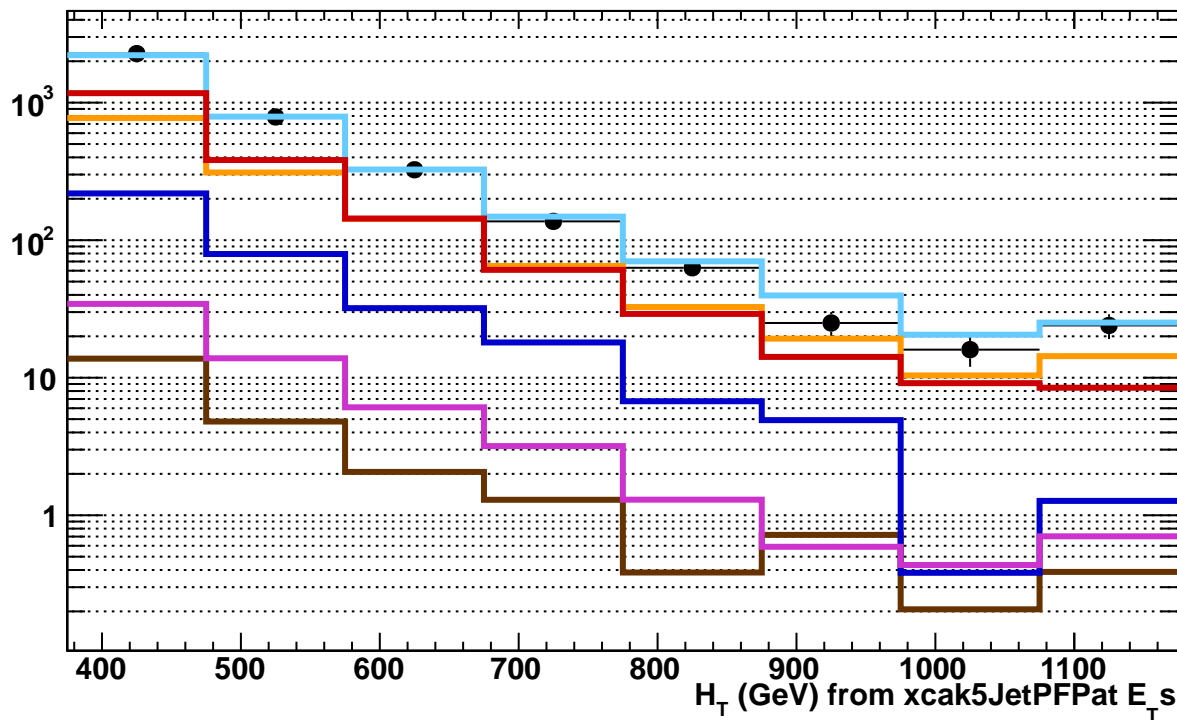


xcak5JetPFSumEtPat_ge4j_ge4b	
Entries	6
Mean	637.8
RMS	105.7
Underflow	0
Overflow	0
Integral	6

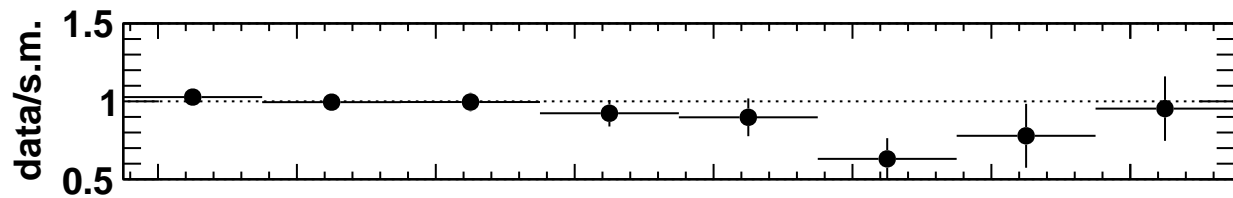
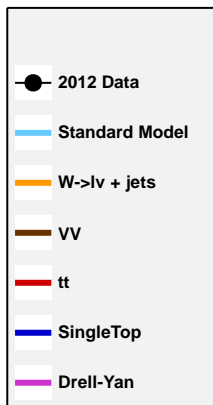




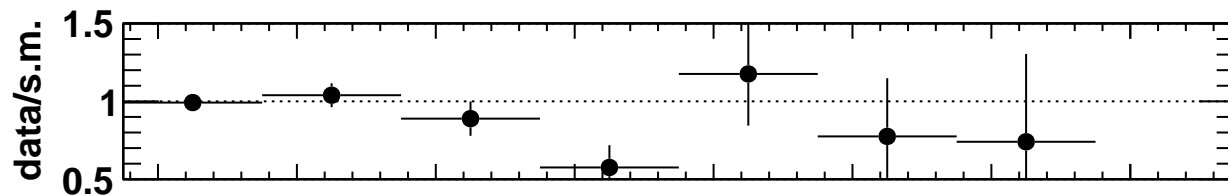
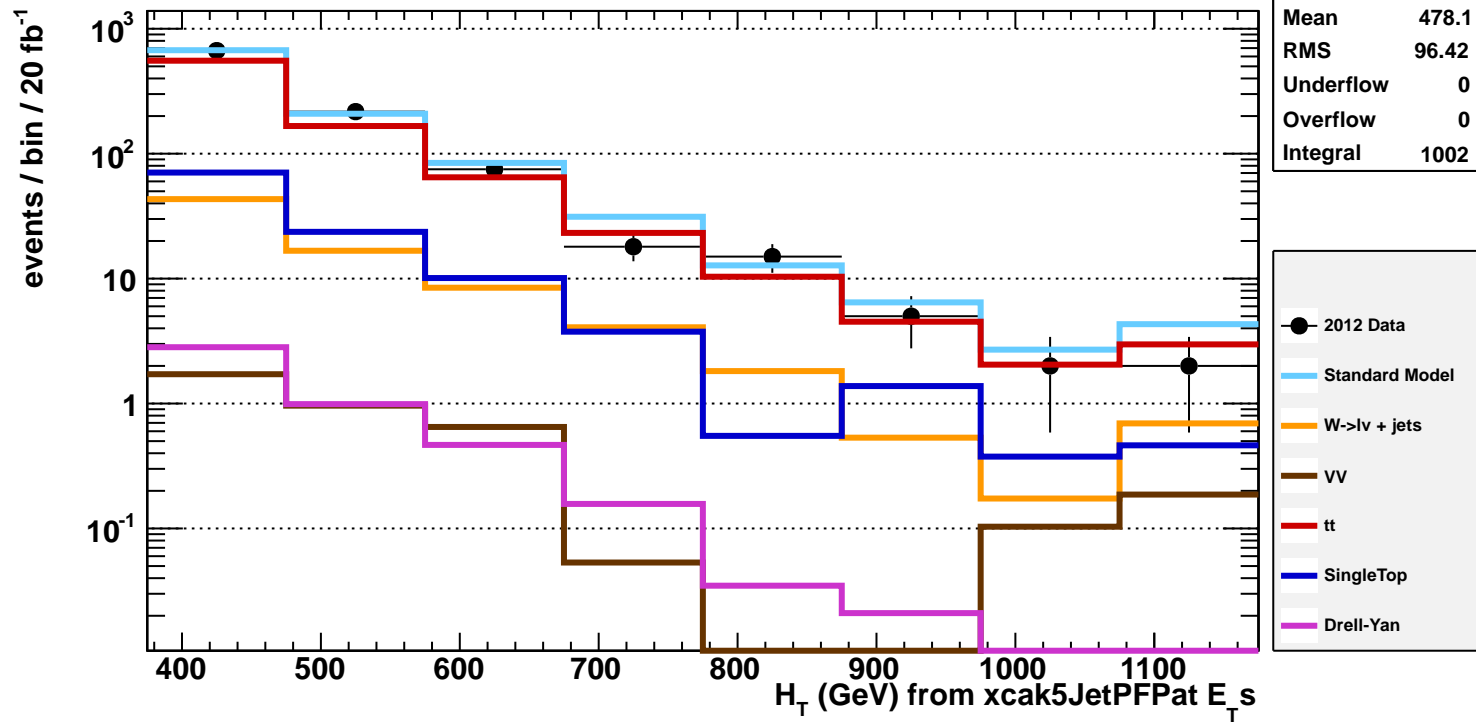
events / bin / 20 fb<sup>-1</sup>

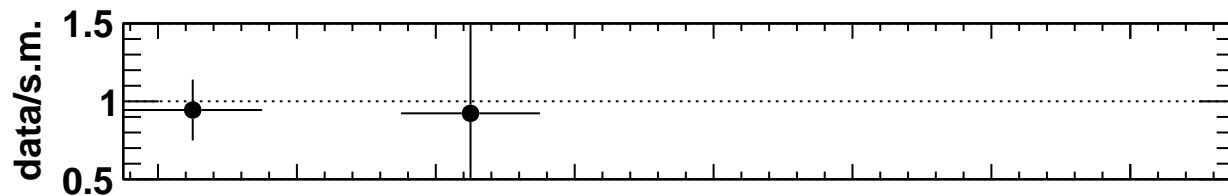
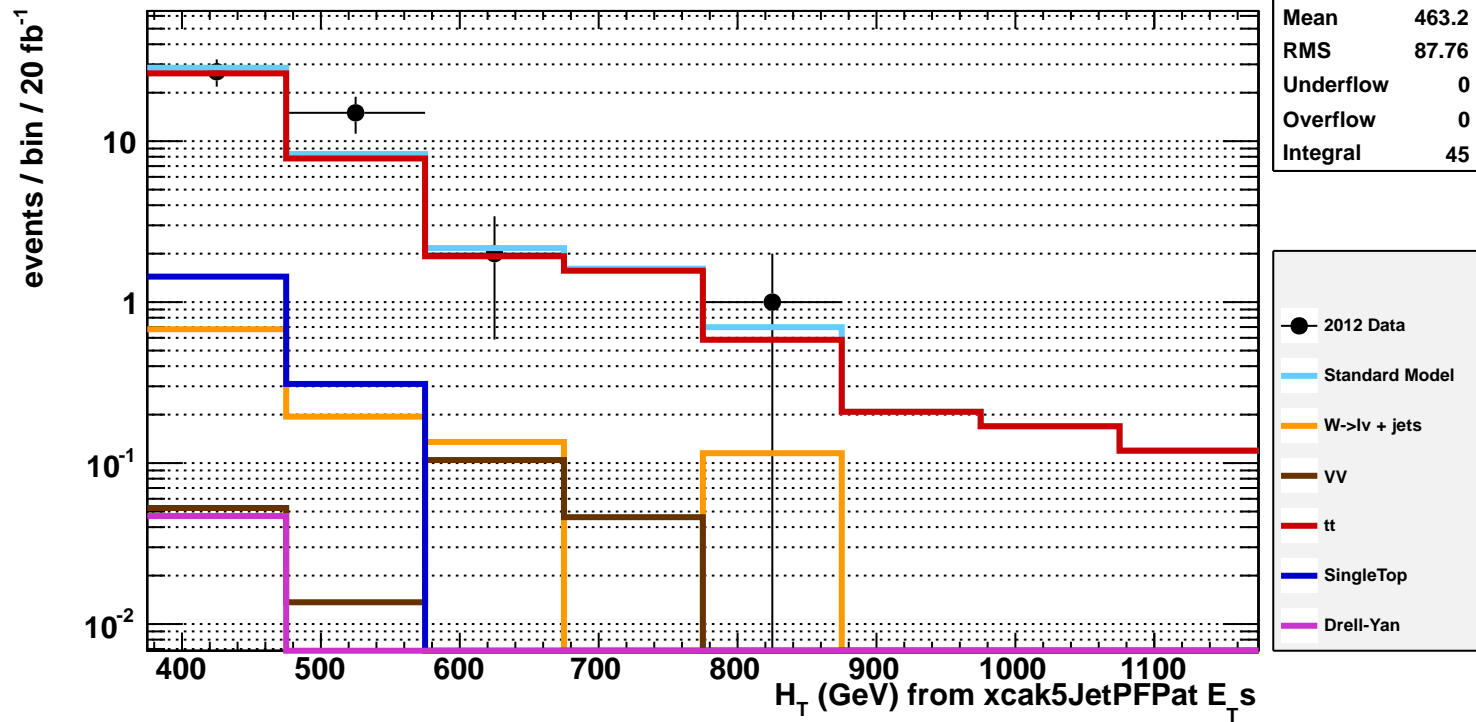


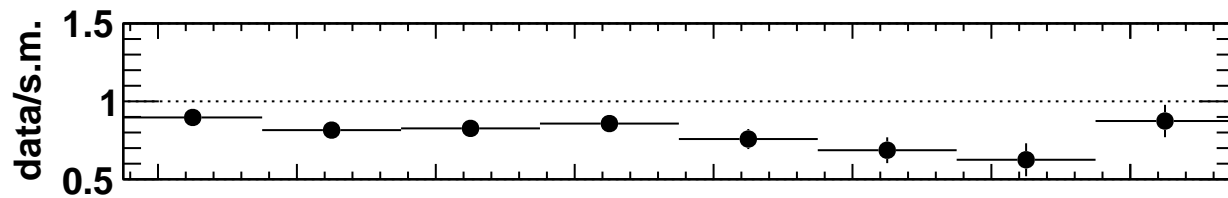
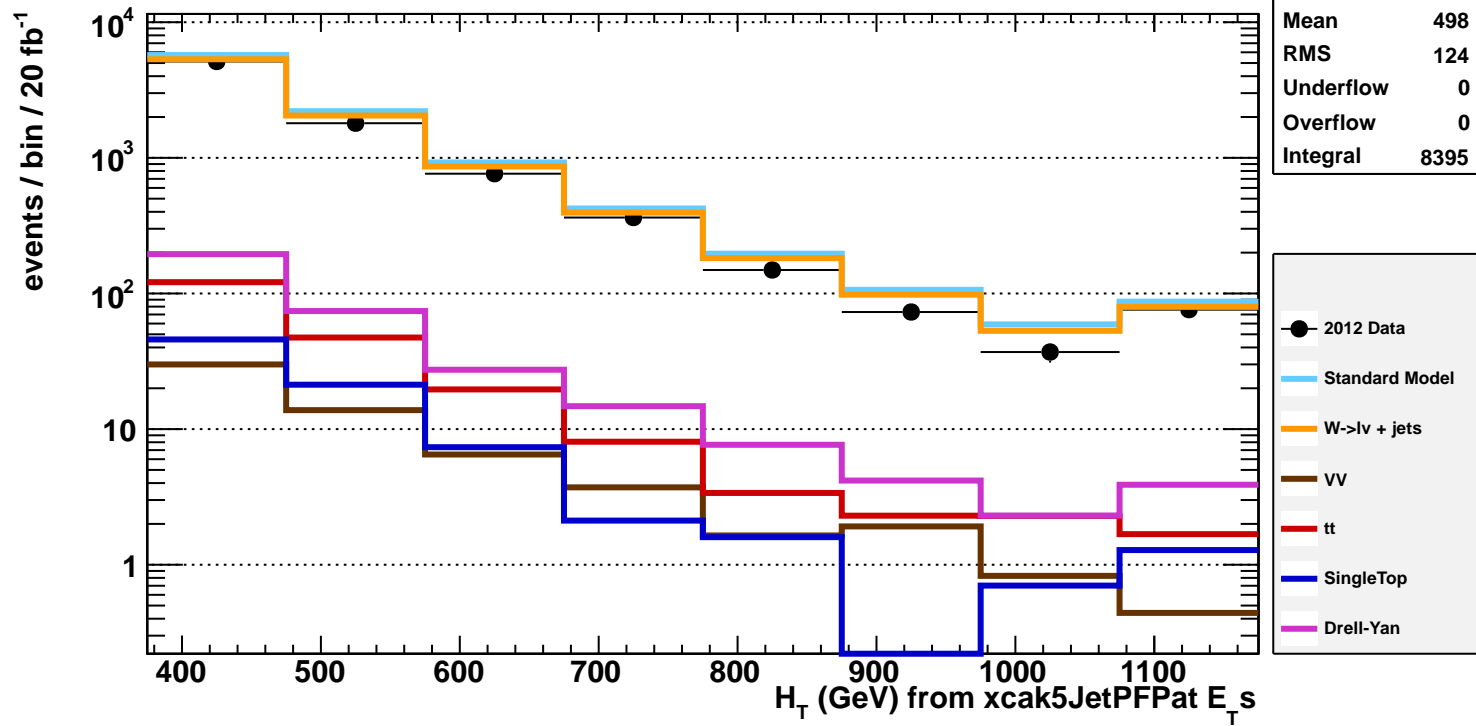
xcak5JetPFSumEtPat_le3j_eq1b	
Entries	3649
Mean	493.2
RMS	117.1
Underflow	0
Overflow	0
Integral	3649

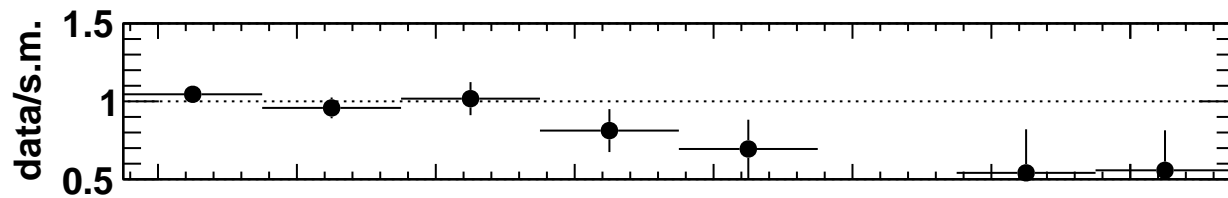
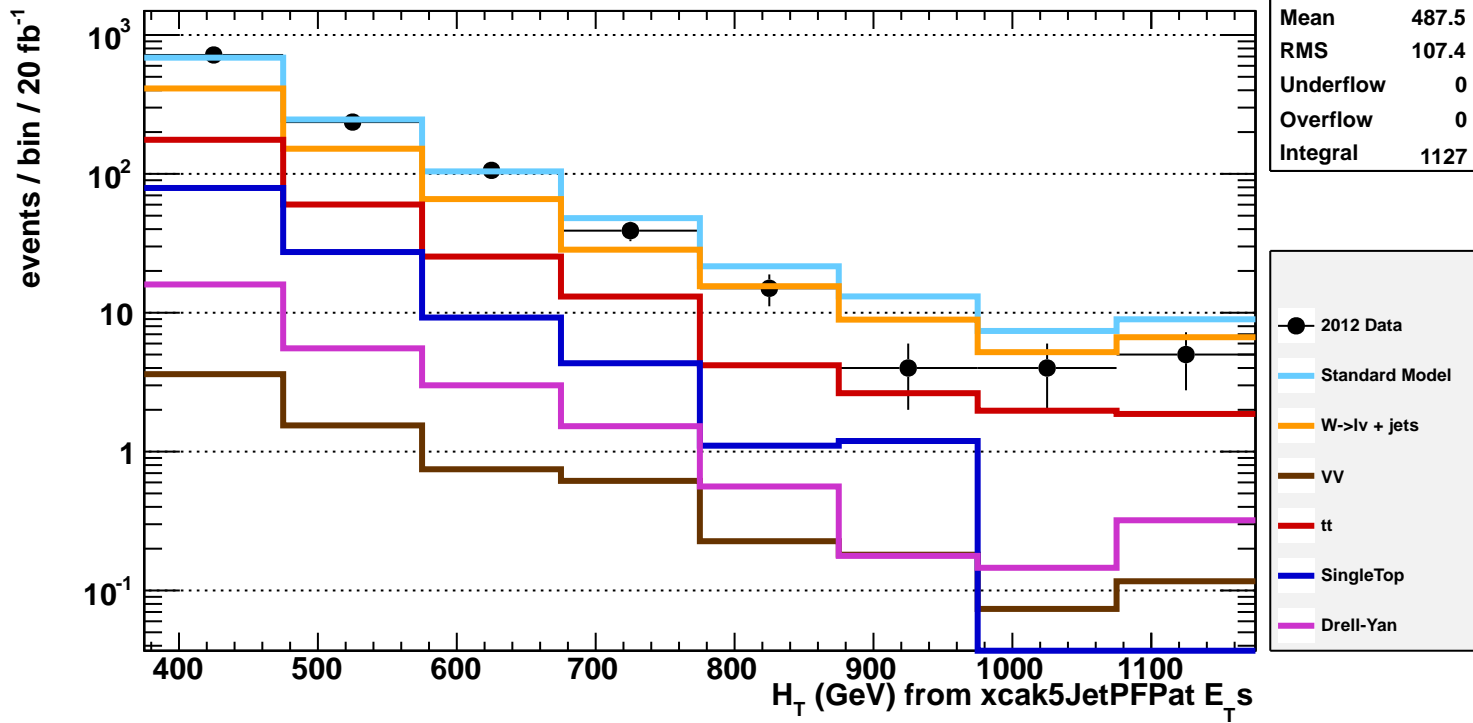






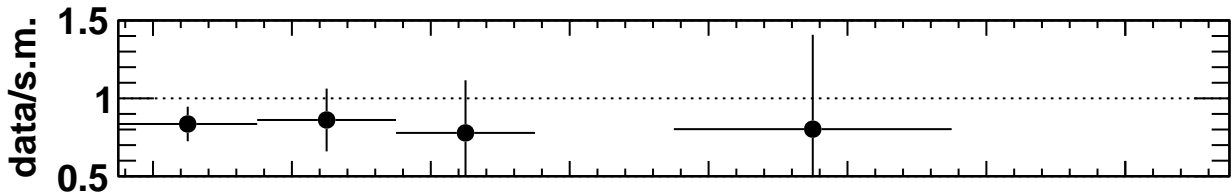
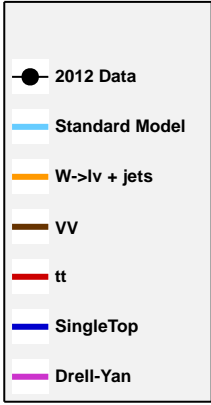
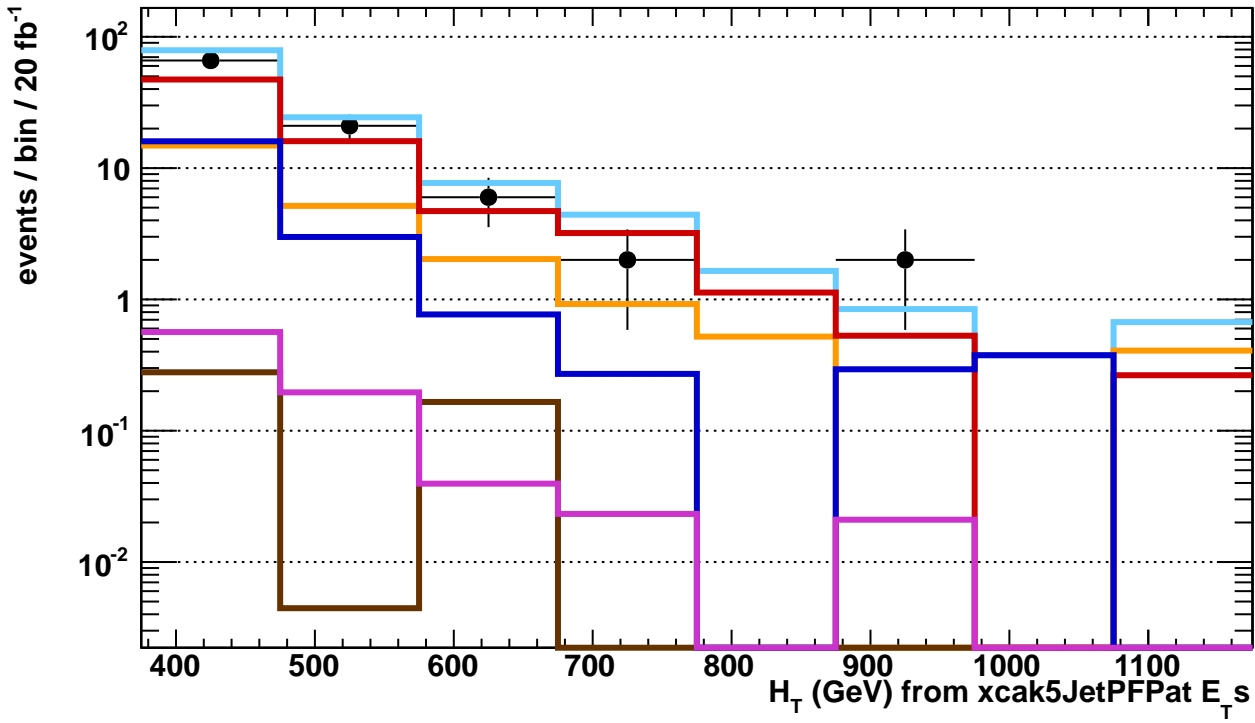






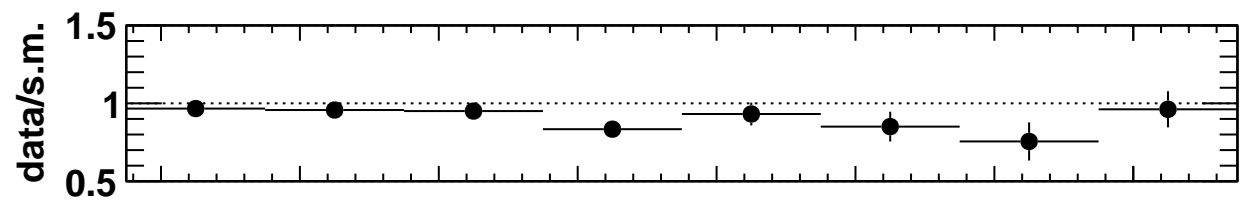
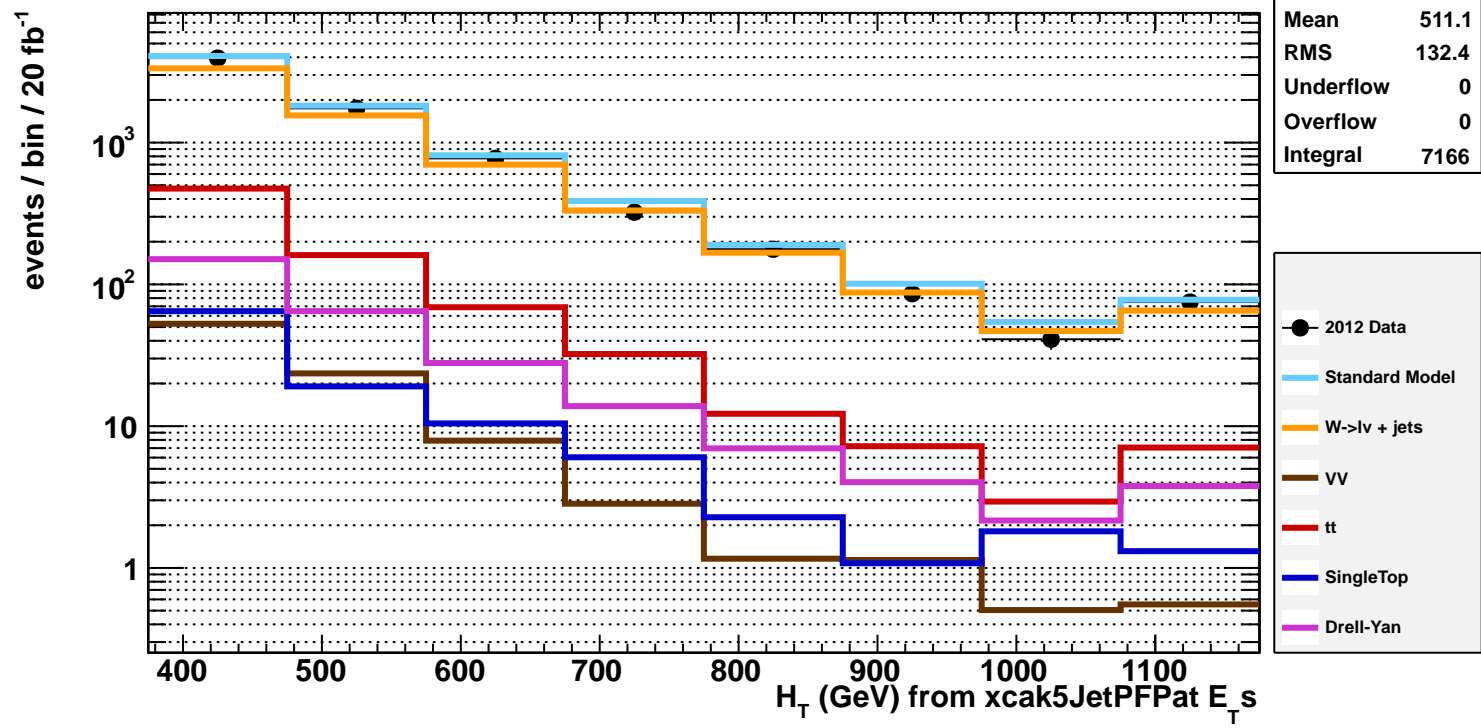
xcak5JetPFSumEtPat\_eq2\_eq2b

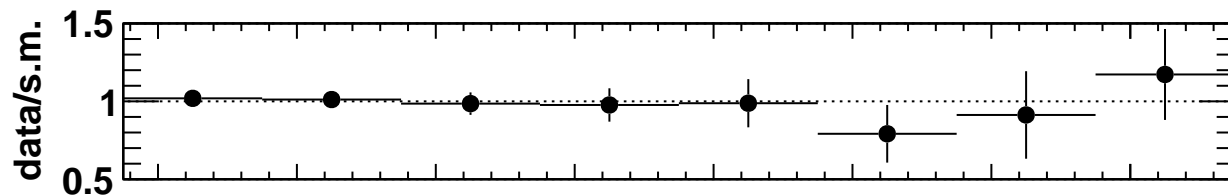
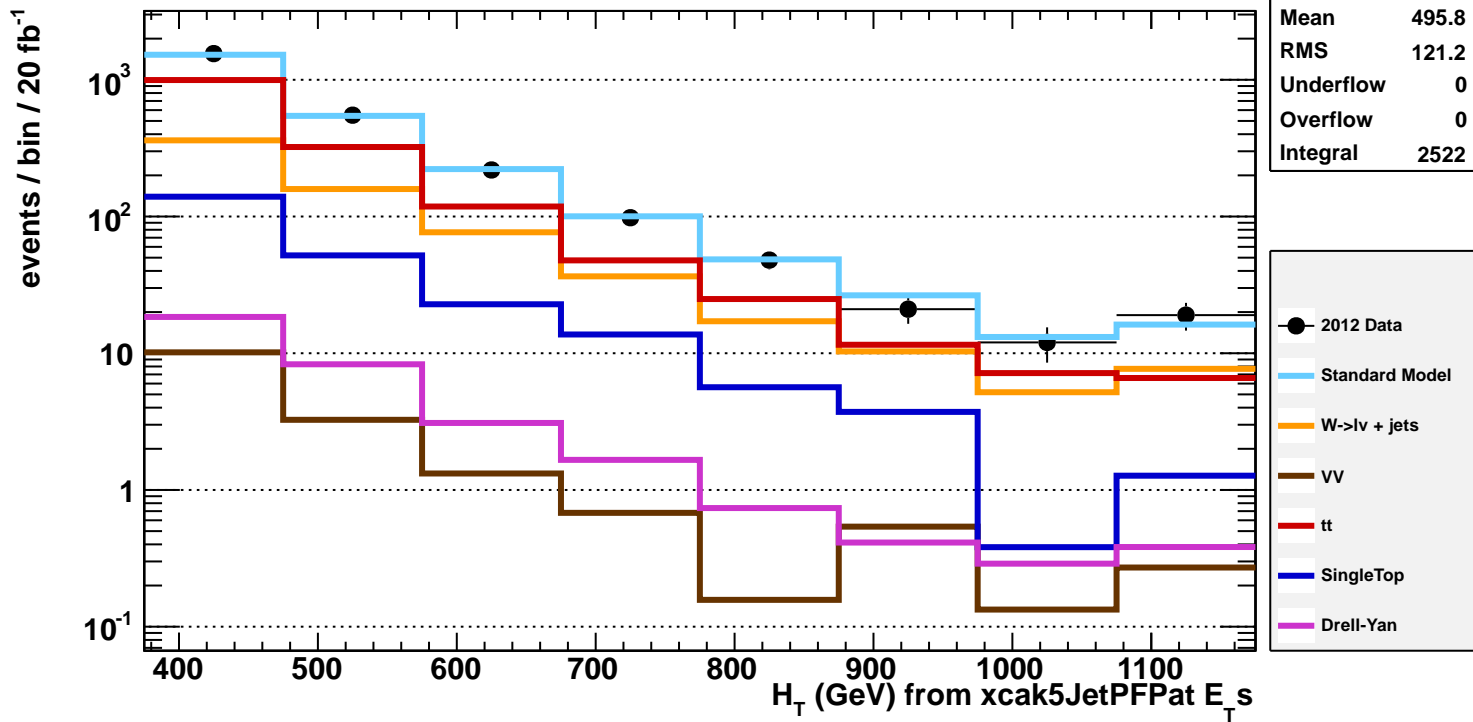
Entries	97
Mean	465.7
RMS	98.34
Underflow	0
Overflow	0
Integral	97



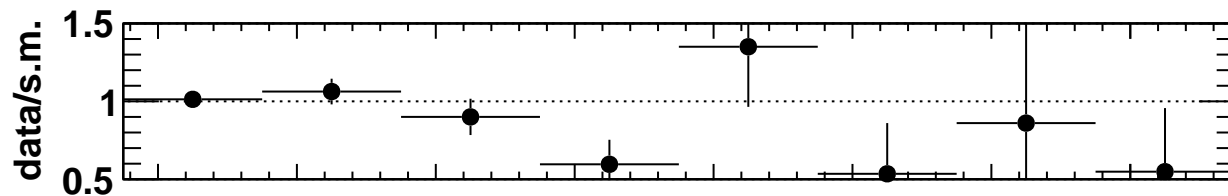
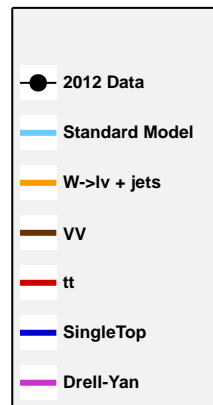
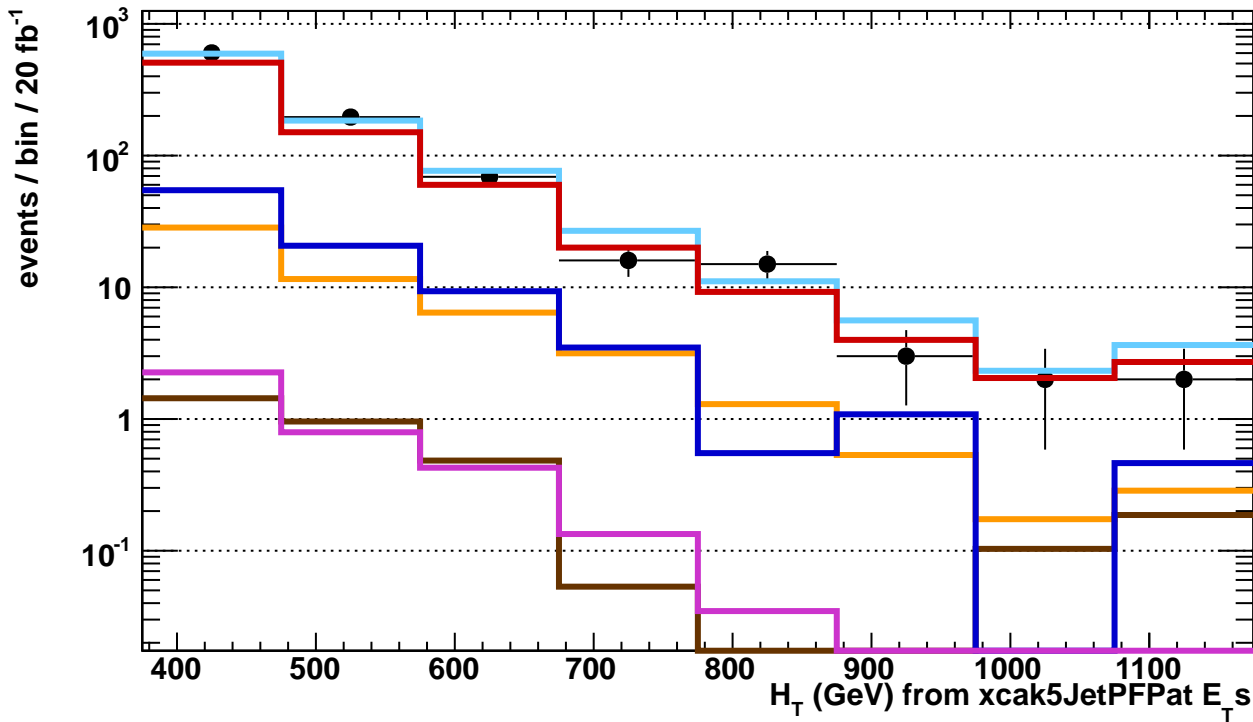
xcak5JetPFSumEtPat\_eq3j\_eq0b

Entries	7166
Mean	511.1
RMS	132.4
Underflow	0
Overflow	0
Integral	7166



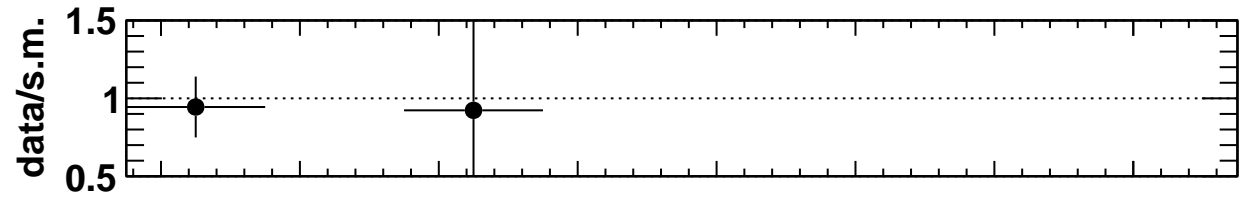
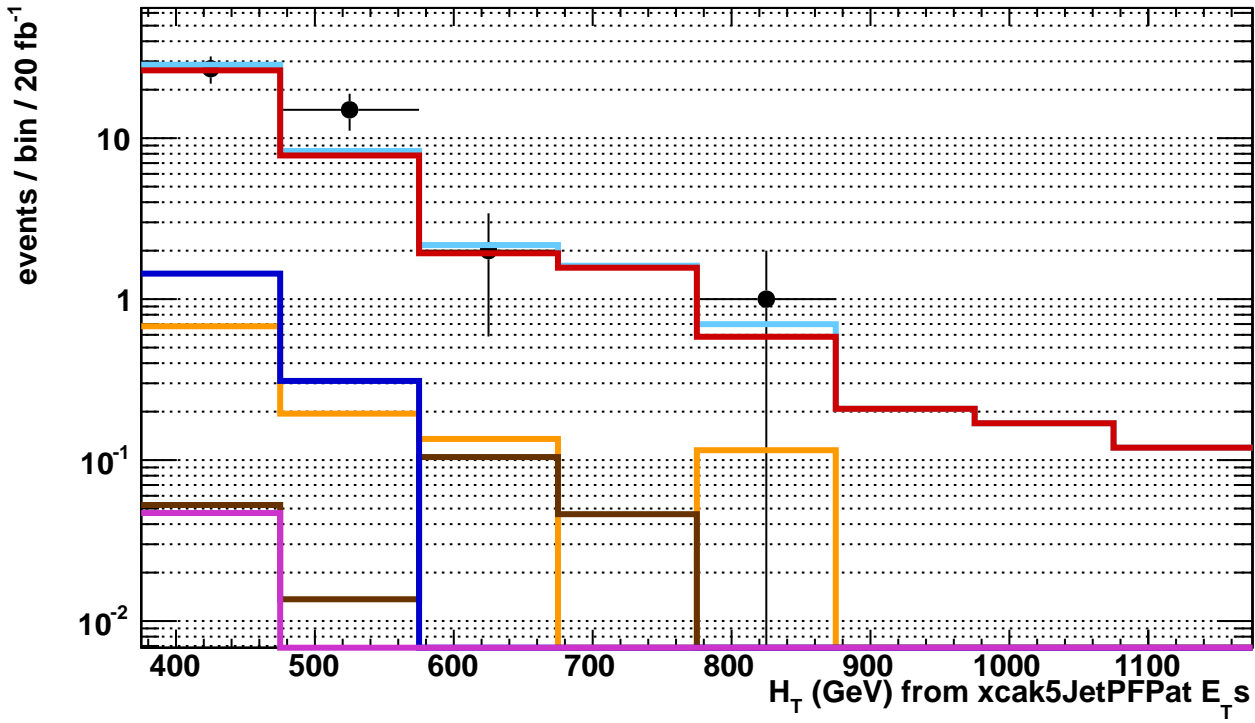


xcak5JetPFSumEtPat_eq3j_eq2b	
Entries	905
Mean	478.4
RMS	96.53
Underflow	0
Overflow	0
Integral	905



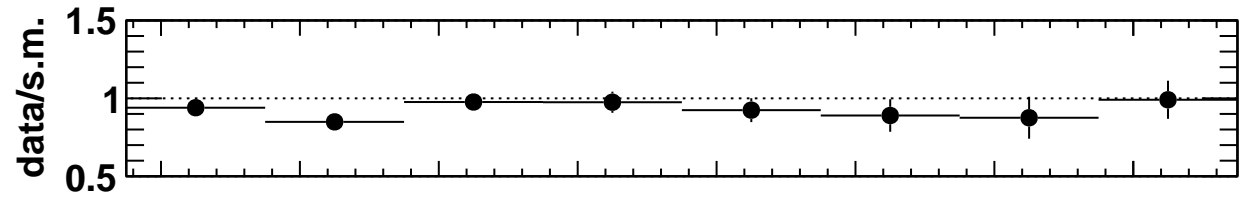
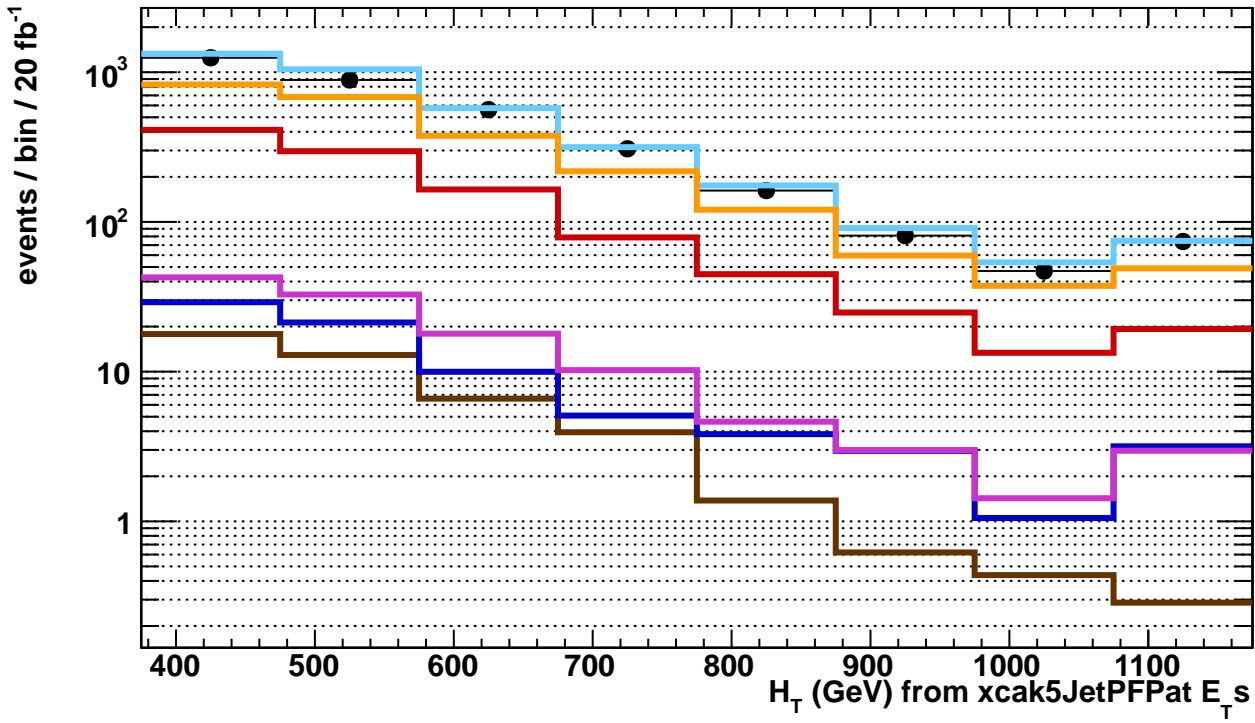


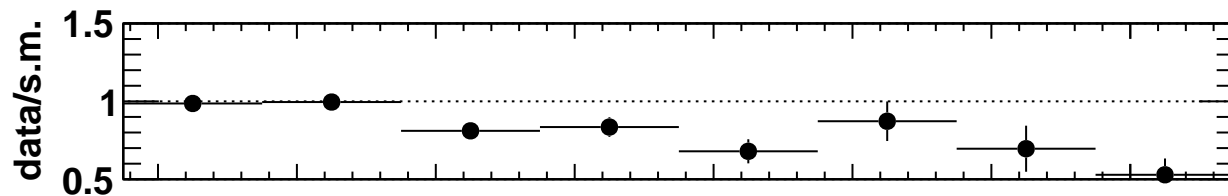
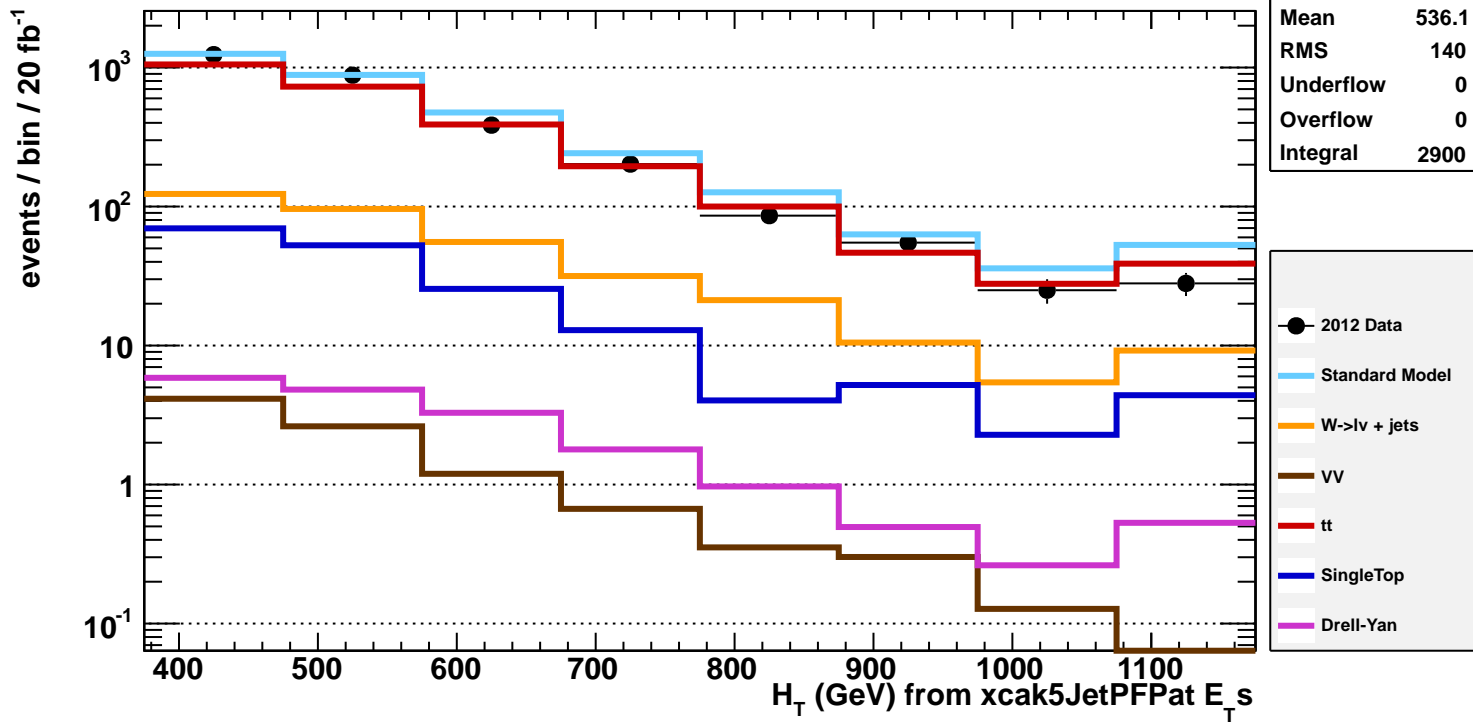
xcak5JetPFSumEtPat_eq3j_eq3b	
Entries	45
Mean	463.2
RMS	87.76
Underflow	0
Overflow	0
Integral	45

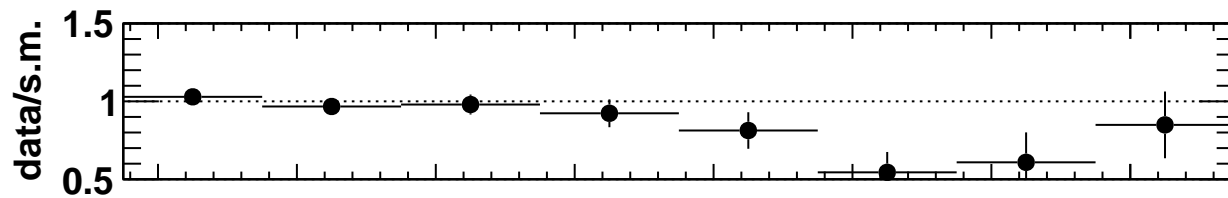
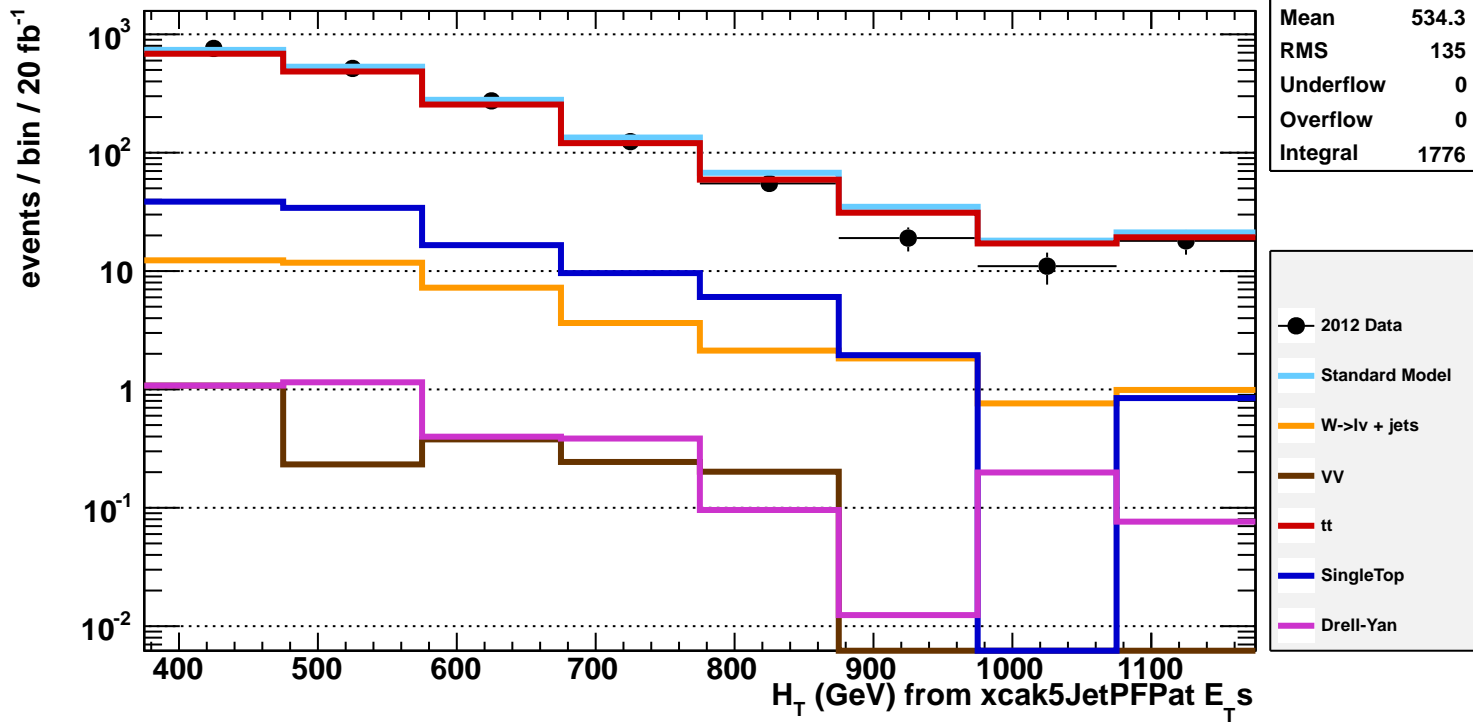


xcak5JetPFSumEtPat\_ge4j\_eq0b

Entries	3371
Mean	567.1
RMS	163.8
Underflow	0
Overflow	0
Integral	3371

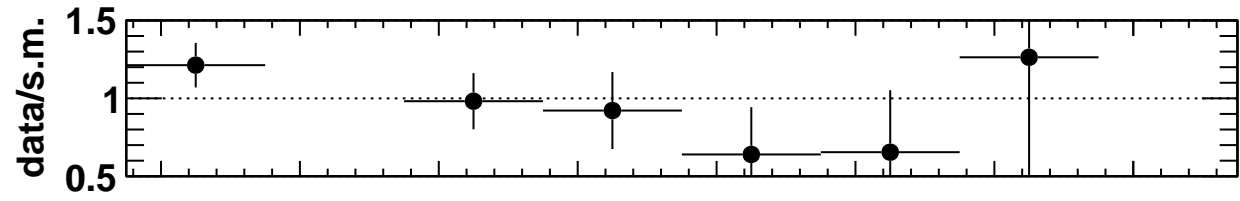
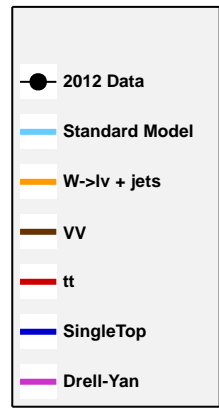
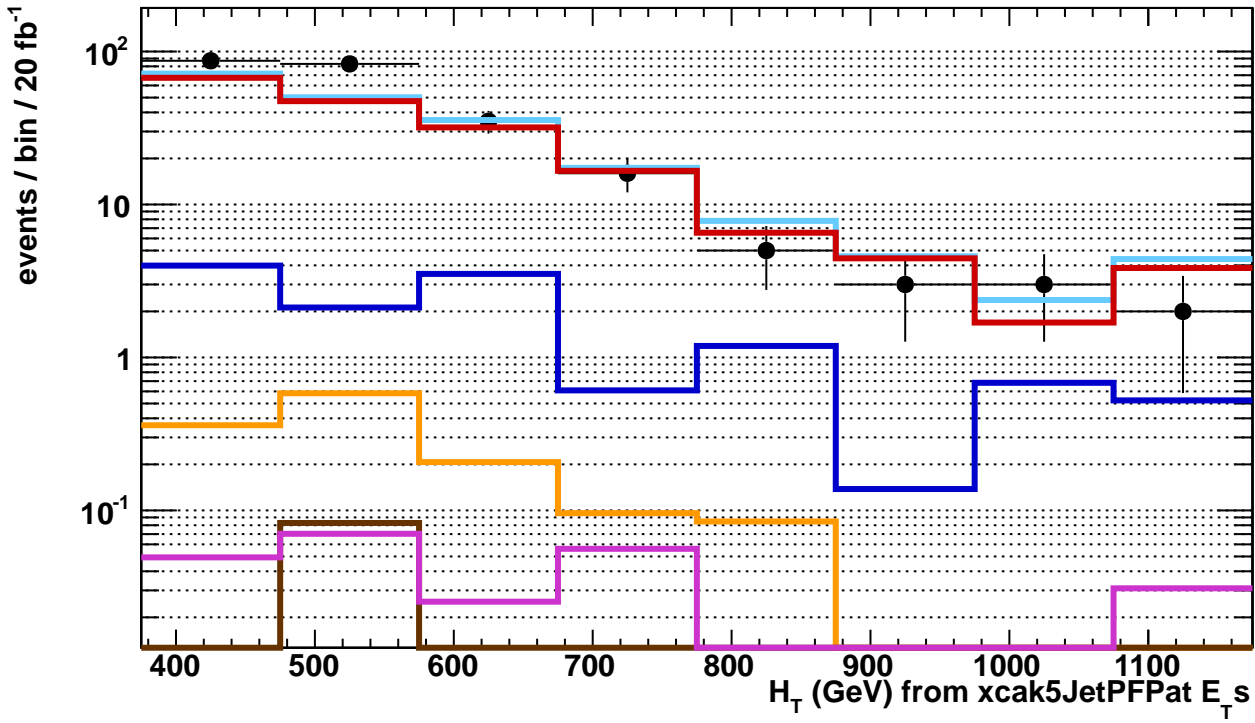




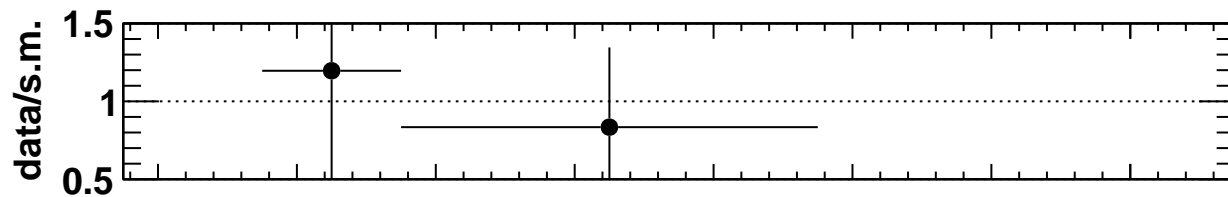
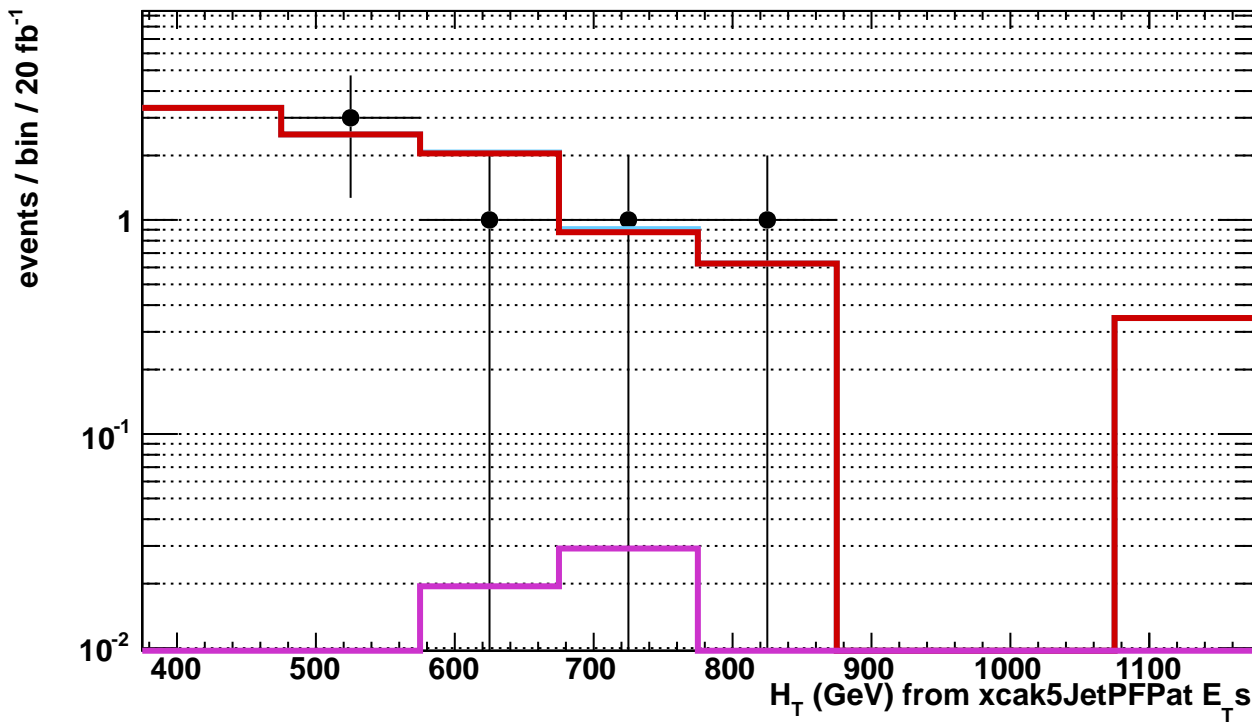


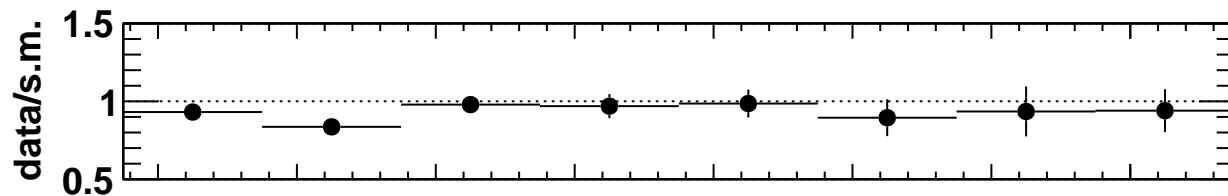
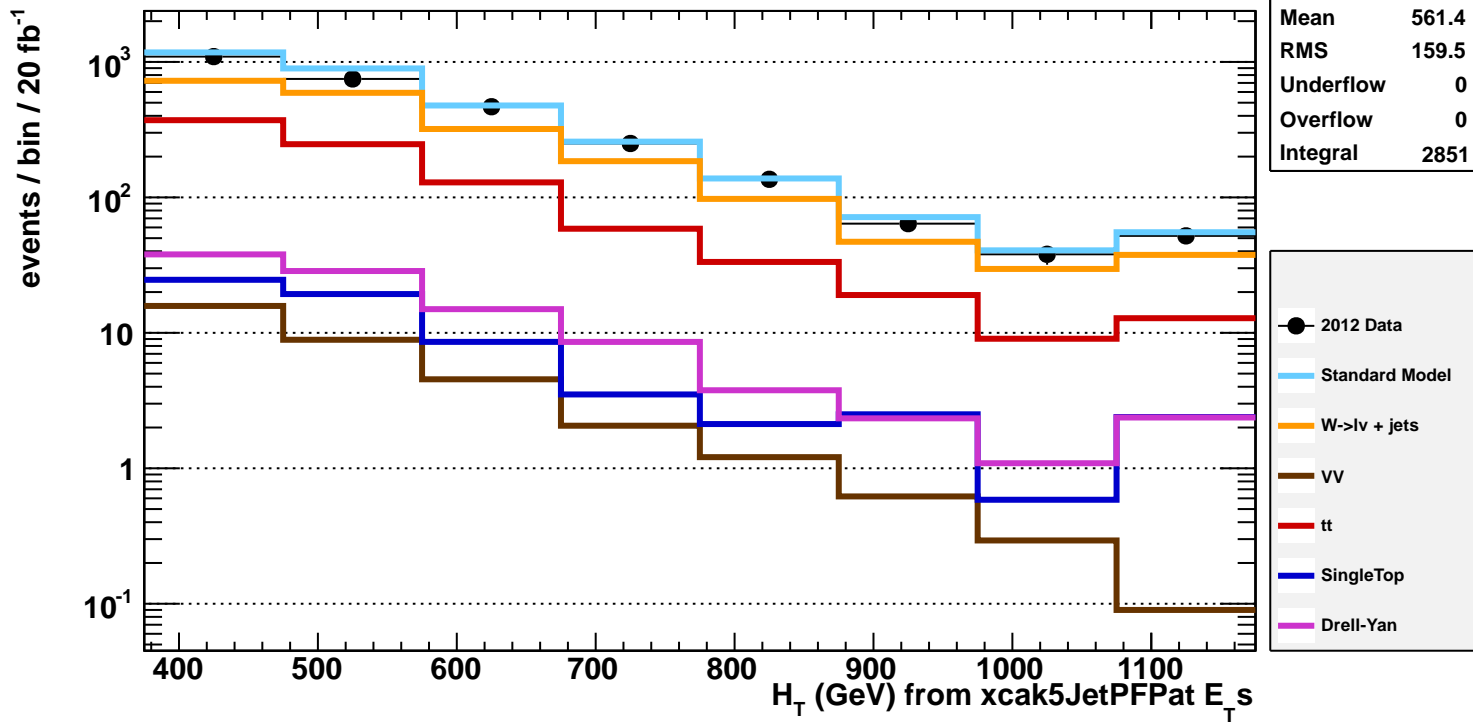
xcak5JetPFSumEtPat\_ge4j\_eq3b

Entries	234
Mean	539.5
RMS	134.1
Underflow	0
Overflow	0
Integral	234

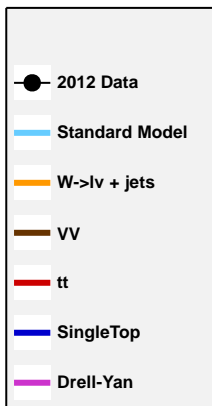
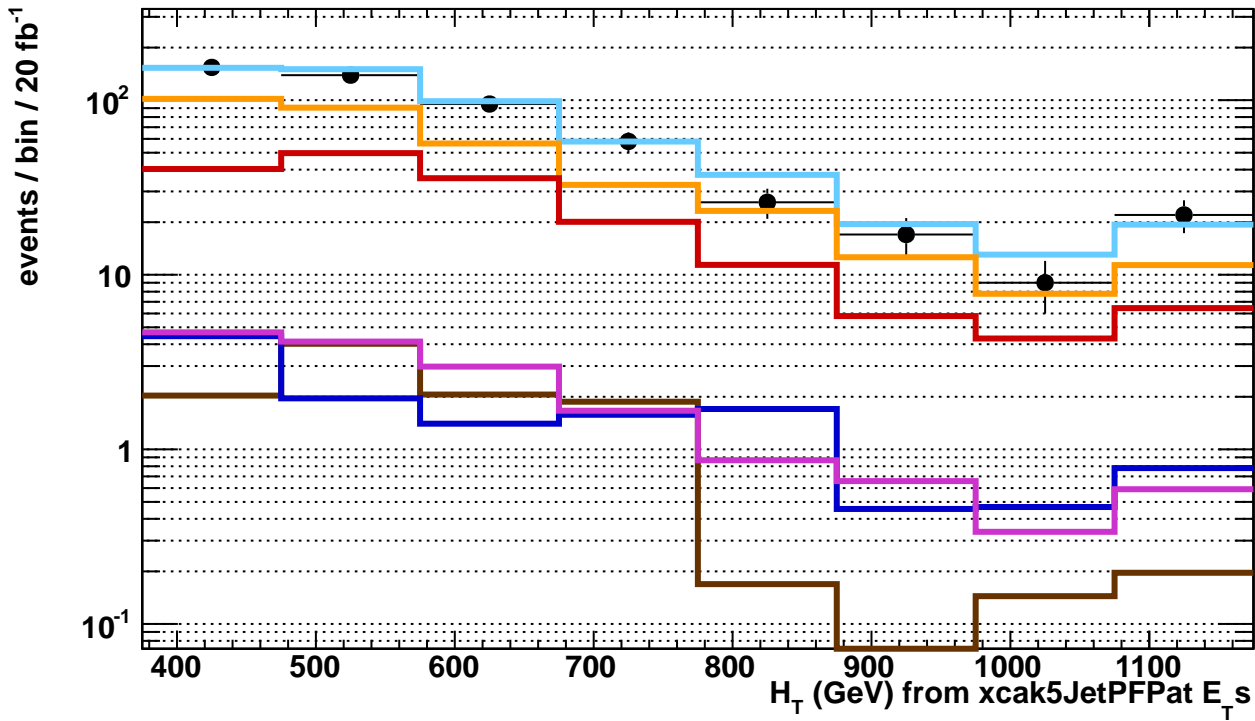


xcak5JetPFSumEtPat_ge4j_ge4b	
Entries	6
Mean	637.8
RMS	105.7
Underflow	0
Overflow	0
Integral	6

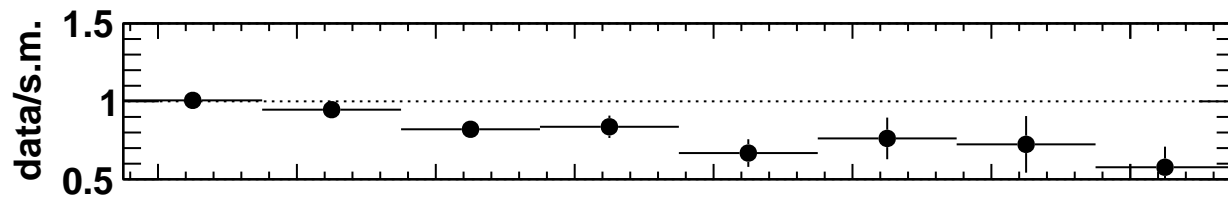
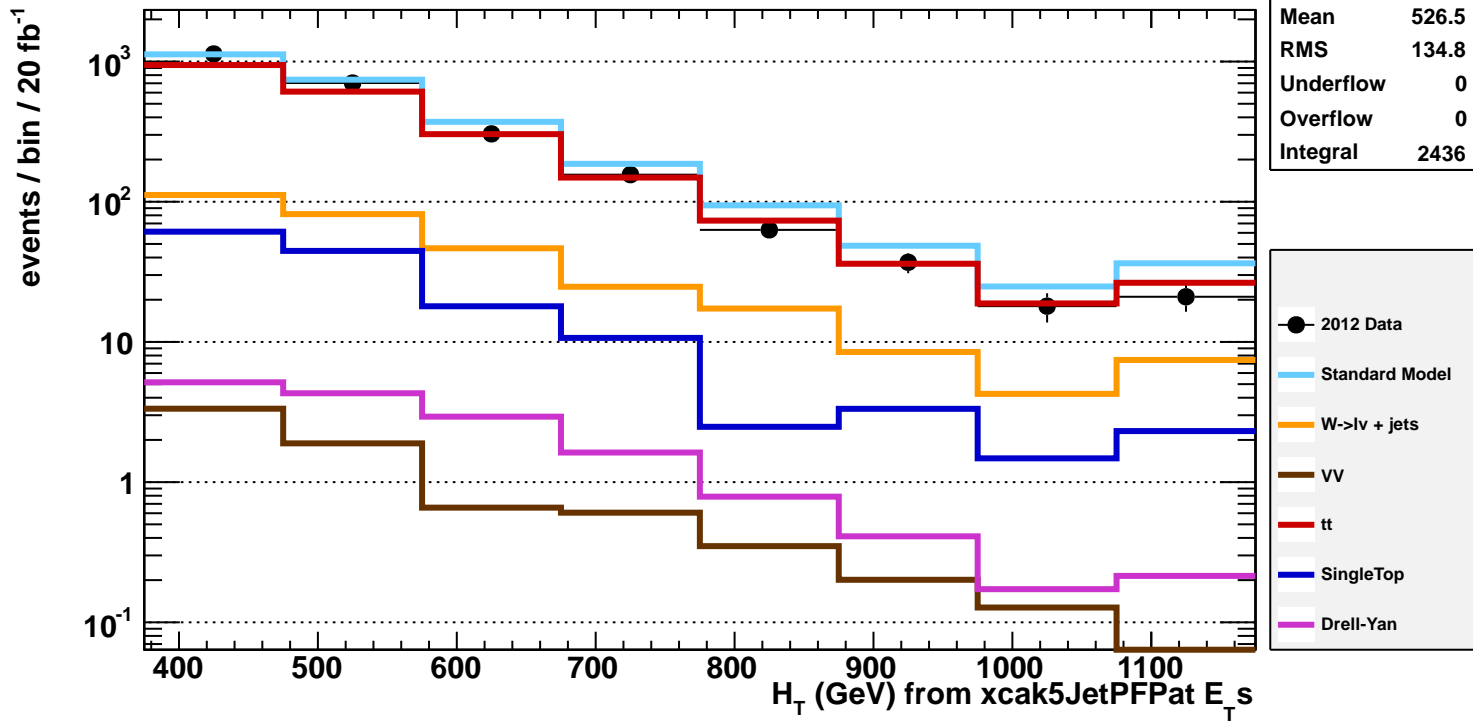


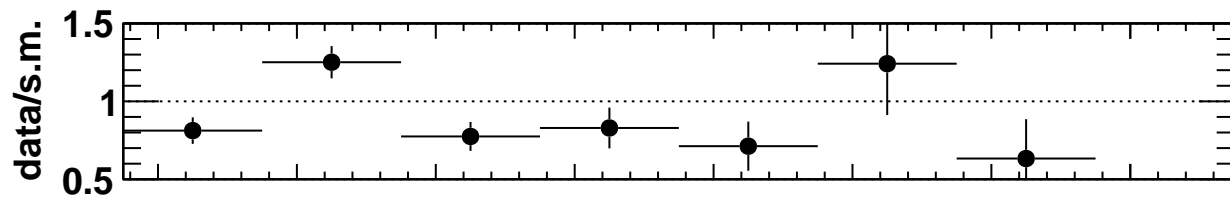
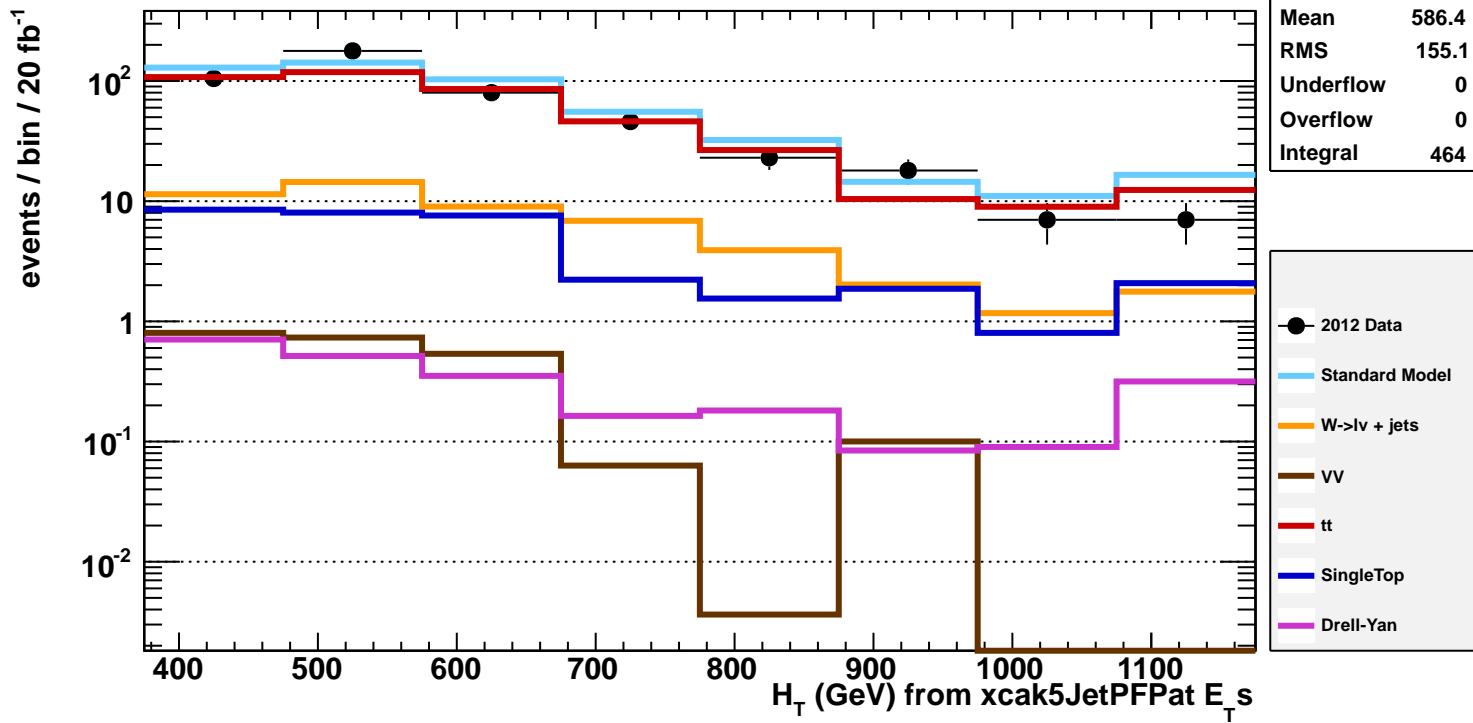


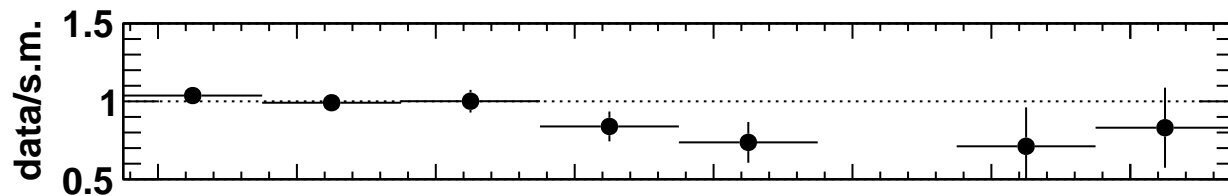
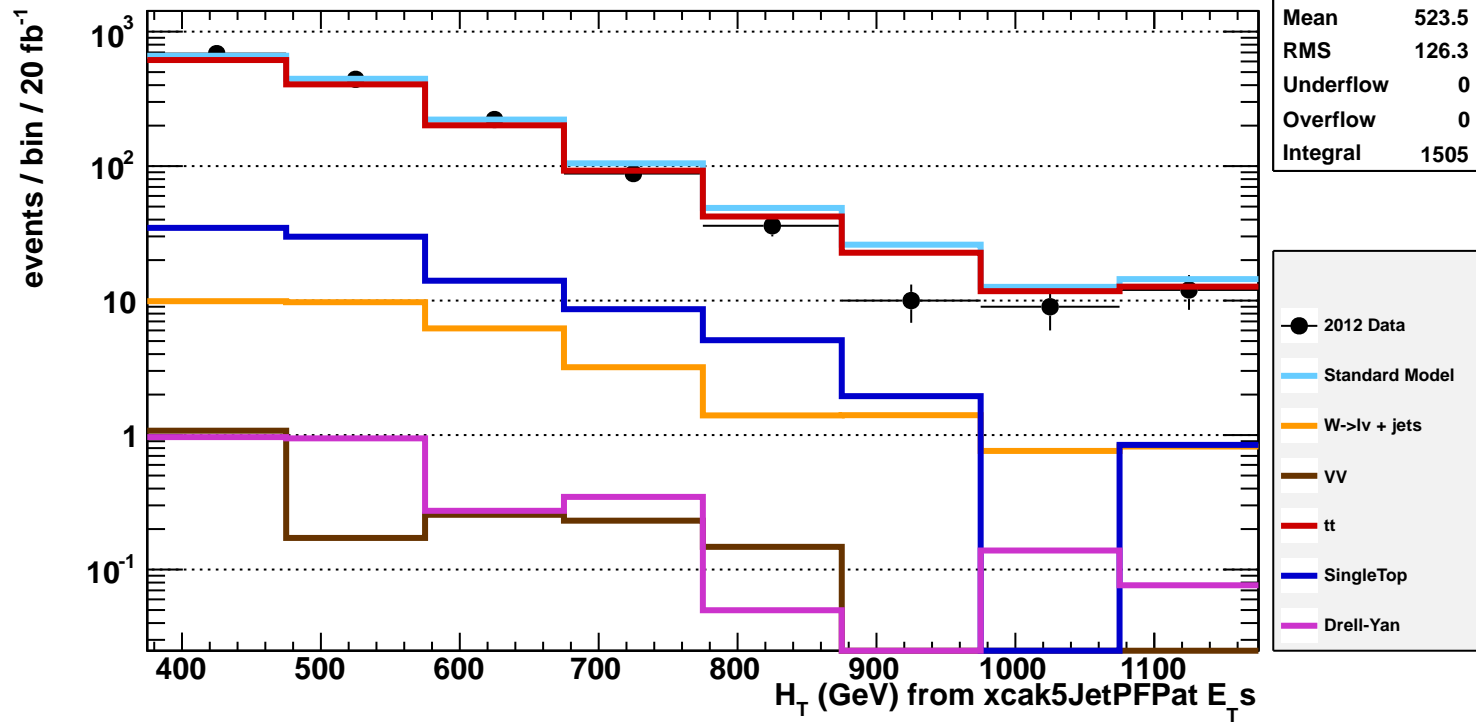
xcak5JetPFSumEtPat_ge4j_eq0b_dRl65	
Entries	520
Mean	598.1
RMS	182.2
Underflow	0
Overflow	0
Integral	520

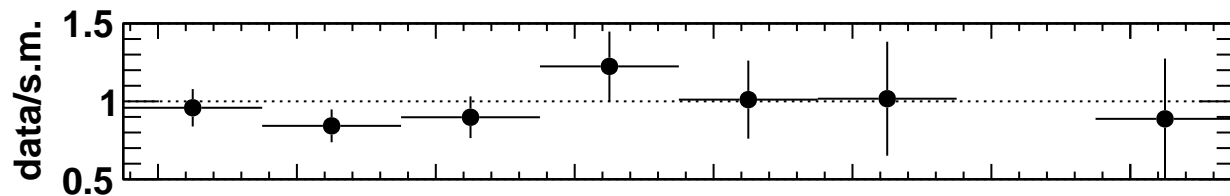
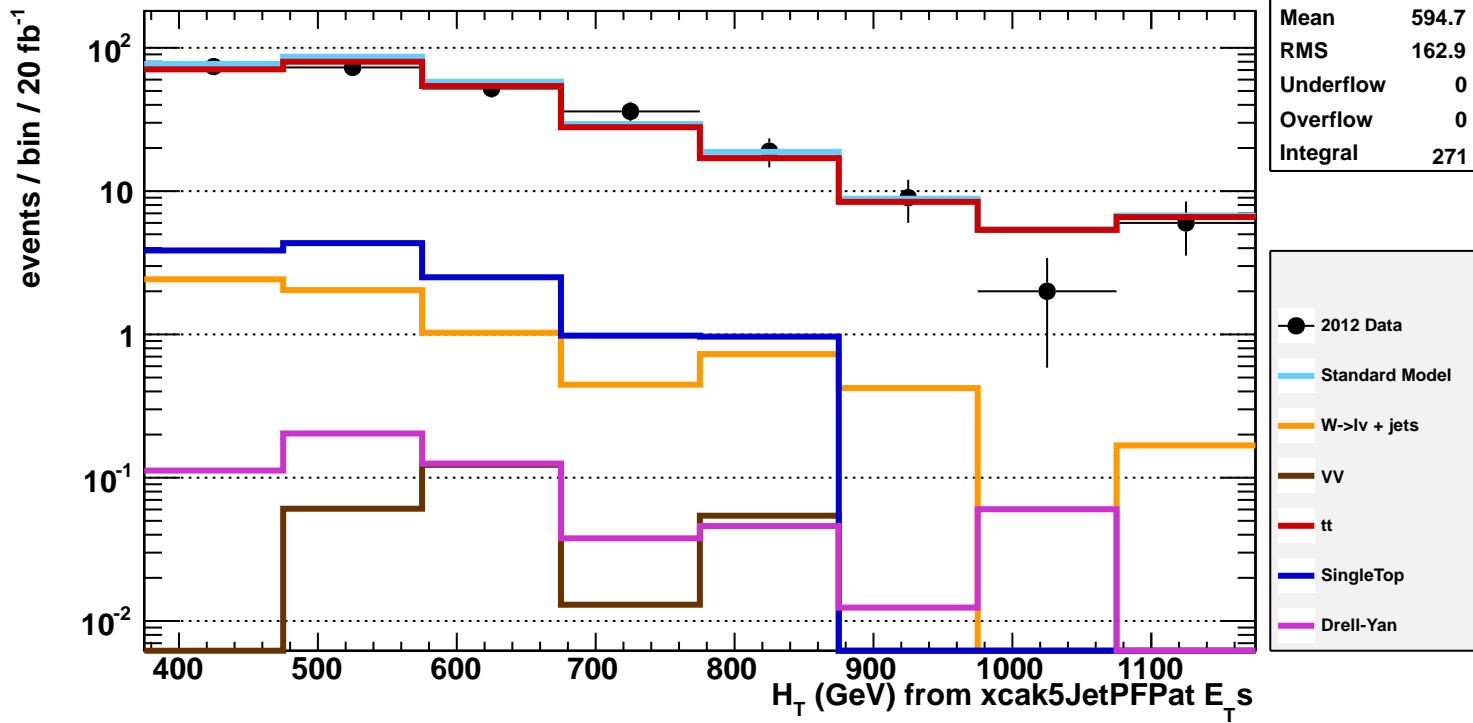




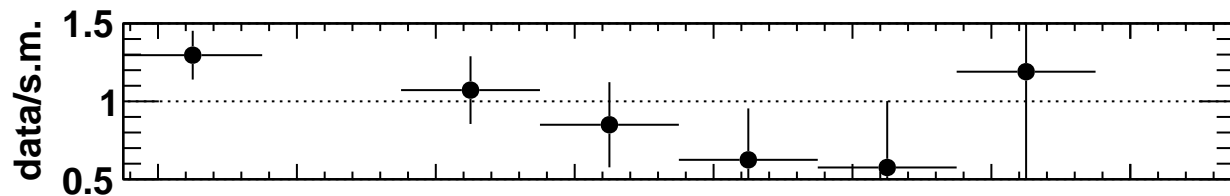
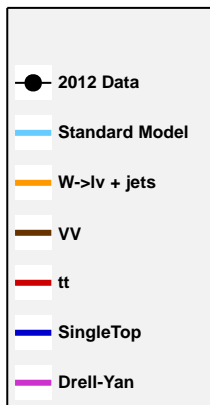
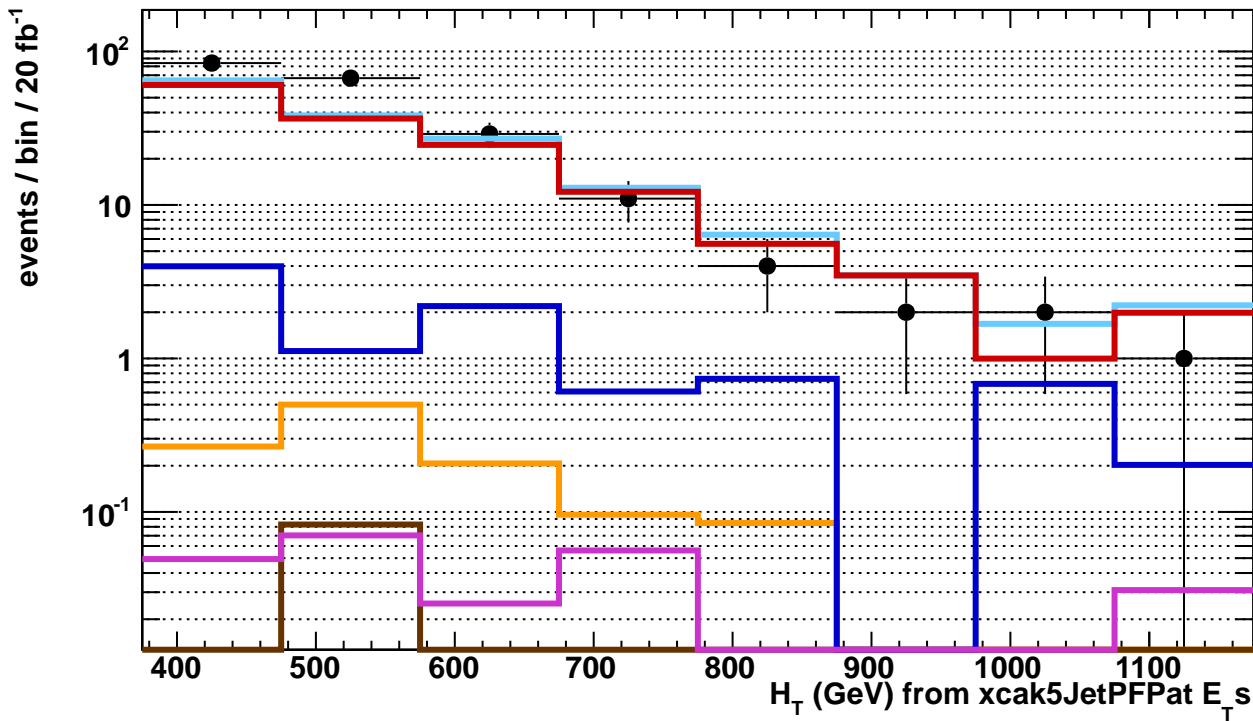




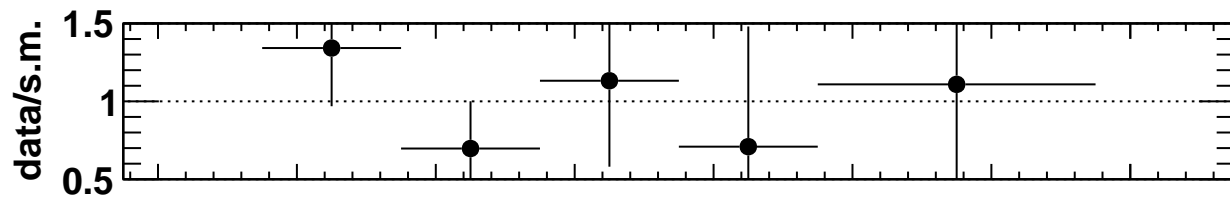
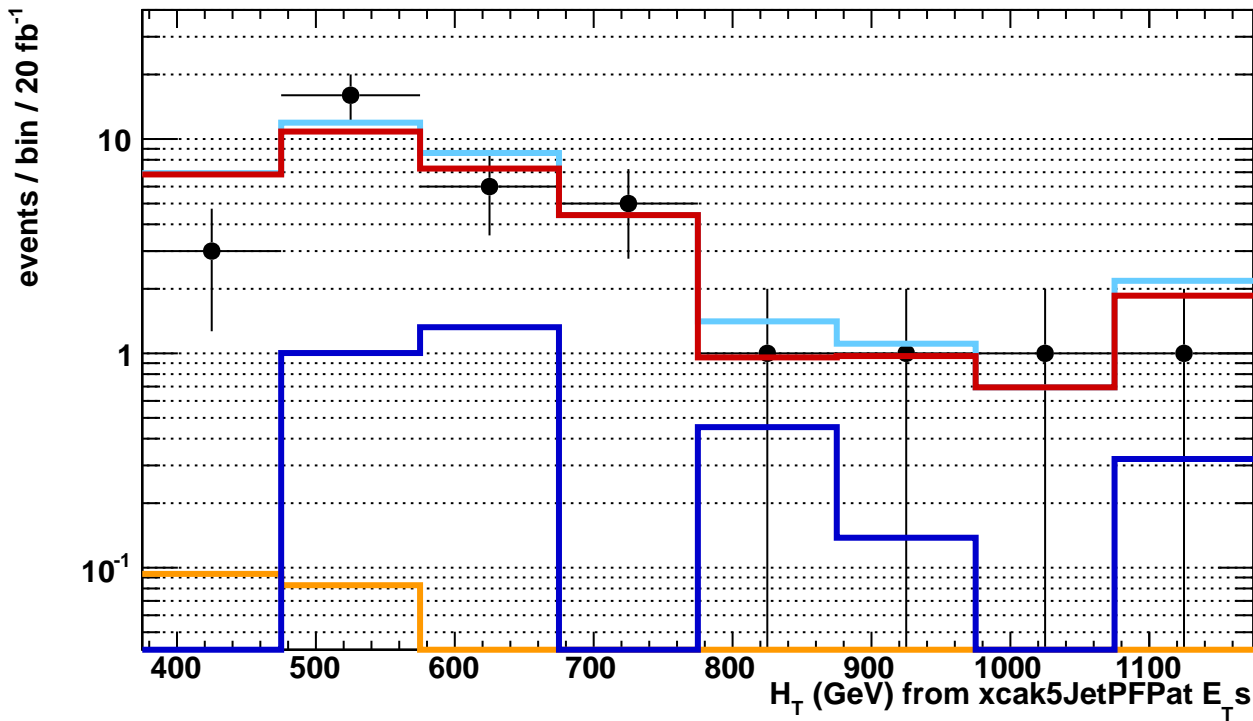




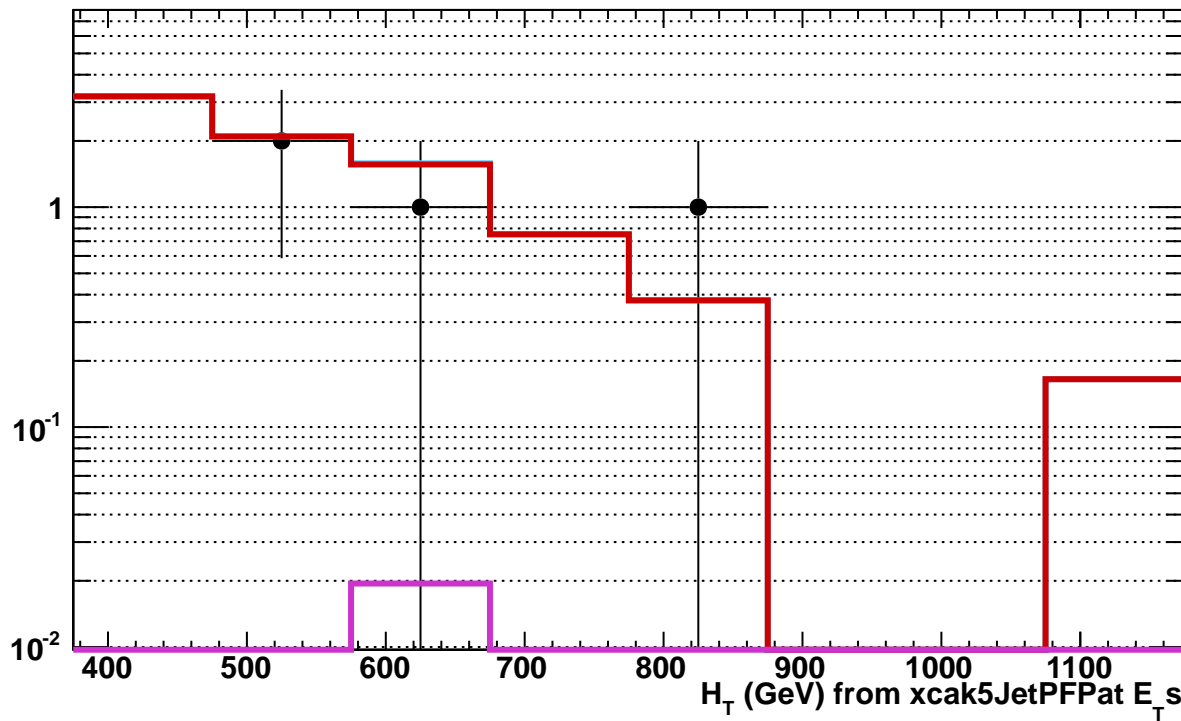
xcak5JetPFSumEtPat_ge4J_eq3b_dRge65	
Entries	200
Mean	526.5
RMS	124.7
Underflow	0
Overflow	0
Integral	200



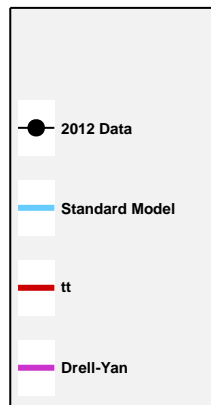
xcak5JetPFSumEtPat_ge4j_eq3b_dRl65	
Entries	34
Mean	610.3
RMS	152.6
Underflow	0
Overflow	0
Integral	34



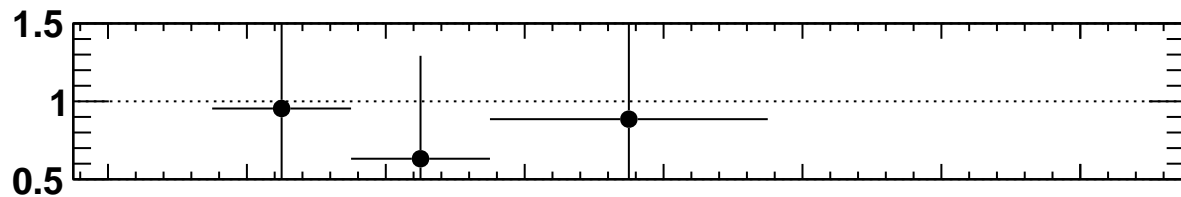
events / bin / 20 fb<sup>-1</sup>

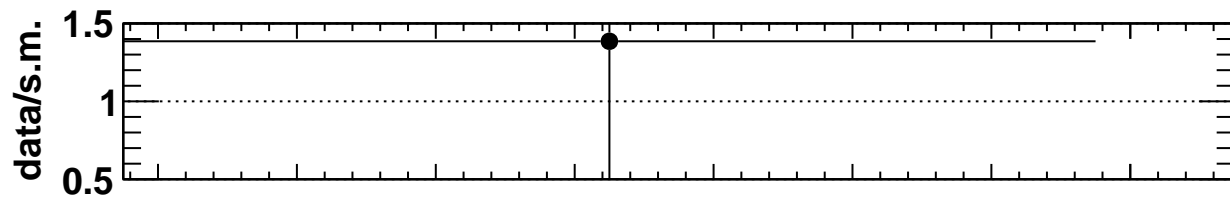
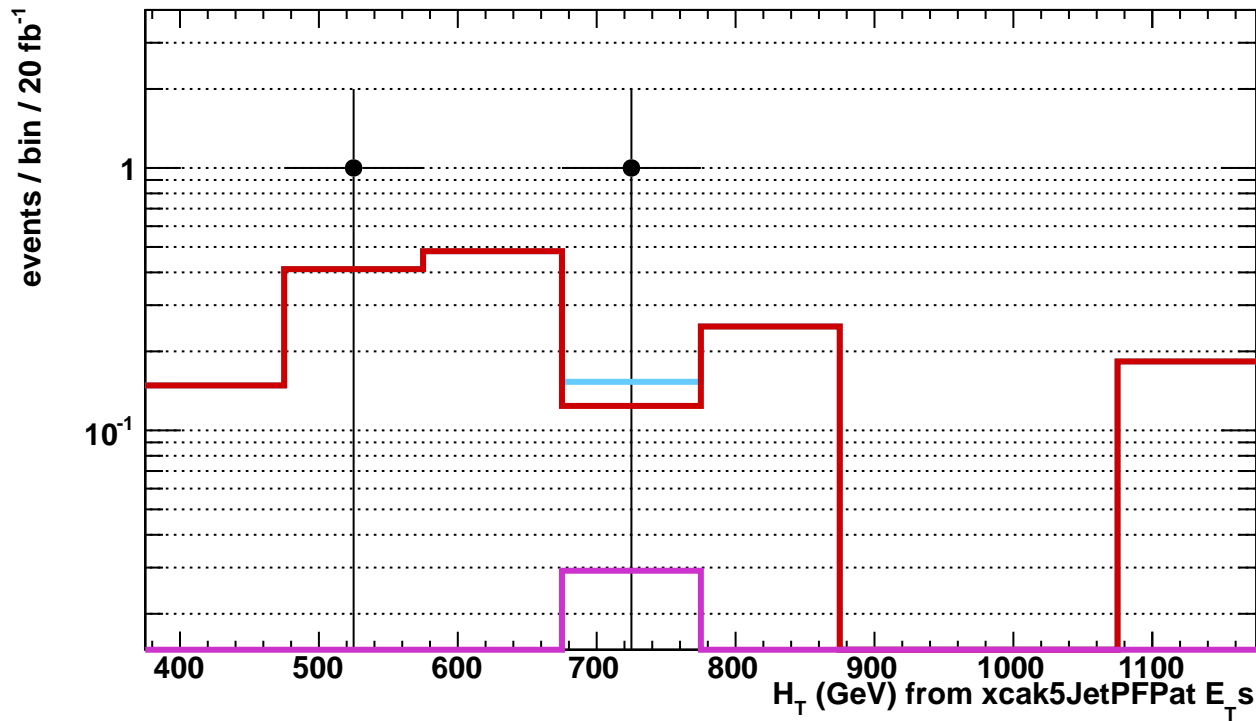


xcak5JetPFSumEtPat_ge4j_ge4b_dRge65	
Entries	4
Mean	639.7
RMS	122.2
Underflow	0
Overflow	0
Integral	4

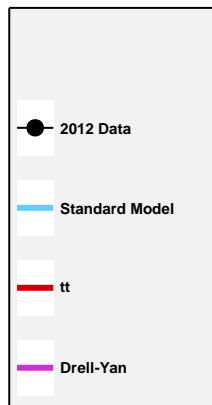


data/s.m.

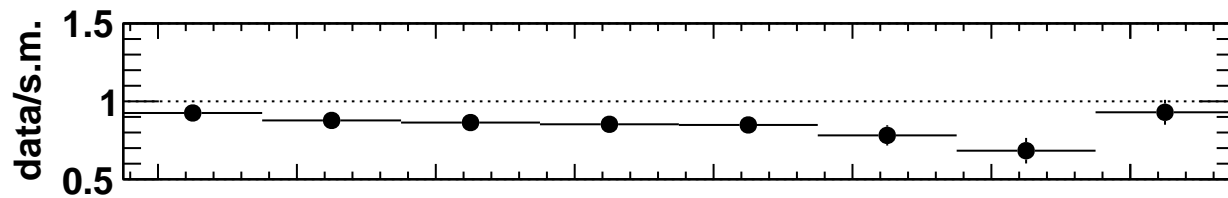
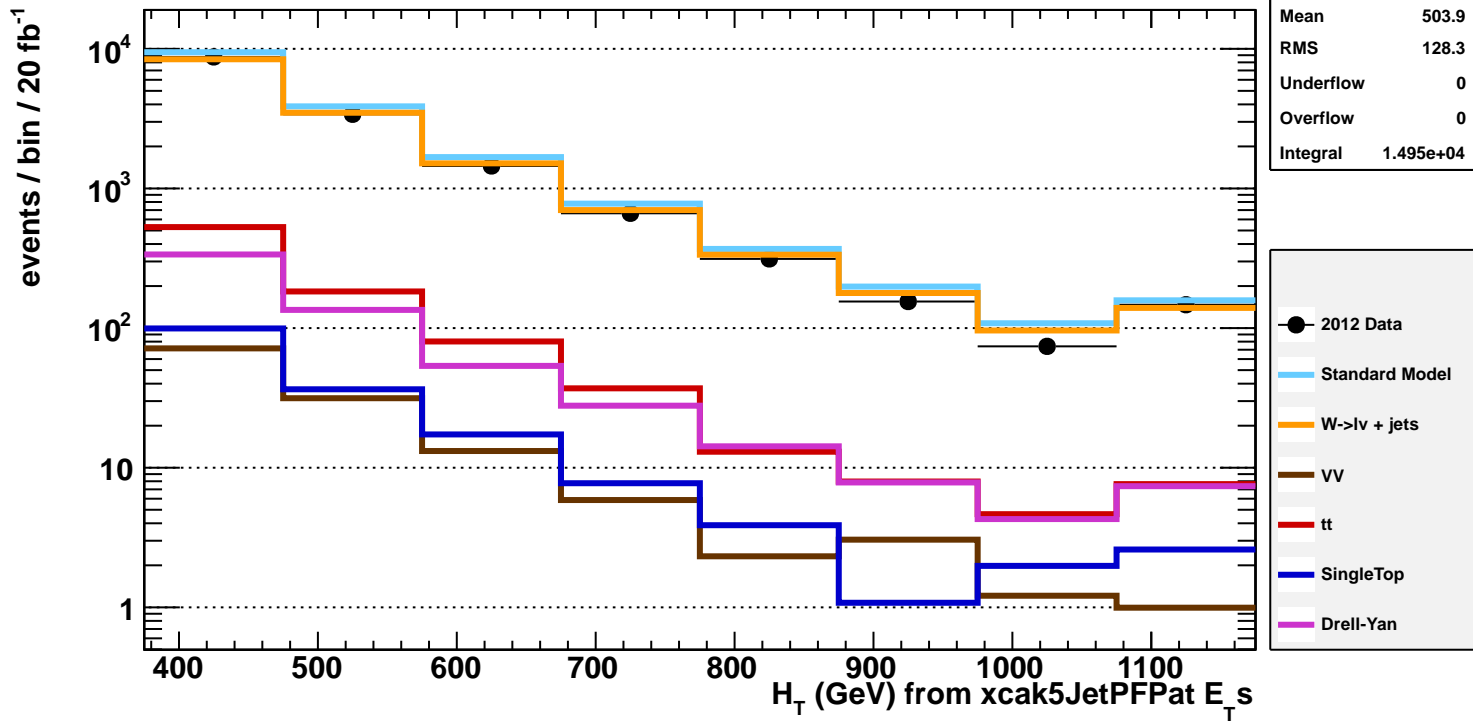


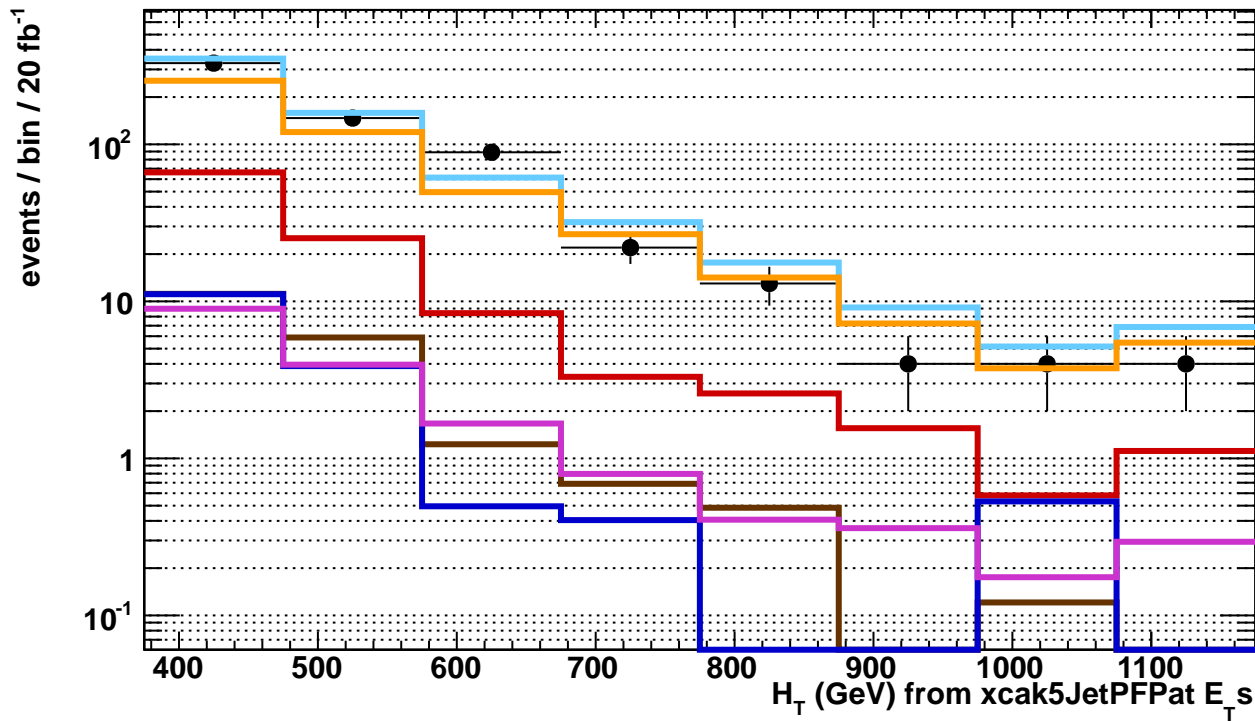


xcak5JetPFSumEtPat_ge4j_ge4b_dRl65	
Entries	2
Mean	634.1
RMS	60.32
Underflow	0
Overflow	0
Integral	2

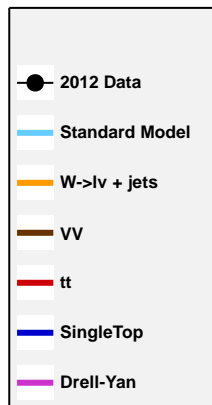


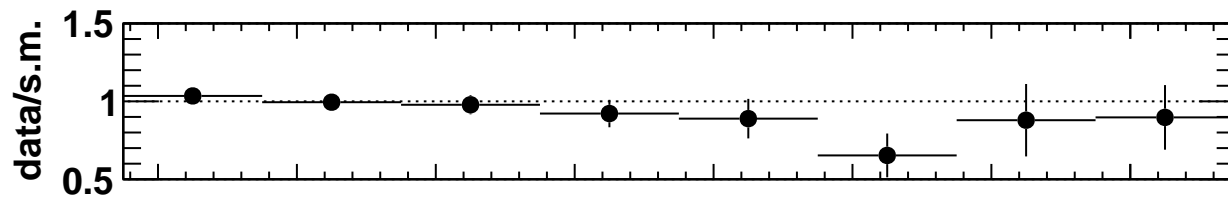
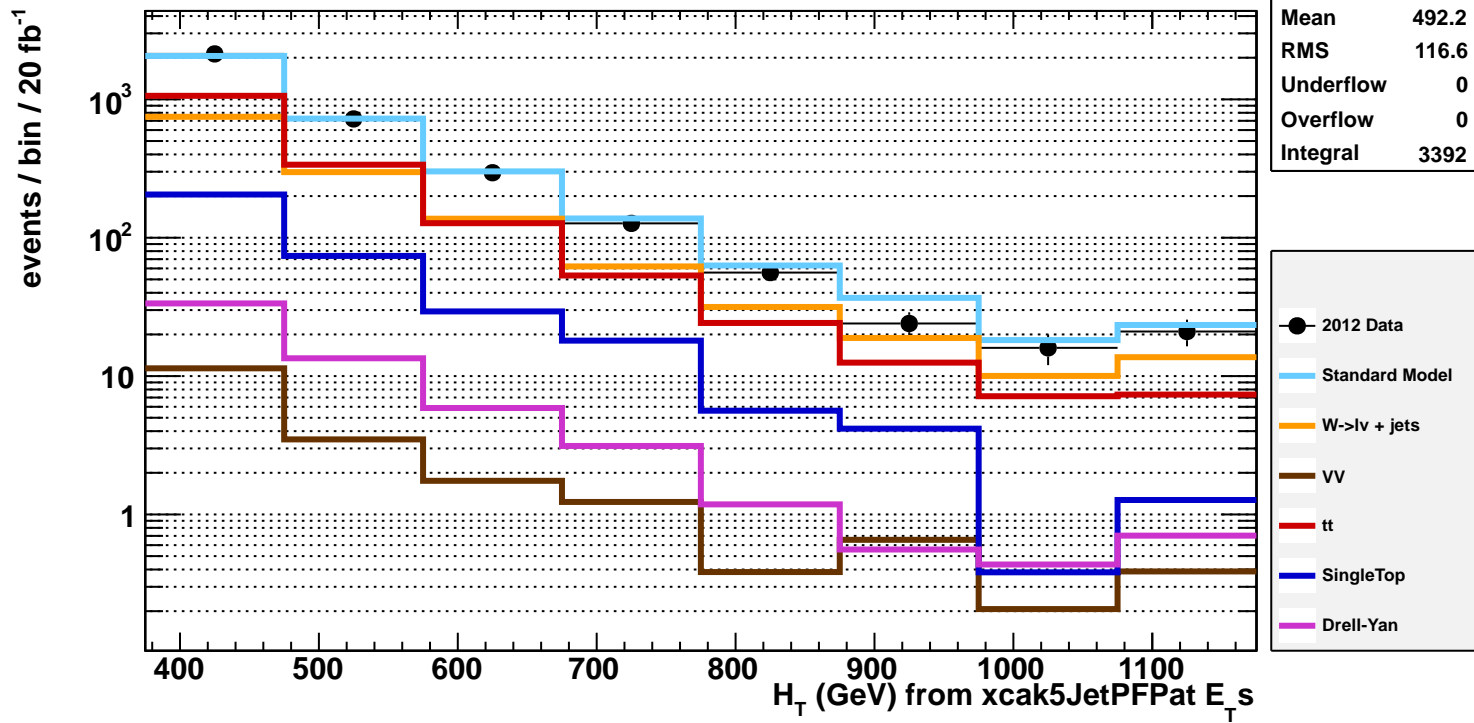


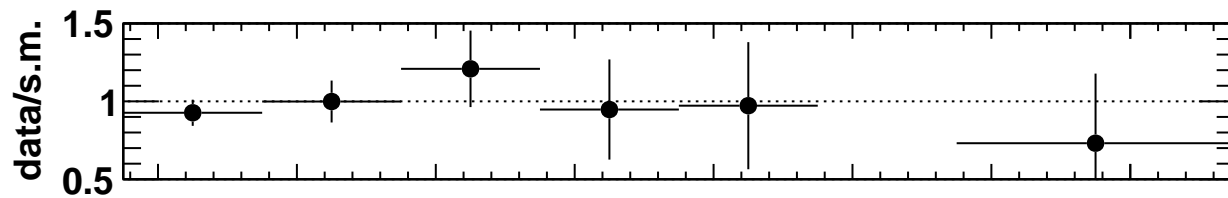
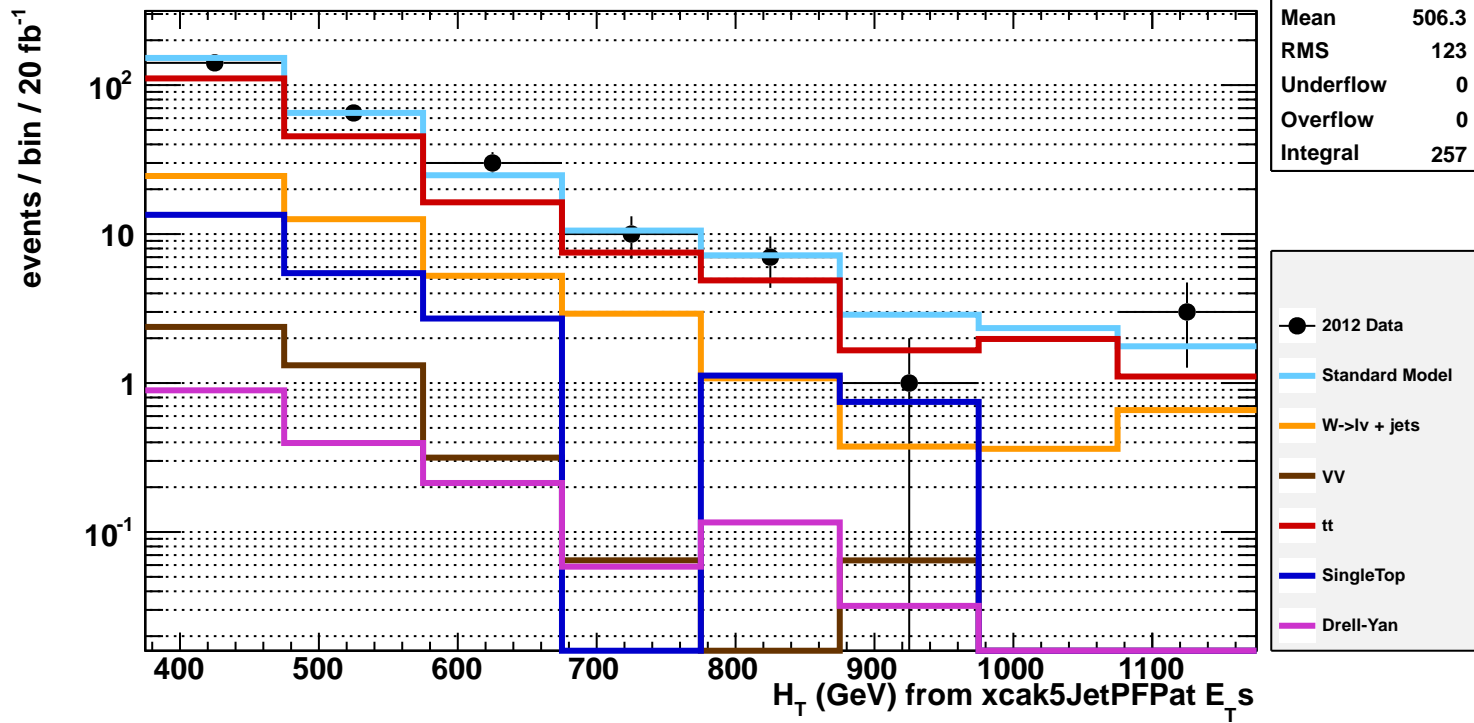




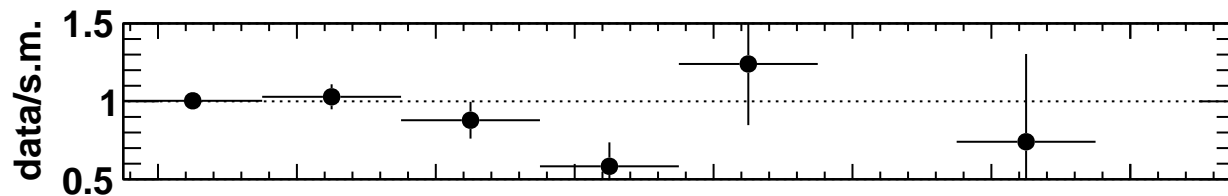
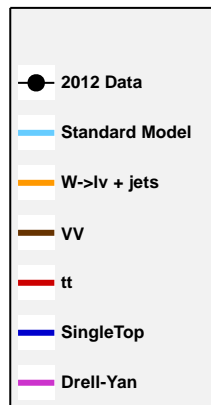
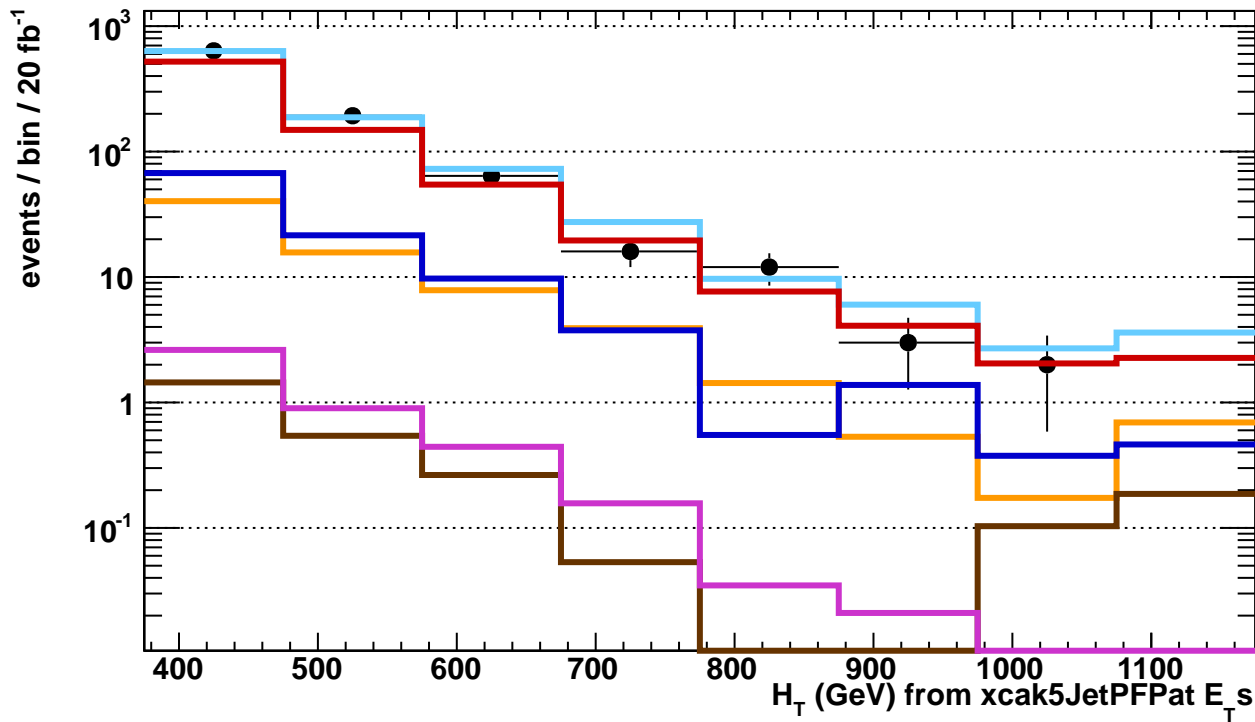
xcak5JetPFSumEtPat_le3j_eq0b_dR165	
Entries	612
Mean	509.2
RMS	122.3
Underflow	0
Overflow	0
Integral	612



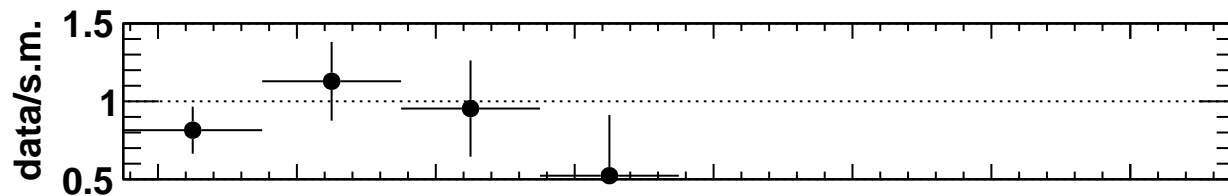
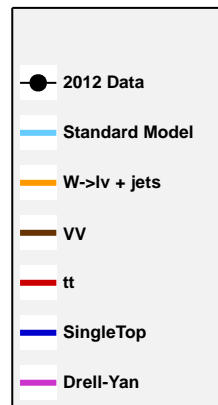
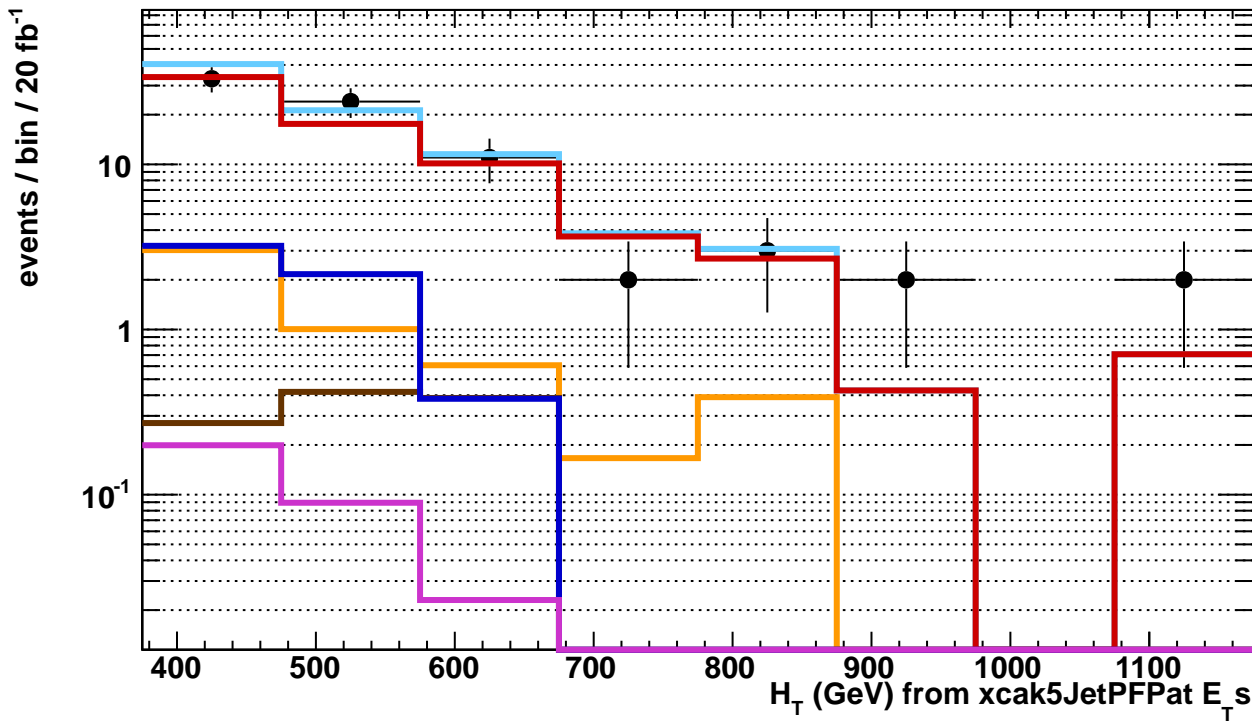


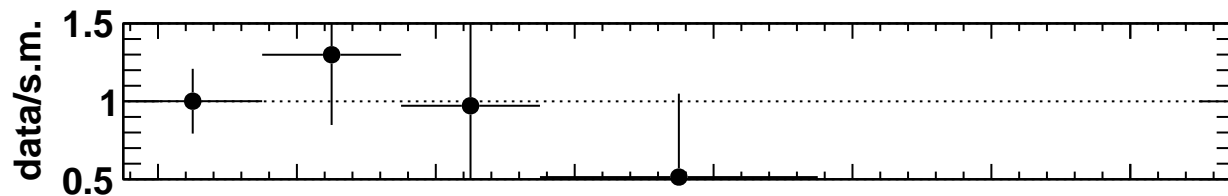
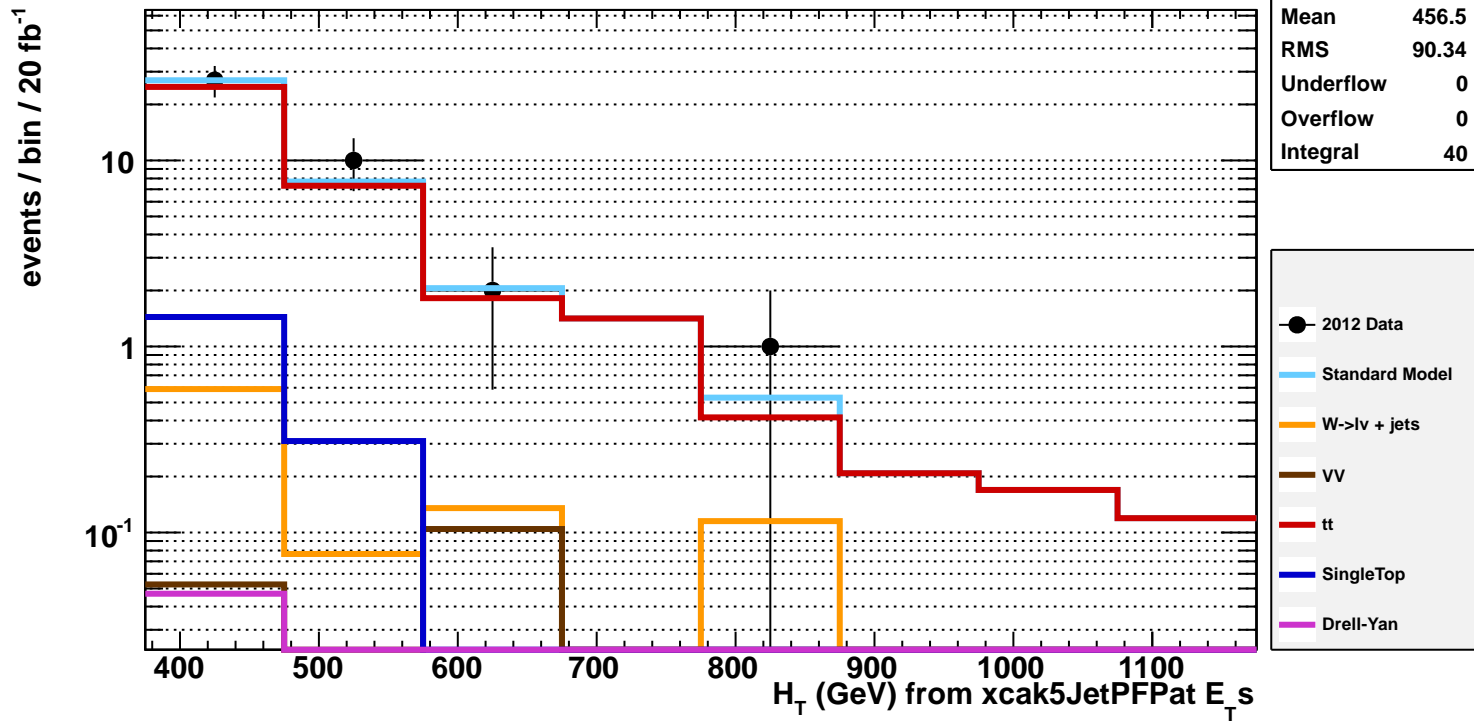


xcak5JetPFSumEIPat_1e3_eq2b_dRge65	
Entries	925
Mean	464.3
RMS	93.42
Underflow	0
Overflow	0
Integral	925

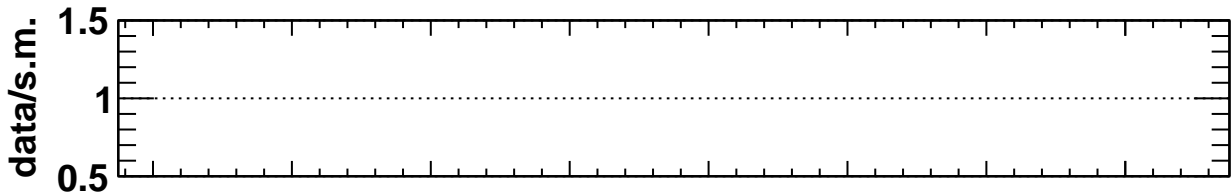
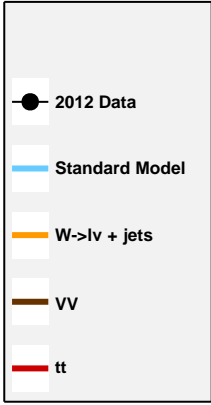
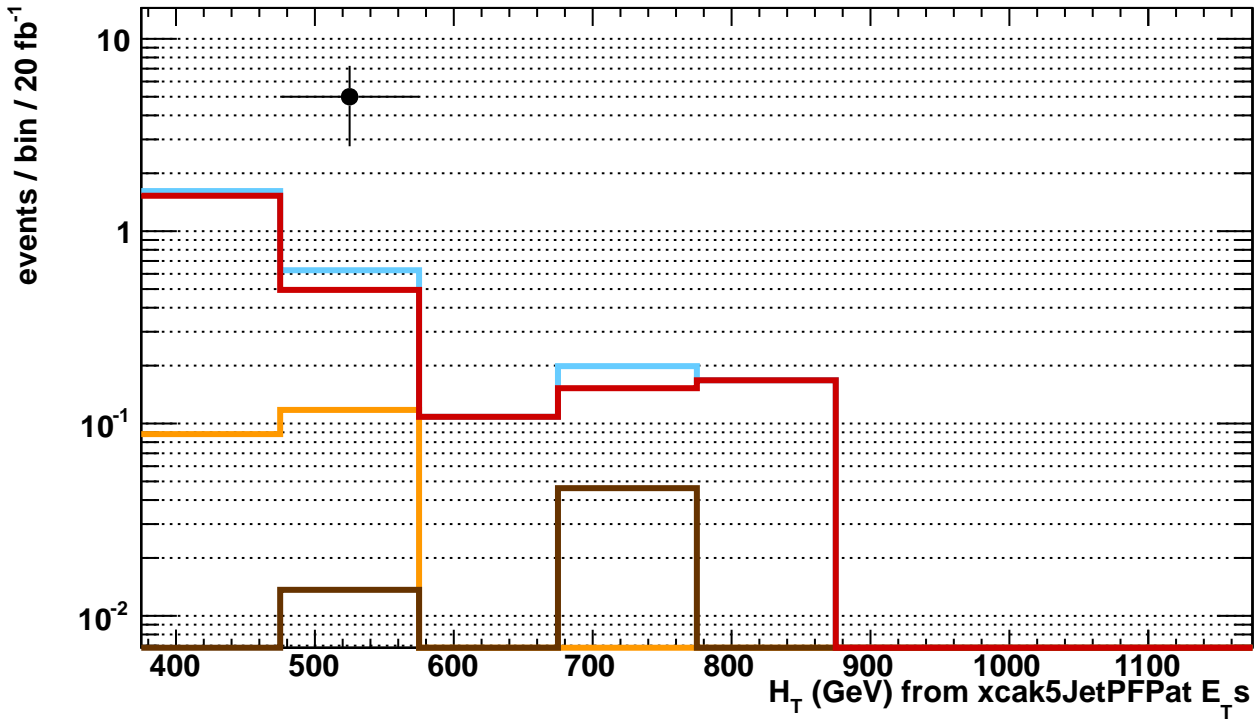


xcak5JetPFSumEtPat_le3j_eq2b_dR165	
Entries	77
Mean	539.3
RMS	153.5
Underflow	0
Overflow	0
Integral	77





xcak5JetPFSumEtPat_le3l_eq3b_dR165	
Entries	5
Mean	517.5
RMS	26.69
Underflow	0
Overflow	0
Integral	5





```

Z: multiplicity          0 <= electronIndicesUnmatchedPF <= 0
A: multiplicity          0 <= photonIndicesUnmatchedPat <= 0
B: deadEcalFilter        xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
C: multiplicity          1 <= muonIndicesPF <= 1
D: pt                    30.00<=muonP4PF[i[0]].pt; muonIndicesPF

E: eta                    -2.10<=muonP4PF[i[0]].eta<=2.10; muonIndicesPF
F: value                  30.00<=muonMtPFFmetP4TypeIPF<=125.00
G: value                  xcak5JetPFMhthighPtPatOvermetP4TypeIPFPlusmuonIndicesPF<=1.25
H: value                  PFFRecHitSumPt<=30.00

```

[ jetSumPlots1 ]

[ kinematicPlots1 ]

```

K: value                  475.00<=xcak5JetPFSSumEtPat
L: value                  575.00<=xcak5JetPFSSumEtPat
M: value                  675.00<=xcak5JetPFSSumEtPat
N: value                  775.00<=xcak5JetPFSSumEtPat

O: value                  875.00<=xcak5JetPFSSumEtPat
P: value                  975.00<=xcak5JetPFSSumEtPat
Q: value                  1075.00<=xcak5JetPFSSumEtPat

```

	2012 Data	Standard Model	W->lv + jets	VV	tt	SingleTop	Drell-Yan	data/s.m.
Z:	128322	7.740(4)e+5	2.230(2)e+5	2.165(4)e+4	4.351(3)e+5	7.18(2)e+4	2.252(4)e+4	0.1658(5)
A:	128313	7.740(4)e+5	2.229(2)e+5	2.165(4)e+4	4.350(3)e+5	7.18(2)e+4	2.251(4)e+4	0.1658(5)
B:	62869	2.458(2)e+5	9.95(1)e+4	5.78(2)e+3	1.120(1)e+5	1.912(8)e+4	9.45(2)e+3	0.256(1)
C:	55351	6.85(1)e+4	4.236(8)e+4	487(7)	2.084(6)e+4	2.31(3)e+3	2.52(1)e+3	0.808(4)
D:	50894	5.452(9)e+4	3.383(7)e+4	408(6)	1.648(5)e+4	1.78(3)e+3	2011(9)	0.934(4)
E:	50891	5.187(9)e+4	3.175(7)e+4	384(6)	1.617(5)e+4	1.75(3)e+3	1814(8)	0.981(5)
F:	36430	3.735(8)e+4	2.316(6)e+4	274(5)	1.163(4)e+4	1.27(2)e+3	1027(6)	0.975(5)
G:	29820	3.088(7)e+4	1.962(5)e+4	233(5)	9.18(4)e+3	1.04(2)e+3	808(5)	0.966(6)
H:	28544	3.079(7)e+4	1.956(5)e+4	232(5)	9.15(4)e+3	1.03(2)e+3	806(5)	0.927(6)

[ jetSumPlots1 ]

[ kinematicPlots1 ]

K:	13165	1.467(5)e+4	9.11(3)e+3	111(3)	4.59(3)e+3	4.9(1)e+2	373(3)	0.898(8)
L:	6231	7.11(3)e+3	4.38(2)e+3	52(2)	2.26(2)e+3	238(10)	181(2)	0.88(1)
M:	3034	3.59(2)e+3	2.23(2)e+3	27(2)	1.12(1)e+3	123(7)	97(2)	0.84(2)
N:	1542	1.89(2)e+3	1.18(1)e+3	14(1)	5.8(1)e+2	64(5)	53(1)	0.82(2)
O:	828	1.04(1)e+3	651(8)	8.8(10)	314(8)	38(4)	31.1(9)	0.79(3)
P:	481	595(9)	373(6)	4.1(7)	178(6)	21(3)	18.8(7)	0.81(4)
Q:	299	348(7)	219(4)	1.9(4)	102(4)	13(2)	12.0(6)	0.86(5)