

sample	nEventsIn	weightIn
HT.Run2012A-22Jan2013.jsonWeight	6489409	5.44e+06
HTMHTParked.Run2012B-22Jan2013.jsonWeight	38426320	3.48e+07
HTMHTParked.Run2012C-22Jan2013.jsonWeight	61486487	5.92e+07
HTMHTParked.Run2012D-22Jan2013.jsonWeight	65833371	6.26e+07
T_s_powheg.puWeight.bTagWeight	243961	2.51e+05
T_tW_powheg.puWeight.bTagWeight	497657	5.12e+05
T_t_powheg.puWeight.bTagWeight	3710227	3.82e+06
Tbar_s_powheg.puWeight.bTagWeight	139973	1.44e+05
Tbar_tW_powheg.puWeight.bTagWeight	493459	5.07e+05
Tbar_t_powheg.puWeight.bTagWeight	1935072	1.99e+06
WW_py6.puWeight.bTagWeight	9840431	1.01e+07
WZ_py6.puWeight.bTagWeight	9872283	1.02e+07
ZZ_py6.puWeight.bTagWeight	9783907	1.01e+07
dyll_HT_400ToInf_M-50.puWeight.bTagWeight	2663789	2.75e+06
dyll_HT_200To400_M-50.puWeight.bTagWeight	6892776	7.11e+06
dyll_HT_10To200_M-50.puWeight.bTagWeight	8111523	8.36e+06
ttbar_CT10_powheg.puWeight.bTagWeight.topPtWeight	26406722	2.72e+07
wj_lv_mg_ht_400ToInf_LO.puWeight.bTagWeight.xsWeight	4875846	5.71e+06
wj_lv_mg_ht_250To300_LO.puWeight.bTagWeight.xsWeight	4924989	6.01e+06
wj_lv_mg_ht_300To400_LO.puWeight.bTagWeight.xsWeight	5125023	6.48e+06
wj_lv_mg_ht_200To250_LO.puWeight.bTagWeight.xsWeight	9591770	1.27e+07
wj_lv_mg_ht_10To150_LO.puWeight.bTagWeight	13992013	1.44e+07
wj_lv_mg_ht_150To200_LO.puWeight.bTagWeight.xsWeight	20694208	2.36e+07
zinv_mg_ht_200_400.puWeight.bTagWeight	4887709	5.03e+06
zinv_mg_ht_200_400.puWeight.bTagWeight	9649619	9.93e+06
zinv_mg_ht_100_200.puWeight.bTagWeight	9860059	1.01e+07
zinv_mg_ht_50_100.puWeight.bTagWeight	23727998	2.44e+07

file created at Tue Sep 16 01:44:04 2014

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ecalLaserCalibEvent2012      pass Ecal laser calibration 2012 event filter
electronIndicesNonIsoPat     pass ptMin & id; fail iso
electronIndicesOtherPat      pass ptMin; fail id
electronIndicesPat            pt>10.0; (2012 Veto)
electronIndicesUnmatchedPat   electronIndicesOtherPat; no dR<0.5 match in ak5JetCorrectedP4Pat
genIndicesStatus3t           pdgId in [-6, 6]; status in [3]
hcalLaserEvent2012           pass HCal laser 2012 event filter
jsonWeight                   run:ls in cert/Cert_190456-208686_8TeV_22Jan2013ReReco_Collisions12_JSON.txt
muonIdPog2012LoosePat        https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Loose_Muon
muonIdPog2012TightPat        https://twiki.cern.ch/twiki/bin/view/CMSPublic/SWGuideMuonId#Tight_Muon
muonIndicesNonIsoPat         pass ptMin & id; fail iso
muonIndicesOtherPat          pass ptMin; fail id
muonIndicesPat               IdPog2012Tight; pt>10.0 GeV; PfIsolationR04DeltaBCorrected<0.12
photonIndicesOtherPat        pass ptMin; fail id/iso
photonIndicesPat             pT>=25.0 GeV; photonSimpleCutBased2012TightPat
photonIndicesUnmatchedPat    photonIndicesOtherPat; no dR<0.5 match in ak5JetCorrectedP4Pat
vertexID                     !fake; nd>=5.0; |z|<=24.0 cm; d0<=2.0 cm
vertexIndices                ; pass ID
vertexIndicesOther           pass sumPtMin; fail ID
weight                       1.bTagWeight.puWeight
weight                       1.bTagWeight.puWeight.topPtWeight
weight                       1.bTagWeight.puWeight.xsWeight
weight                       1.jsonWeight
xcak5JetCorrectedP4Pat       muonPatDR<0.50; electronPatDR<0.50; photonPatDR<0.50
xcak5JetDeadEcalDRlowPtPat   xcak5JetPat; nXtal>=10; cracks checked
xcak5JetIndicesBtagged2Pat   (>0.679)
xcak5JetIndicesOtherPat      pass ptMin; fail jetID or etaMax
xcak5JetIndicesPat           pT>=50.0 GeV; |eta|<3.0; JetIDloose
xcak5JetIndiceshighPtPat     pT>=50.0 GeV; |eta|<3.0; JetIDloose
xcak5JetIndiceslowPtPat      pT>=30.0 GeV; |eta|<3.0; JetIDloose

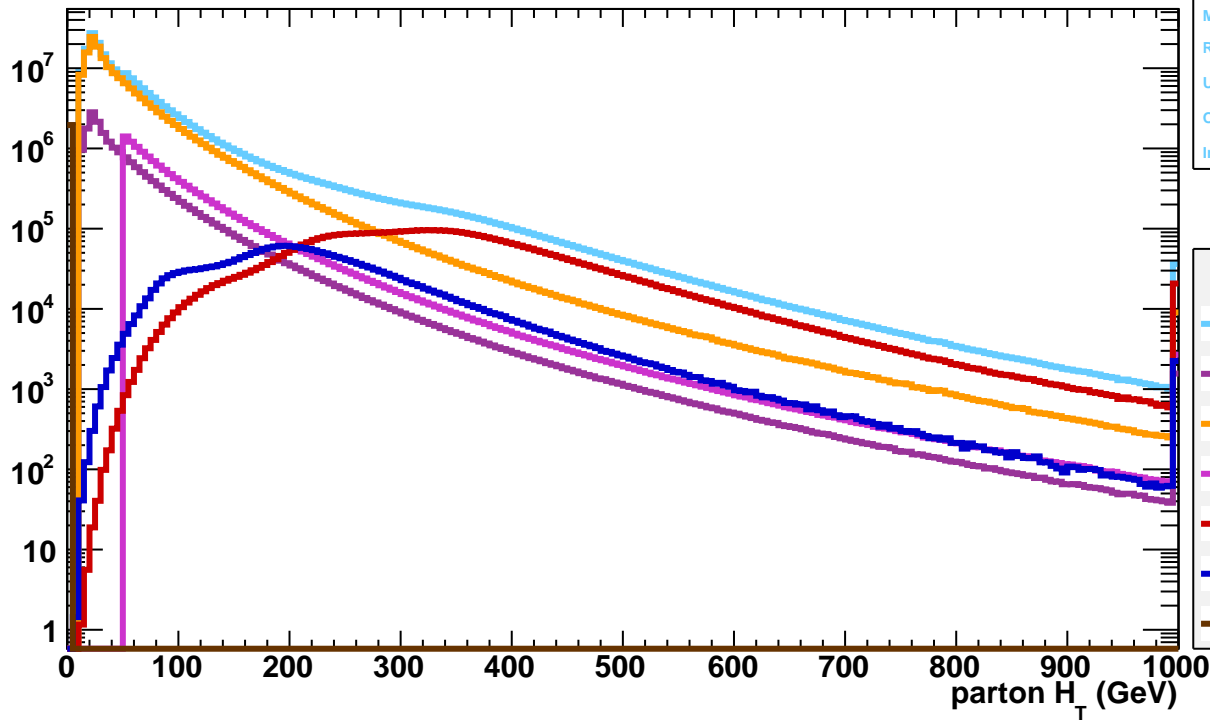
```

Calculables (imperfect) absent calc leaf sltr

NONE

	2012 Data	Standard Mod	Drell-Yan W->lv + jets Z->vv + jets				tt	SingleTop	VV	data/s.m.
a:	161925770	2.0615(4)e+8	1.9455(7)e+7	1.6448(4)e+8	1.2572(2)e+7	5.383(1)e+6	2.3011(9)e+6	1.9578(4)e+6		0.7855(2)

events / bin / 19 fb⁻¹



genPartonHT	
Entries	1.812749e+08
Mean	66.81
RMS	79.24
Underflow	0
Overflow	0
Integral	2.061e+08

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

```

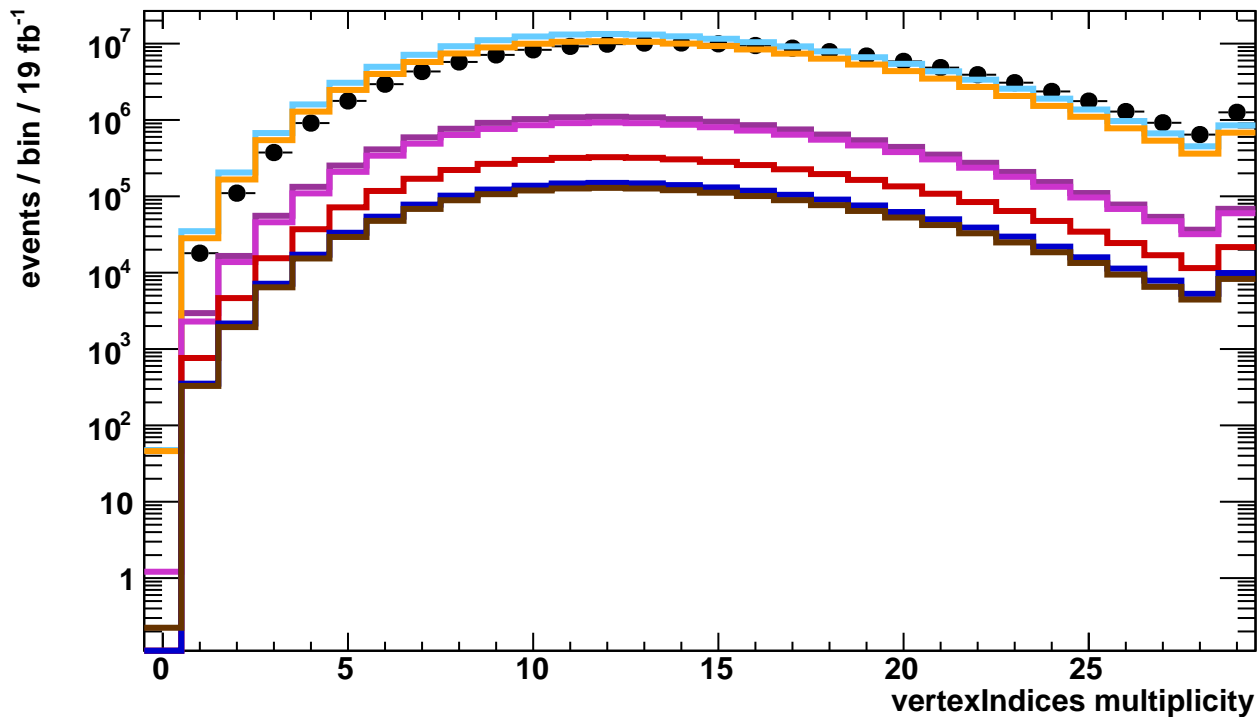
a: master          master
b: monster        <=10 tracks or >0.25 good fraction
c: hbheNoise      hbheNoise
d: value          beamHaloCSCTightHaloId<=0.00
e: value          1.00<=trackingFailureFilterFlag

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

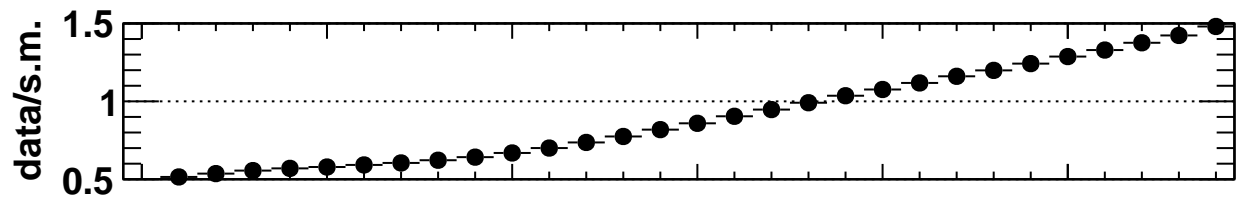
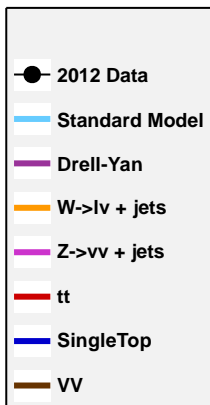
k: multiplicity   0 <= singleIsolatedTrack <= 0

```

	2012 Data	Standard Mod	Drell-Yan W->lv + jets	Z->vv + jets	tt	SingleTop	VV	data/s.m.	
a:	161925770	2.0615(4)e+8	1.9455(7)e+7	1.6448(4)e+8	1.2572(2)e+7	5.383(1)e+6	2.3011(9)e+6	1.9578(4)e+6	0.7855(2)
b:	161924972	2.0615(4)e+8	1.9455(7)e+7	1.6448(4)e+8	1.2572(2)e+7	5.383(1)e+6	2.3011(9)e+6	1.9578(4)e+6	0.7855(2)
c:	160439157	-	-	-	-	-	-	-	-
d:	159670356	2.0612(4)e+8	1.9453(7)e+7	1.6446(4)e+8	1.2570(2)e+7	5.382(1)e+6	2.3007(9)e+6	1.9576(4)e+6	0.7746(2)
e:	159667829	2.0612(4)e+8	1.9453(7)e+7	1.6446(4)e+8	1.2570(2)e+7	5.382(1)e+6	2.3007(9)e+6	1.9576(4)e+6	0.7746(2)
f:	159667108	-	-	-	-	-	-	-	-
g:	159142618	2.0610(4)e+8	1.9450(7)e+7	1.6445(4)e+8	1.2570(2)e+7	5.380(1)e+6	2.3002(9)e+6	1.9573(4)e+6	0.7722(2)
h:	159142615	2.0610(4)e+8	1.9450(7)e+7	1.6445(4)e+8	1.2570(2)e+7	5.380(1)e+6	2.3002(9)e+6	1.9573(4)e+6	0.7722(2)
i:	159111052	2.0605(4)e+8	1.9436(7)e+7	1.6441(4)e+8	1.2570(2)e+7	5.377(1)e+6	2.2996(9)e+6	1.9565(4)e+6	0.7722(2)
j:	159107069	2.0603(4)e+8	1.9431(7)e+7	1.6439(4)e+8	1.2570(2)e+7	5.376(1)e+6	2.2994(9)e+6	1.9563(4)e+6	0.7723(2)
k:	139758551	1.7021(4)e+8	1.3986(6)e+7	1.3673(4)e+8	1.1793(2)e+7	4.144(-)e+6	1.9129(9)e+6	1.6423(4)e+6	0.8211(2)



vertexIndicesMultiplicity	
Entries	1.397585e+08
Mean	14.73
RMS	5.246
Underflow	0
Overflow	0
Integral	1.398e+08



```

l: multiplicity          1 <= vertexIndices
m: llFilter              LlTech_BPTX_plus_AND_minus.v0
n: physicsDeclaredFilter physicsDeclaredFilter
o: HTxTriggerMap         HTxTriggerMap

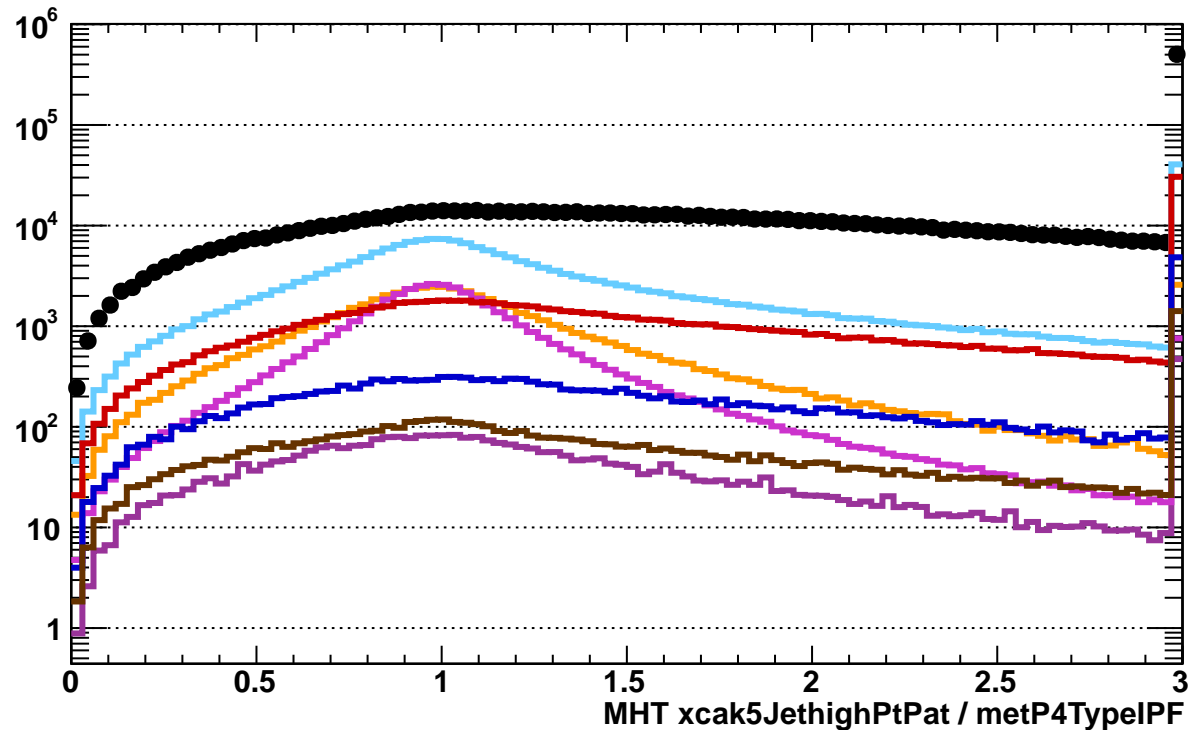
p: jetEtaSelector        xcak5JetPat; |eta[index[0]]|<=2.5
q: jetPtSelector         xcak5JetPat; pT[index[0]]>=100.0 GeV
r: jetPtSelector         xcak5JetPat; pT[index[1]]>=100.0 GeV
s: value                 375.00<=xcak5JetSumEtPat
t: uniquelyMatchedNonisoMuons xcak5JetPat

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

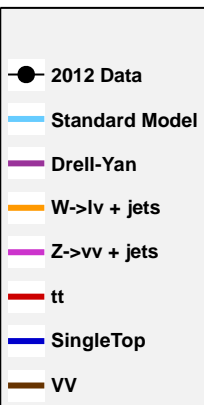
z: multiplicity          0 <= muonIndicesPat <= 0
A: multiplicity          0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity          0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter        xcak5JetPat; dR>0.300 when deltaPhiStar<0.500

```

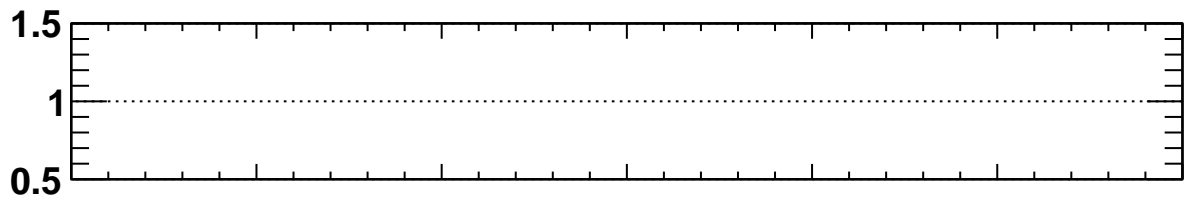
	2012 Data	Standard Mod	Drell-Yan W->lv + jets Z->vv + jets				tt	SingleTop	VV	data/s.m.
l:	139758551	1.7021(4)e+8	1.3986(6)e+7	1.3673(4)e+8	1.1793(2)e+7	4.144(-)e+6	1.9129(9)e+6	1.6423(4)e+6		0.8211(2)
m:	139758363	-	-	-	-	-	-	-	-	
n:	139631006	-	-	-	-	-	-	-	-	
o:	9399833	-	-	-	-	-	-	-	-	
p:	9226526	4.965(2)e+7	3.777(3)e+6	3.313(2)e+7	6.331(1)e+6	3.936(-)e+6	1.5400(8)e+6	9.404(3)e+5		0.18582(9)
q:	9071768	1.1435(6)e+7	7.20(1)e+5	6.269(5)e+6	1.6026(6)e+6	2.1400(7)e+6	4.993(4)e+5	2.045(1)e+5		0.7933(5)
r:	7630042	2.542(-)e+6	1.215(2)e+5	9.909(8)e+5	2.373(1)e+5	9.405(5)e+5	1.893(3)e+5	6.268(8)e+4		3.001(2)
s:	7233757	1.2330(5)e+6	4.455(6)e+4	3.552(3)e+5	9.109(6)e+4	6.207(4)e+5	9.34(2)e+4	2.799(5)e+4		5.867(3)
t:	7220369	1.2238(5)e+6	4.415(6)e+4	3.533(3)e+5	9.104(6)e+4	6.146(4)e+5	9.28(2)e+4	2.792(5)e+4		5.900(3)
u:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4		5.923(3)
v:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4		5.923(3)
w:	6774586	1.1844(5)e+6	4.265(6)e+4	3.456(3)e+5	8.984(6)e+4	5.898(4)e+5	8.92(2)e+4	2.735(5)e+4		5.720(3)
x:	6742525	1.0119(5)e+6	2.676(5)e+4	2.539(2)e+5	8.981(6)e+4	5.315(3)e+5	8.37(2)e+4	2.618(5)e+4		6.663(4)
y:	6713053	1.0049(5)e+6	2.613(5)e+4	2.496(2)e+5	8.977(6)e+4	5.298(3)e+5	8.35(2)e+4	2.605(5)e+4		6.681(4)
z:	6688261	8.395(4)e+5	1.240(4)e+4	1.578(2)e+5	8.976(6)e+4	4.764(3)e+5	7.83(2)e+4	2.494(5)e+4		7.967(5)
A:	6680982	8.377(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.753(3)e+5	7.81(2)e+4	2.490(5)e+4		7.976(5)
B:	6680567	8.376(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.752(3)e+5	7.81(2)e+4	2.489(5)e+4		7.975(5)
C:	1463167	2.631(2)e+5	3.82(2)e+3	6.42(1)e+4	4.598(4)e+4	1.213(2)e+5	2.111(9)e+4	6.68(3)e+3		5.561(7)

events / bin / 19 fb⁻¹

xcak5JethighPtPatOvermetP4TypeIPF	
Entries	1463167
Mean	2.049
RMS	0.8927
Underflow	0
Overflow	0
Integral	1.463e+06



data/s.m.



```

m: l1Filter                               L1Tech_BPTX_plus_AND_minus.v0
n: physicsDeclaredFilter                 physicsDeclaredFilter
o: HTxTriggerMap                         HTxTriggerMap

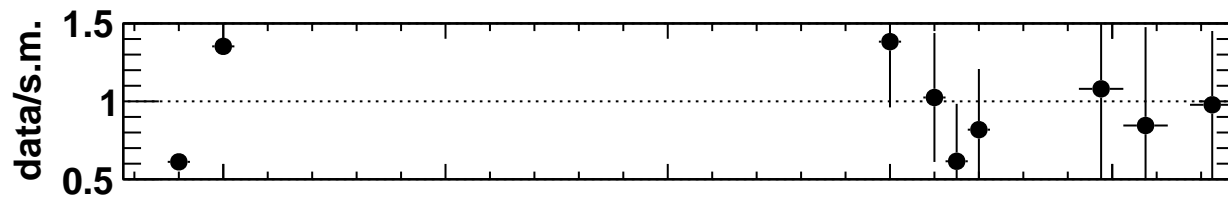
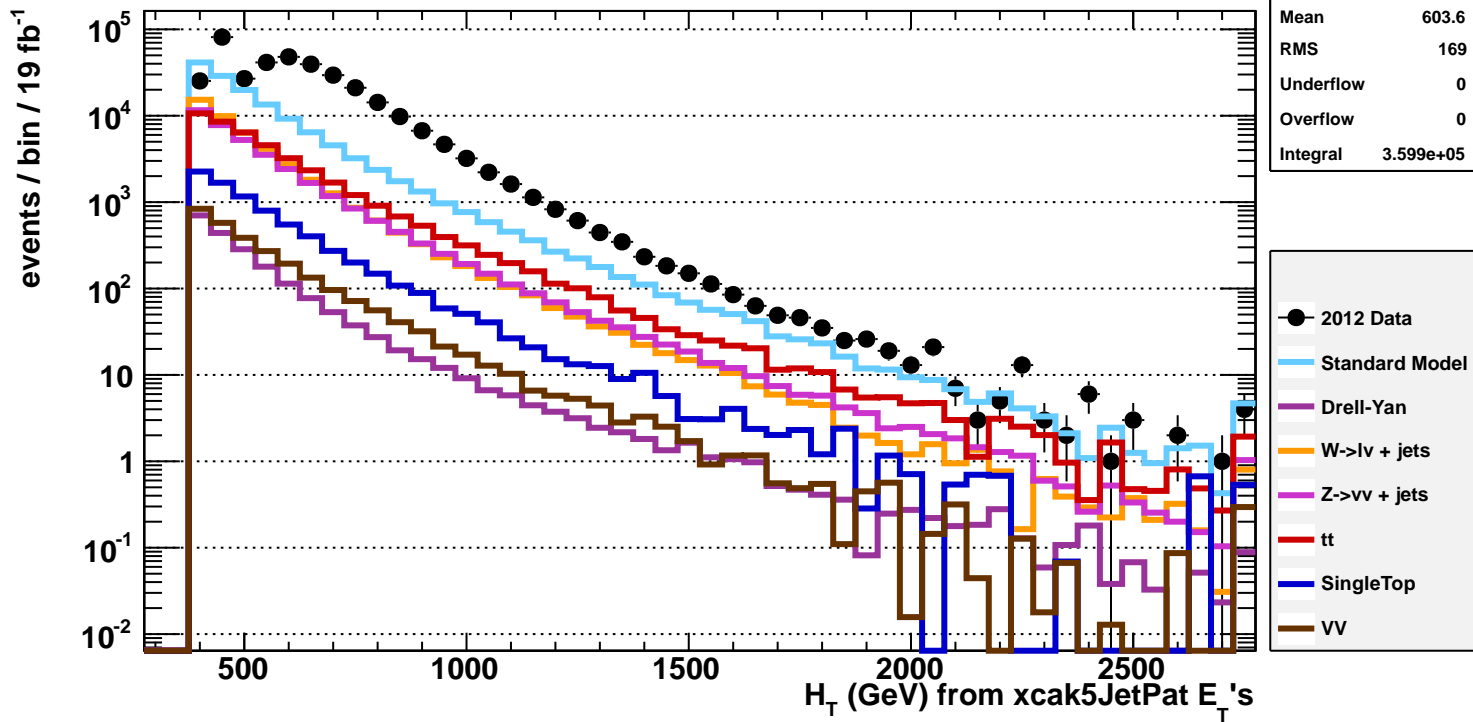
p: jetEtaSelector                        xcak5JetPat; |eta[index[0]]|<=2.5
q: jetPtSelector                        xcak5JetPat; pT[index[0]]>=100.0 GeV
r: jetPtSelector                        xcak5JetPat; pT[index[1]]>=100.0 GeV
s: value                                375.00<=xcak5JetSumEtPat
t: uniquelyMatchedNonisoMuons          xcak5JetPat

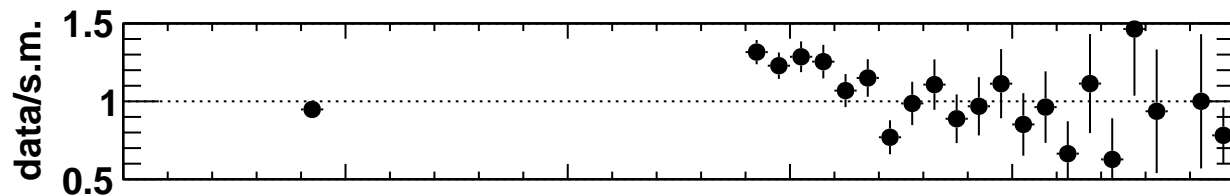
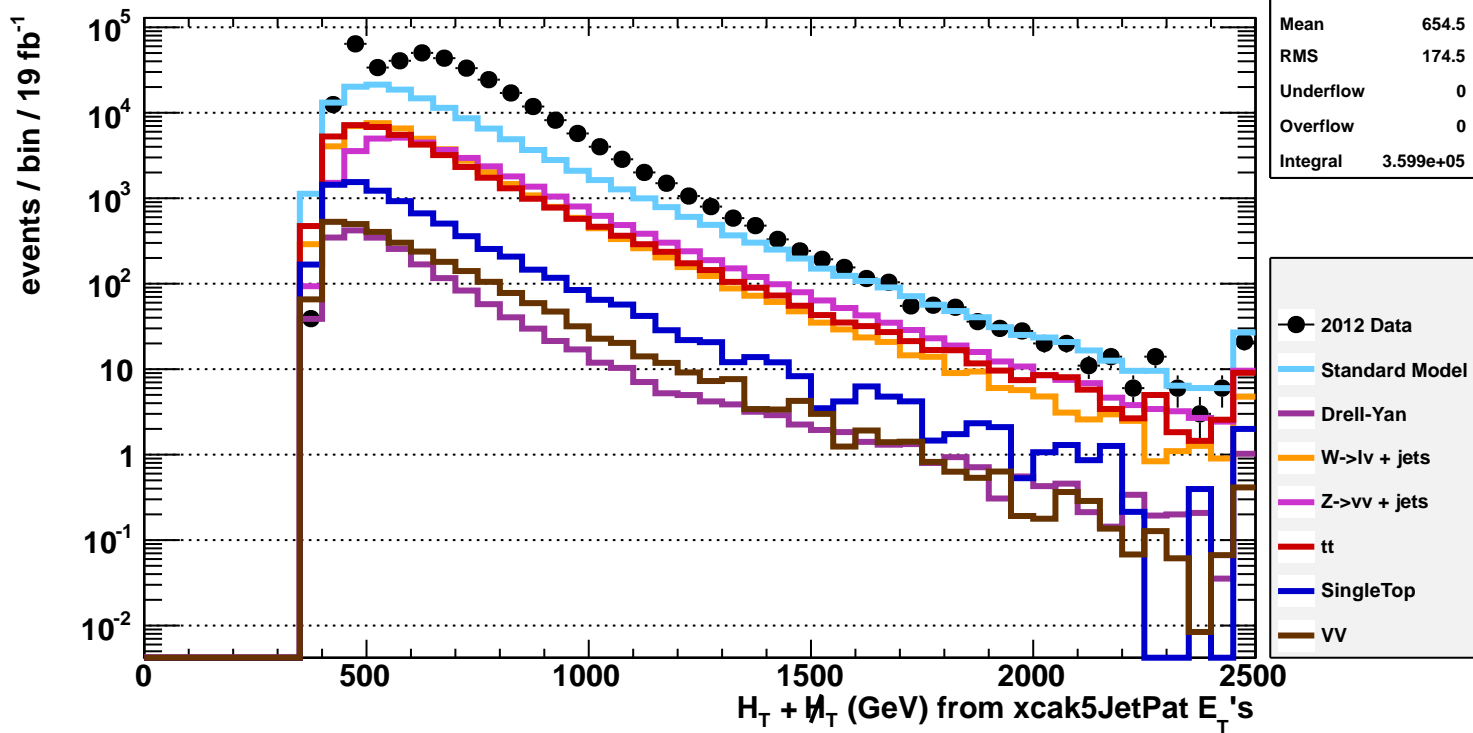
u: multiplicity                         0 <= xcak5JetIndicesWithOddMuonPat <= 0
v: multiplicity                         2 <= xcak5JetIndicesPat
w: multiplicity                         0 <= xcak5JetIndicesOtherPat <= 0
x: multiplicity                         0 <= electronIndicesPat <= 0
y: multiplicity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

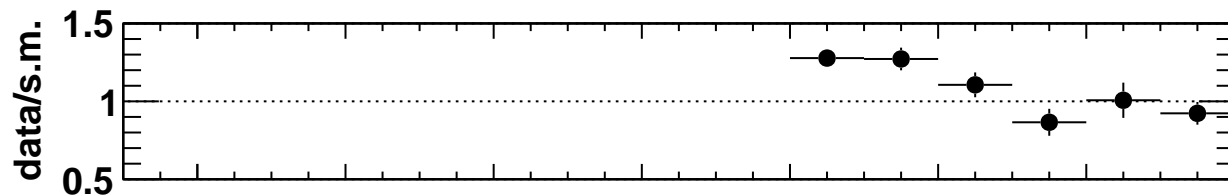
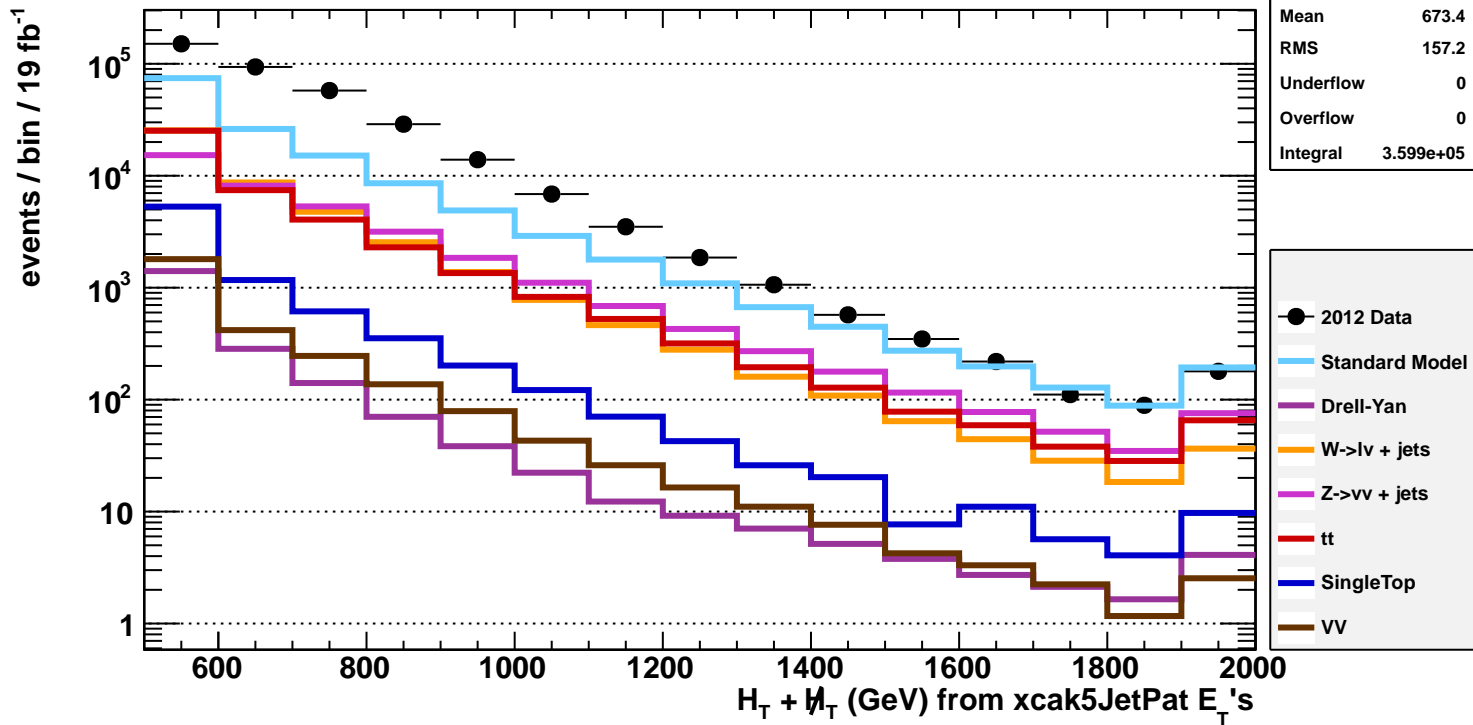
z: multiplicity                         0 <= muonIndicesPat <= 0
A: multiplicity                         0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity                         0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter                       xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: value                                xcak5JetMhthighPtPatOvermetP4TypeIPF<=1.25

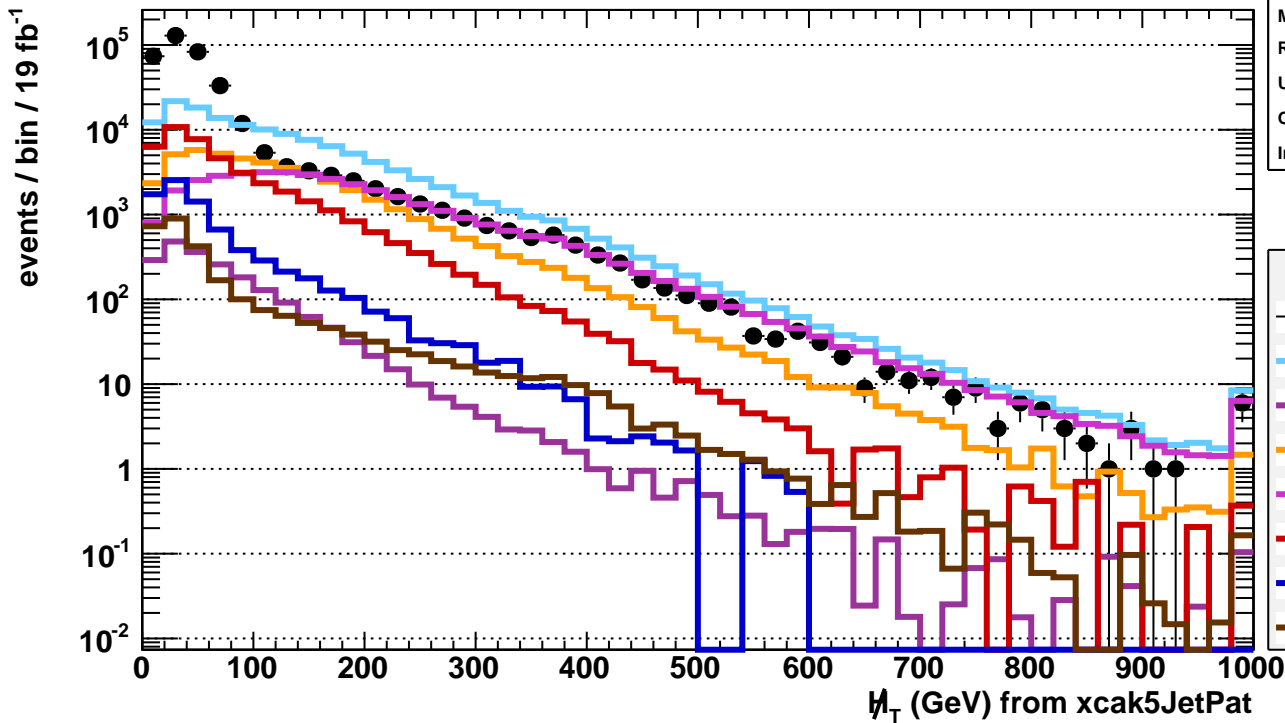
```

	2012 Data	Standard Mod	Drell-Yan W->lv + jets Z->vv + jets				tt	SingleTop	VV	data/s.m.
m:	139758363	-	-	-	-	-	-	-	-	
n:	139631006	-	-	-	-	-	-	-	-	
o:	9399833	-	-	-	-	-	-	-	-	
p:	9226526	4.965(2)e+7	3.777(3)e+6	3.313(2)e+7	6.331(1)e+6	3.936(-)e+6	1.5400(8)e+6	9.404(3)e+5	0.18582(9)	
q:	9071768	1.1435(6)e+7	7.20(1)e+5	6.269(5)e+6	1.6026(6)e+6	2.1400(7)e+6	4.993(4)e+5	2.045(1)e+5	0.7933(5)	
r:	7630042	2.542(-)e+6	1.215(2)e+5	9.909(8)e+5	2.373(1)e+5	9.405(5)e+5	1.893(3)e+5	6.268(8)e+4	3.001(2)	
s:	7233757	1.2330(5)e+6	4.455(6)e+4	3.552(3)e+5	9.109(6)e+4	6.207(4)e+5	9.34(2)e+4	2.799(5)e+4	5.867(3)	
t:	7220369	1.2238(5)e+6	4.415(6)e+4	3.533(3)e+5	9.104(6)e+4	6.146(4)e+5	9.28(2)e+4	2.792(5)e+4	5.900(3)	
u:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4	5.923(3)	
v:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4	5.923(3)	
w:	6774586	1.1844(5)e+6	4.265(6)e+4	3.456(3)e+5	8.984(6)e+4	5.898(4)e+5	8.92(2)e+4	2.735(5)e+4	5.720(3)	
x:	6742525	1.0119(5)e+6	2.676(5)e+4	2.539(2)e+5	8.981(6)e+4	5.315(3)e+5	8.37(2)e+4	2.618(5)e+4	6.663(4)	
y:	6713053	1.0049(5)e+6	2.613(5)e+4	2.496(2)e+5	8.977(6)e+4	5.298(3)e+5	8.35(2)e+4	2.605(5)e+4	6.681(4)	
z:	6688261	8.395(4)e+5	1.240(4)e+4	1.578(2)e+5	8.976(6)e+4	4.764(3)e+5	7.83(2)e+4	2.494(5)e+4	7.967(5)	
A:	6680982	8.377(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.753(3)e+5	7.81(2)e+4	2.490(5)e+4	7.976(5)	
B:	6680567	8.376(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.752(3)e+5	7.81(2)e+4	2.489(5)e+4	7.975(5)	
C:	1463167	2.631(2)e+5	3.82(2)e+3	6.42(1)e+4	4.598(4)e+4	1.213(2)e+5	2.111(9)e+4	6.68(3)e+3	5.561(7)	
D:	359924	1.370(1)e+5	2.01(2)e+3	4.482(9)e+4	3.679(4)e+4	4.265(9)e+4	7.96(6)e+3	2.80(2)e+3	2.627(5)	

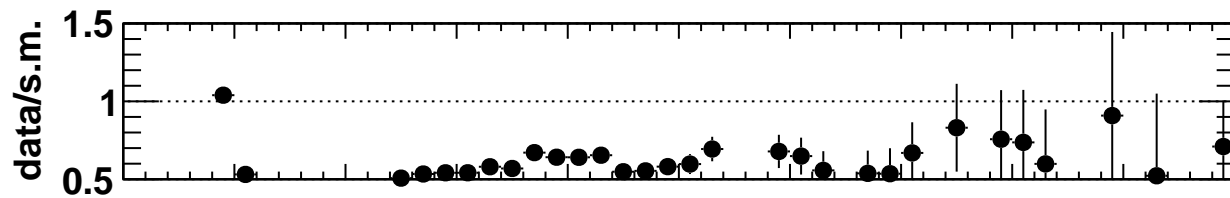
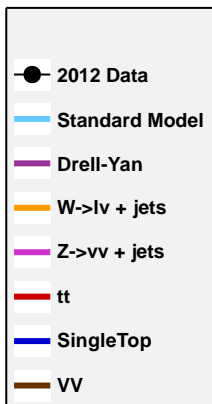


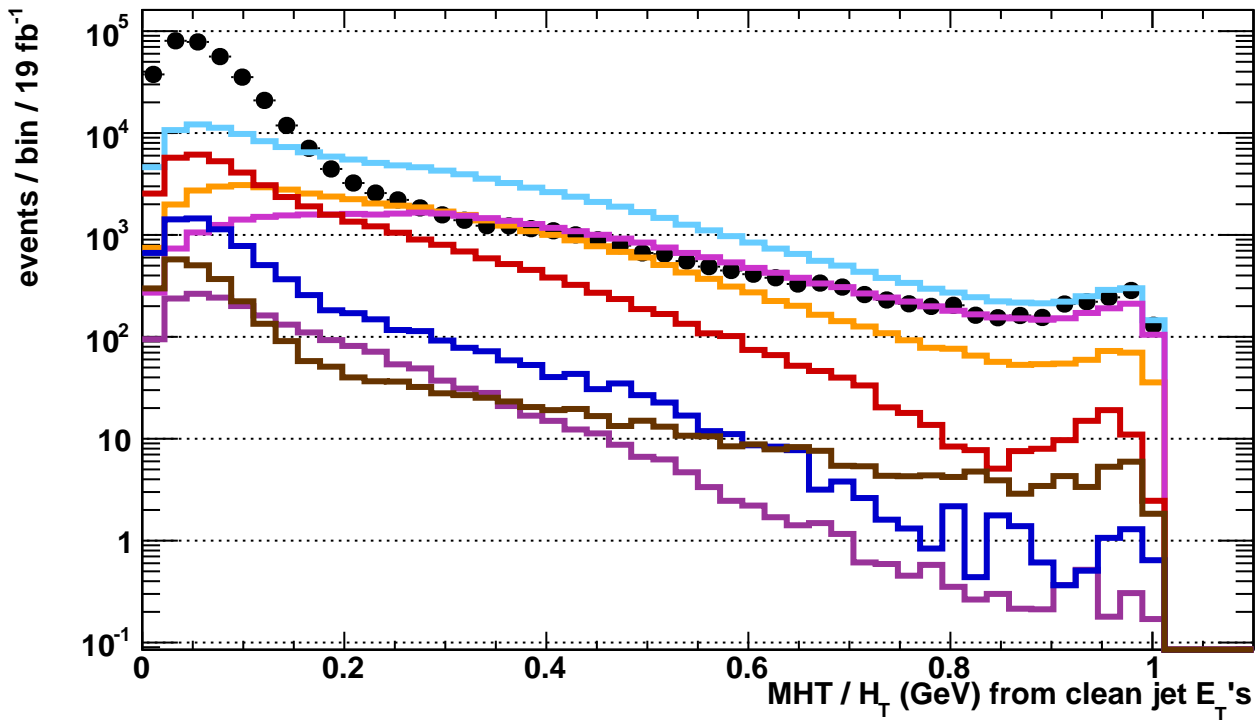




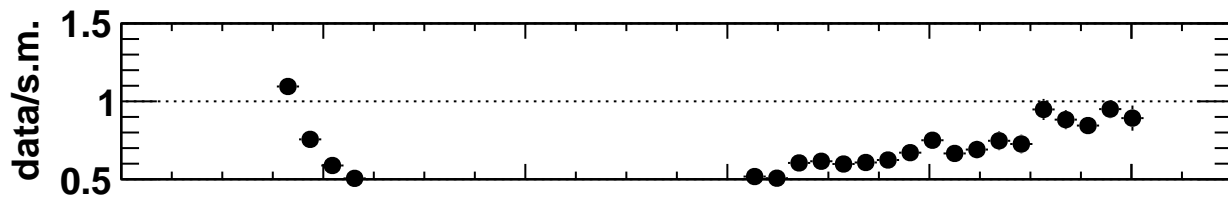
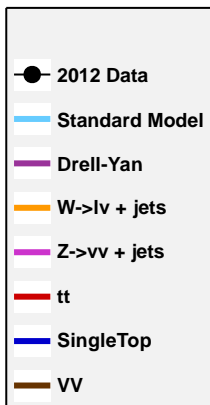


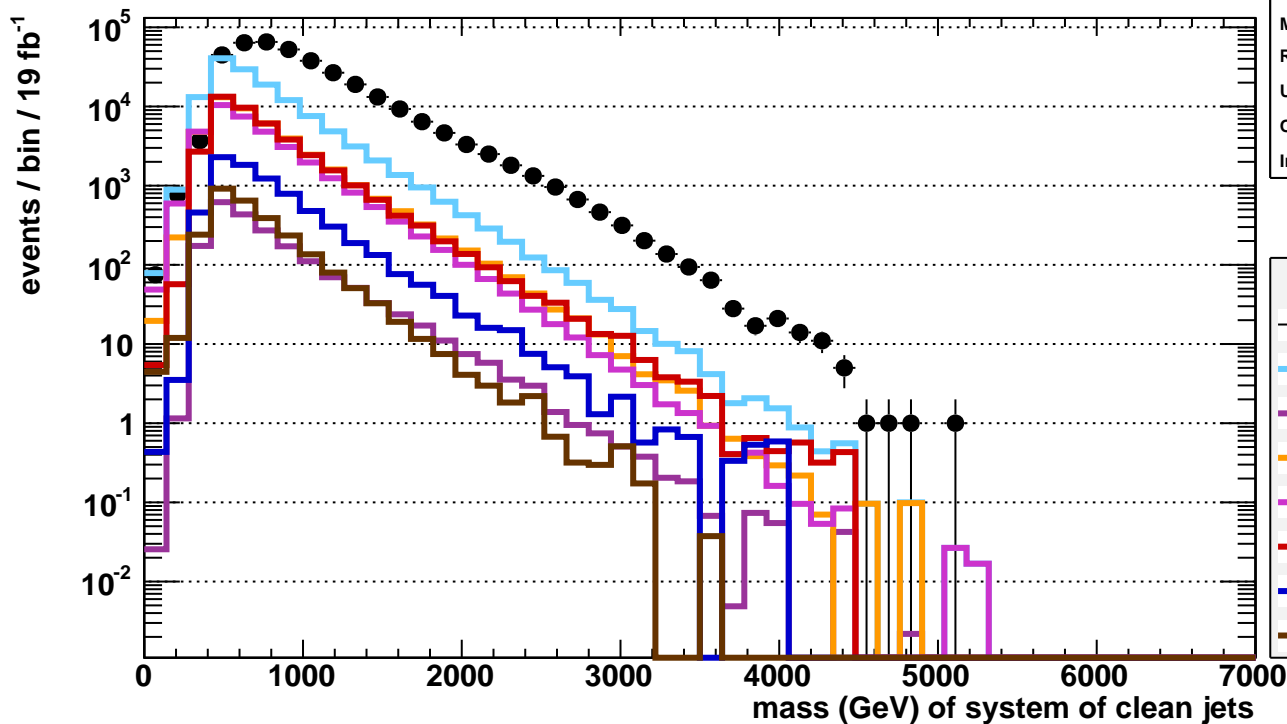
xcak5JetMhtPat	
Entries	359924
Mean	50.25
RMS	57.17
Underflow	0
Overflow	0
Integral	3.599e+05



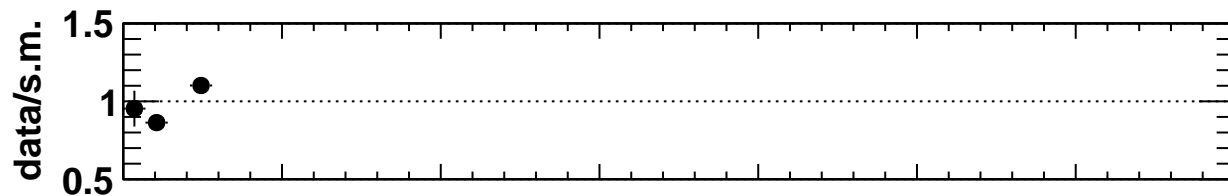
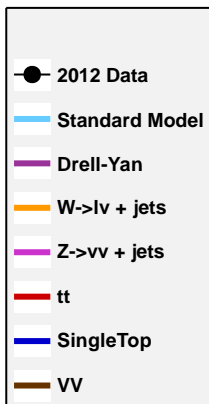


xcak5JetmHtOverHtPat	
Entries	359924
Mean	0.09088
RMS	0.113
Underflow	0
Overflow	0
Integral	3.599e+05

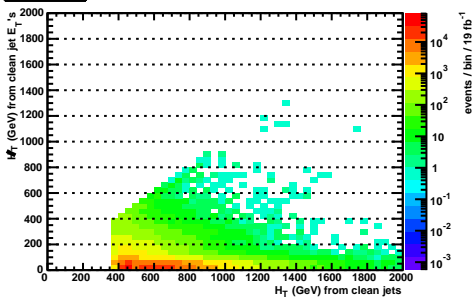




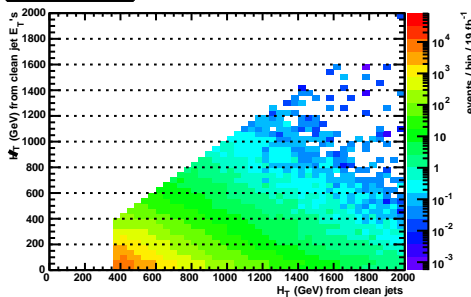
xcak5JetmPat	
Entries	359924
Mean	946.9
RMS	426.2
Underflow	0
Overflow	0
Integral	3.599e+05



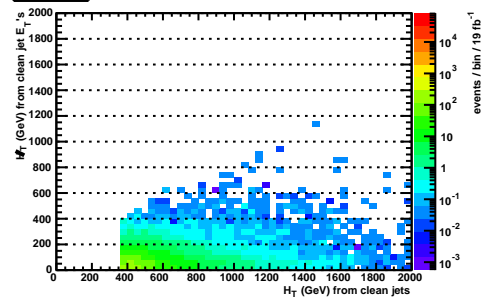
2012 Data



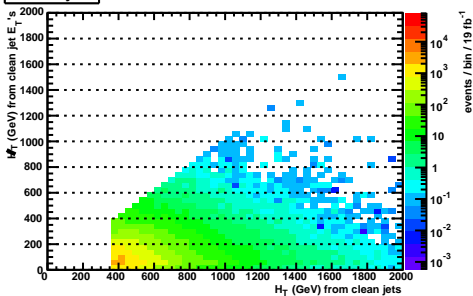
Standard Model



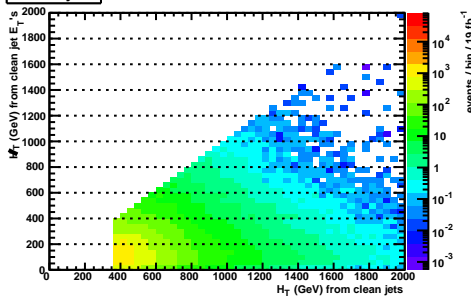
Drell-Yan



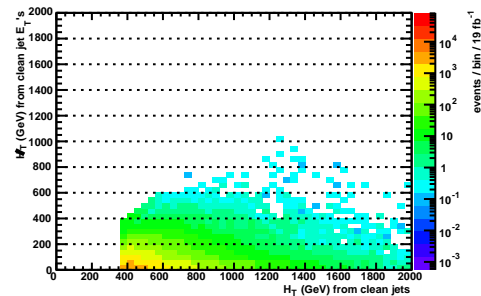
W->lv + jets



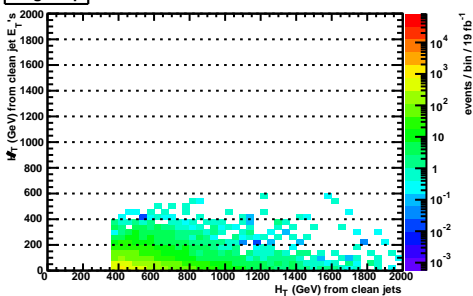
Z->vv + jets



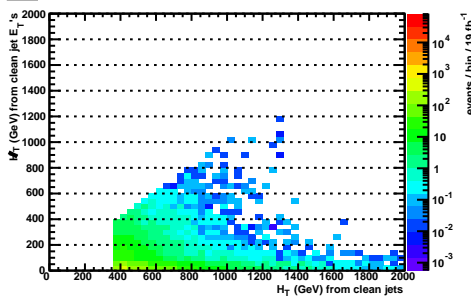
tt

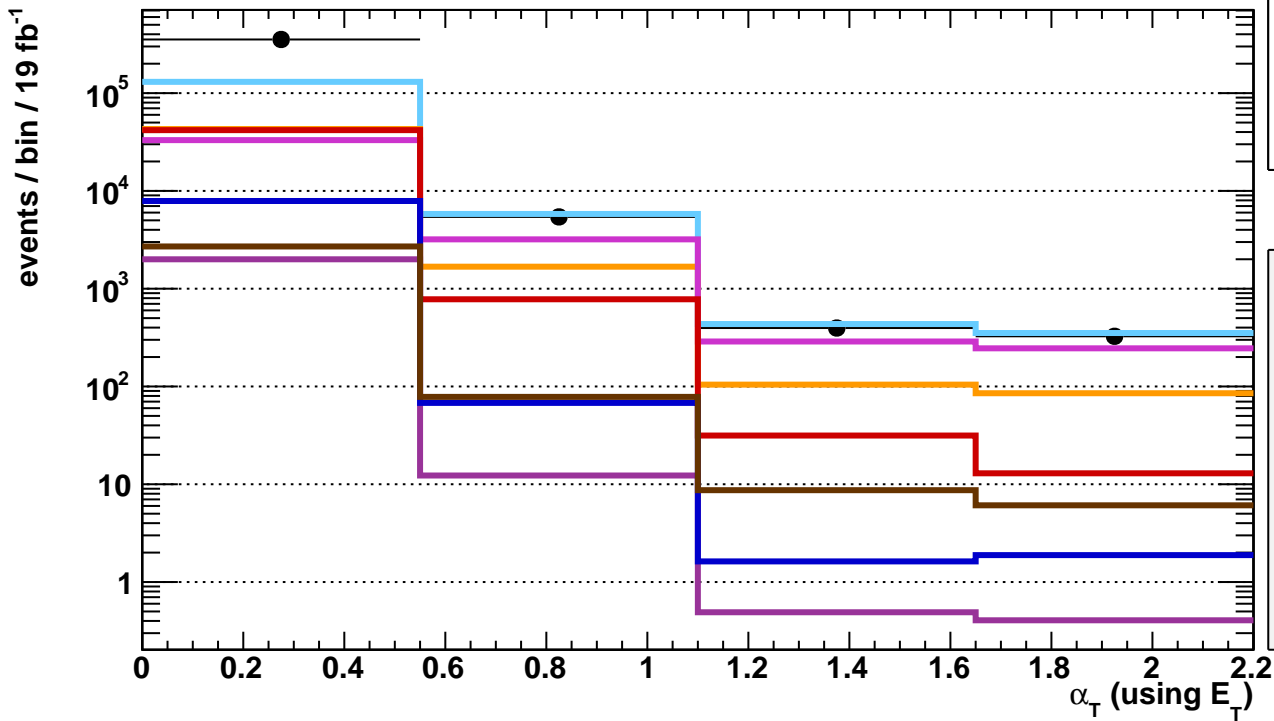


SingleTop

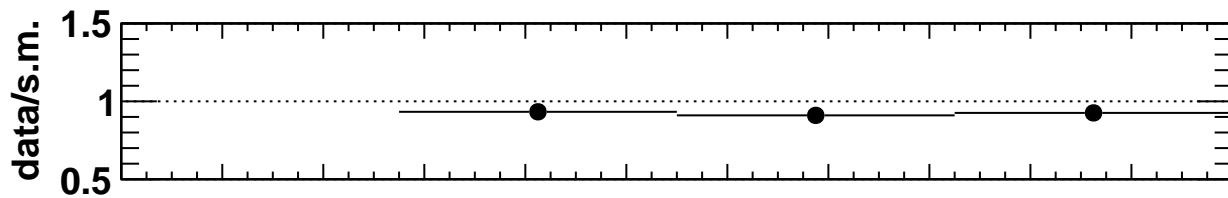
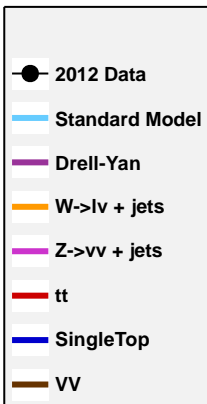


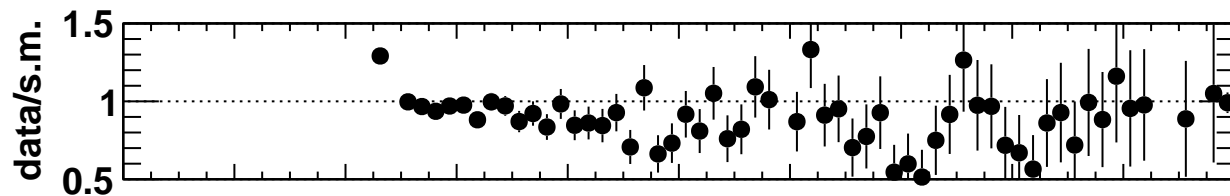
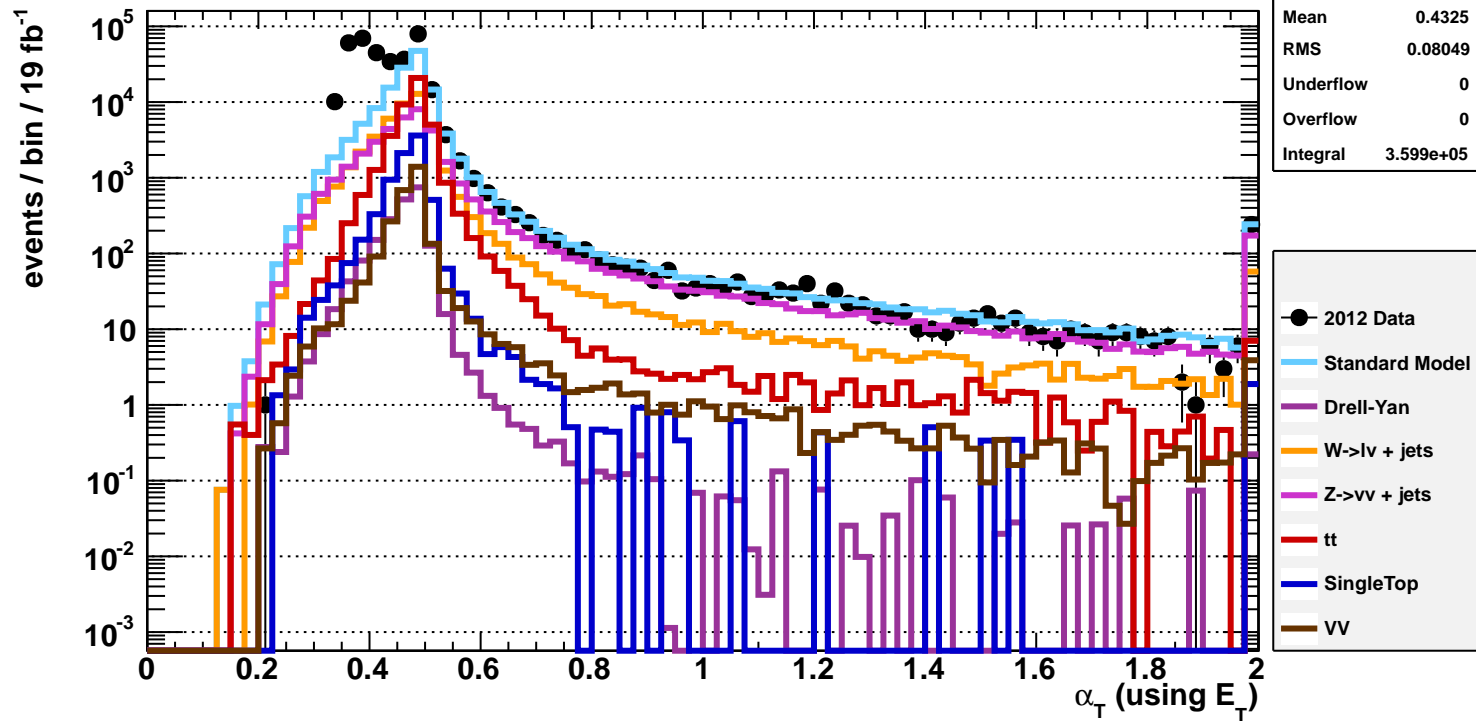
VV

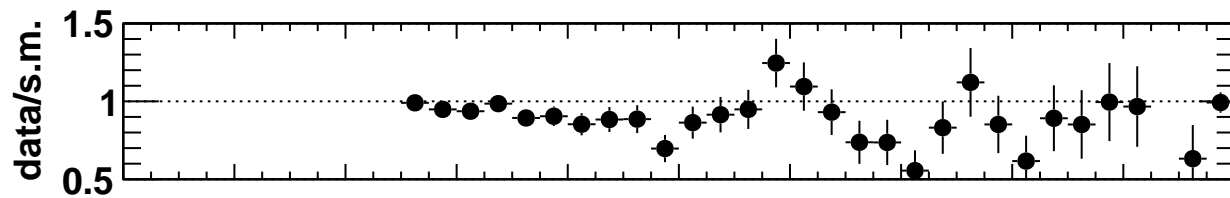
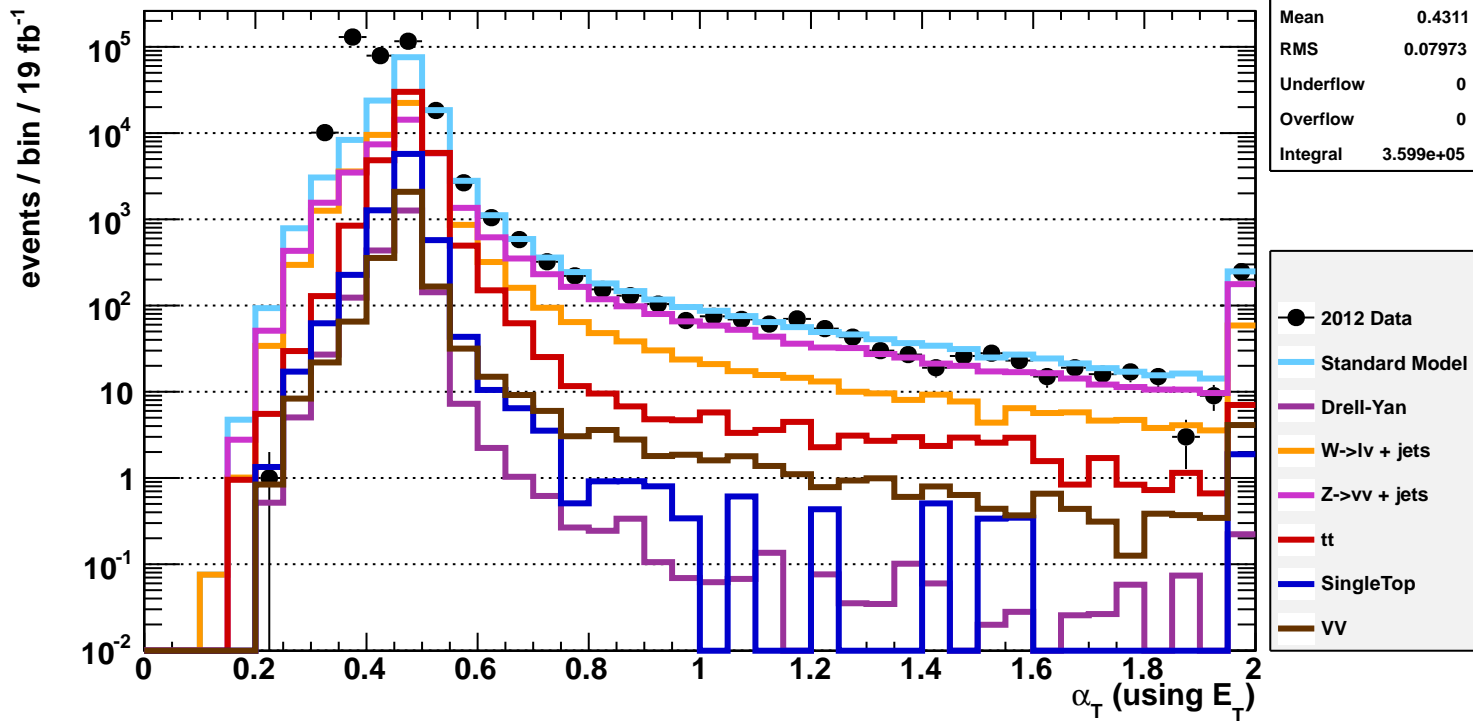


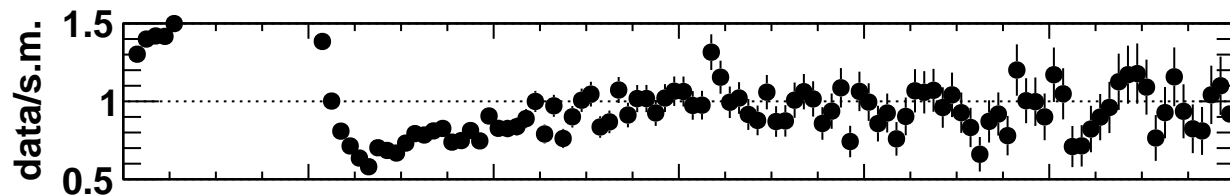
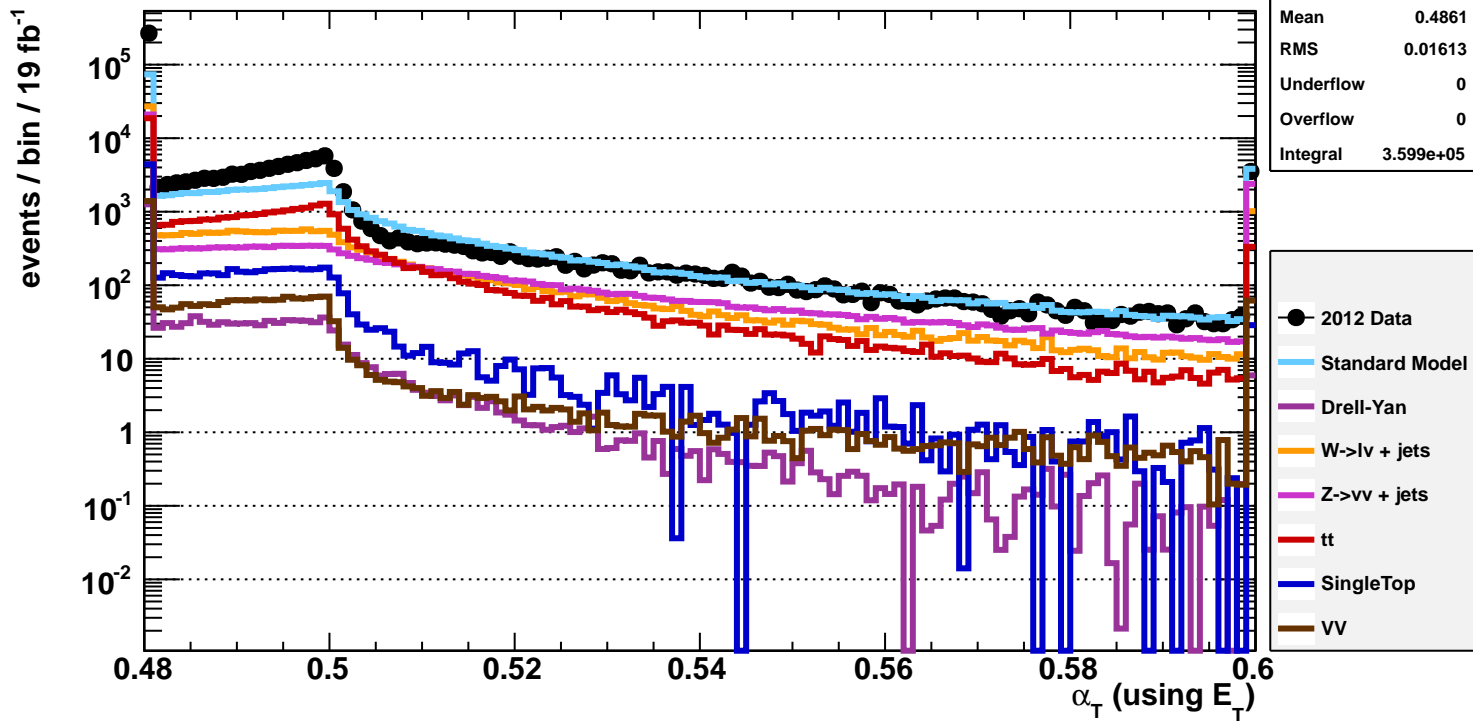


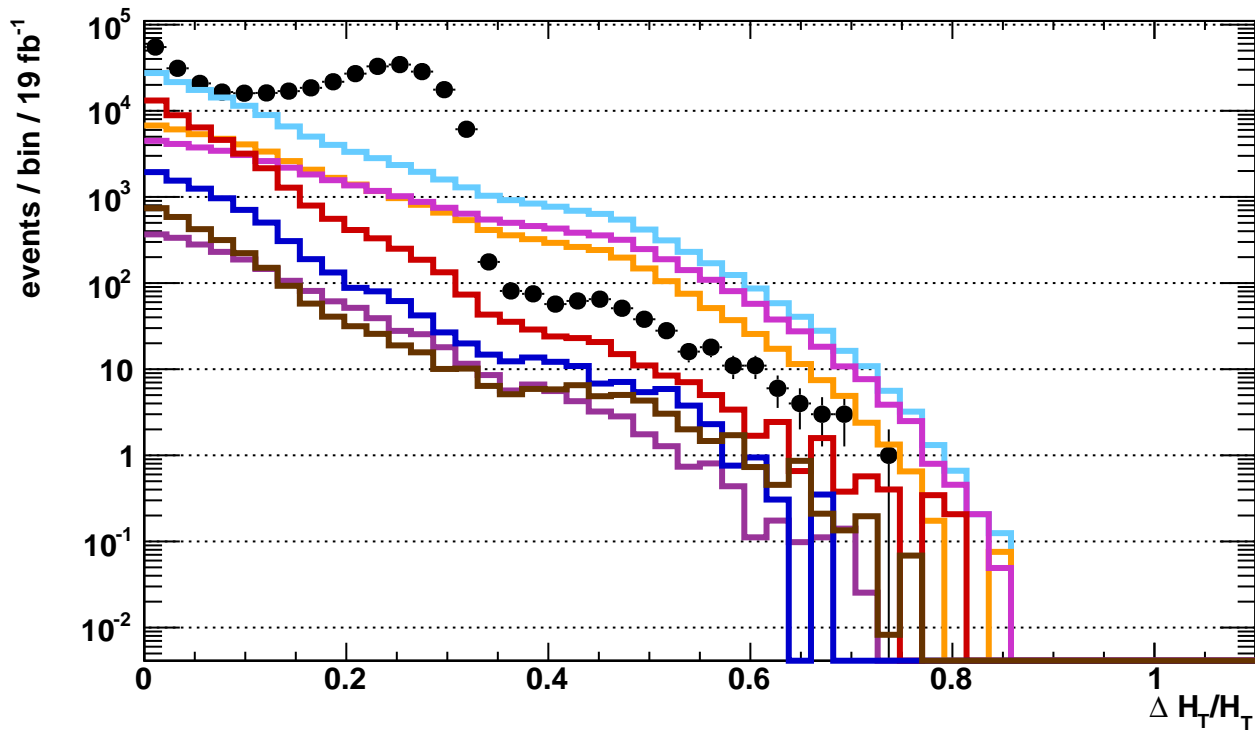
xcak5JetAlphaTFewBinsPat	
Entries	359924
Mean	0.286
RMS	0.09074
Underflow	0
Overflow	0
Integral	3.599e+05



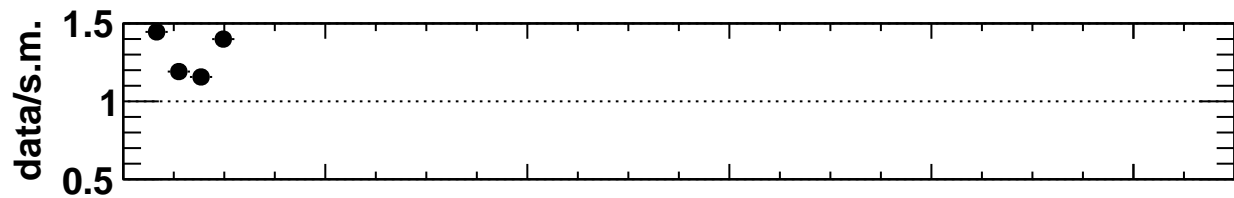
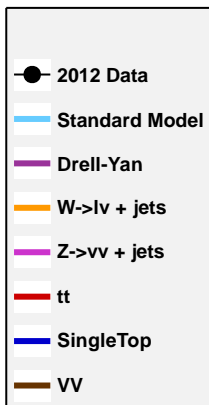


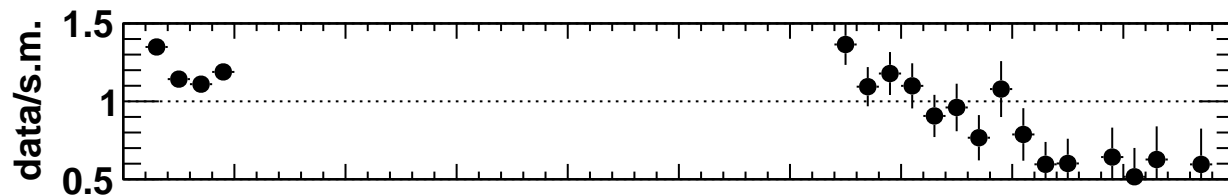
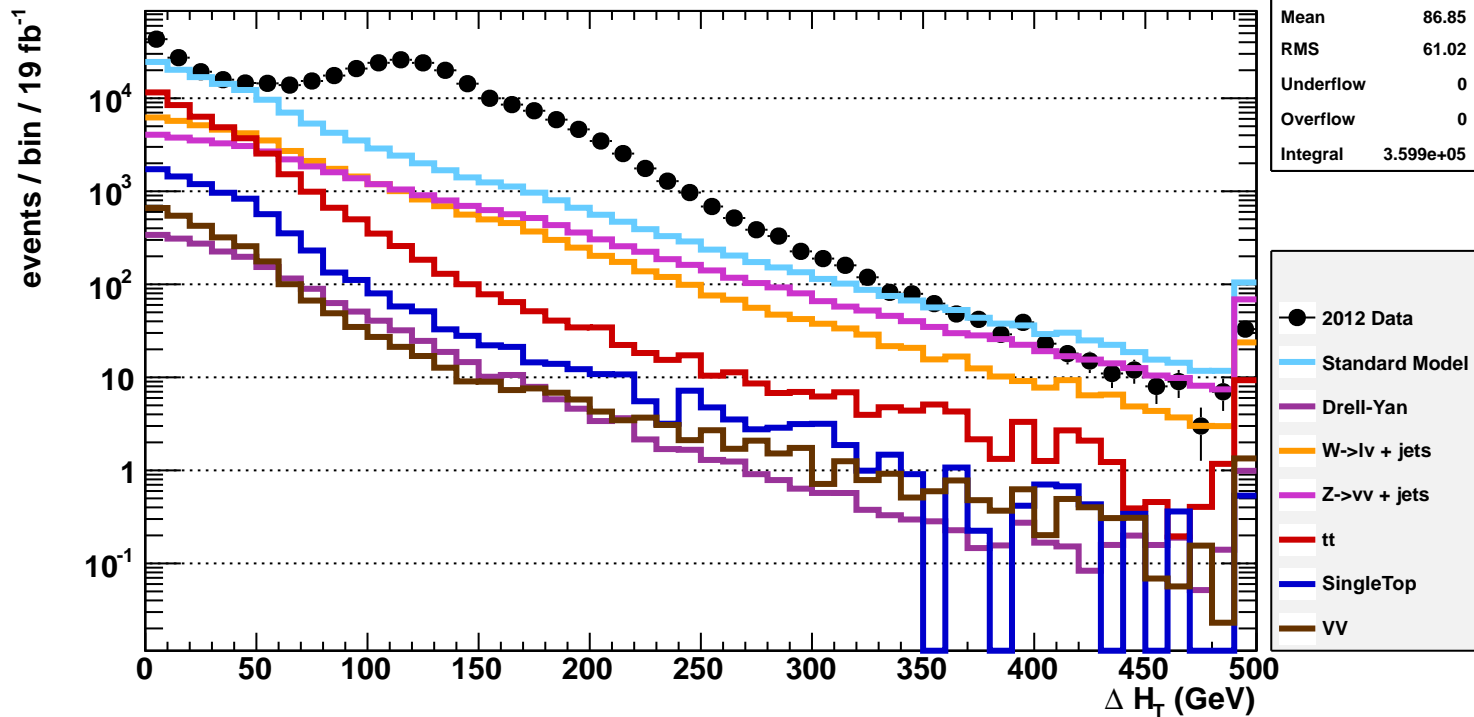




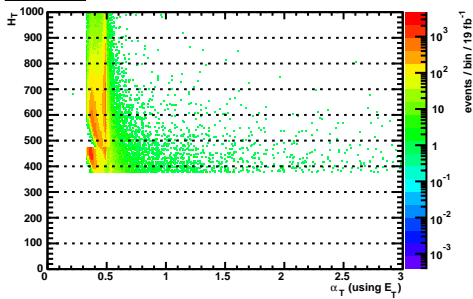


xcak5.JetDeltaHtOverHtPat	
Entries	359924
Mean	0.1507
RMS	0.1002
Underflow	0
Overflow	0
Integral	3.599e+05

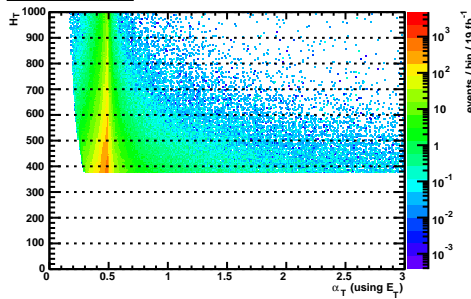




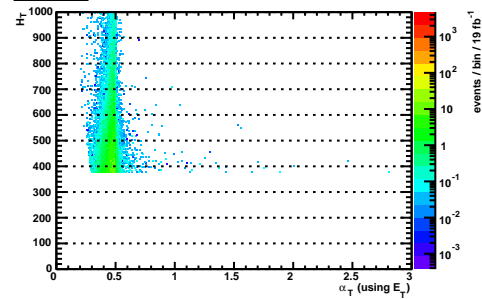
2012 Data



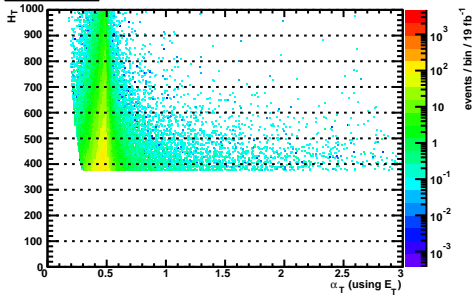
Standard Model



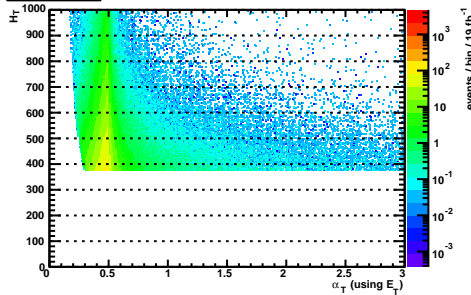
Drell-Yan



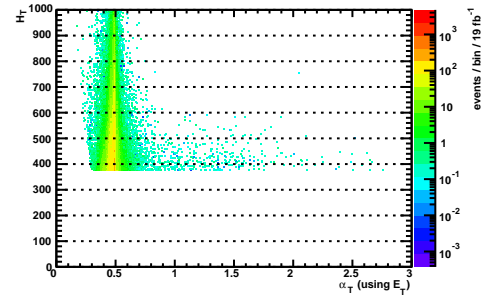
W->lv + jets



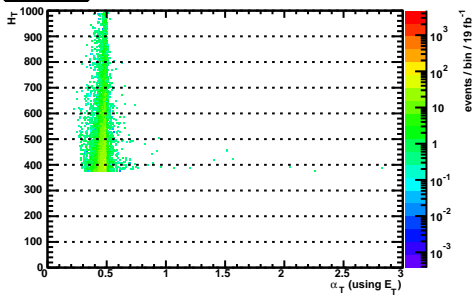
Z->vv + jets



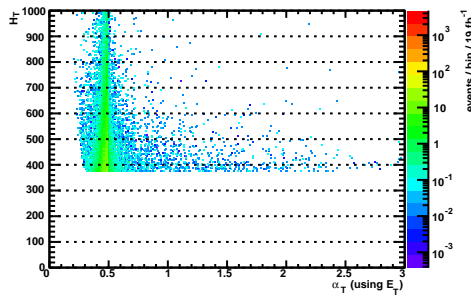
tt

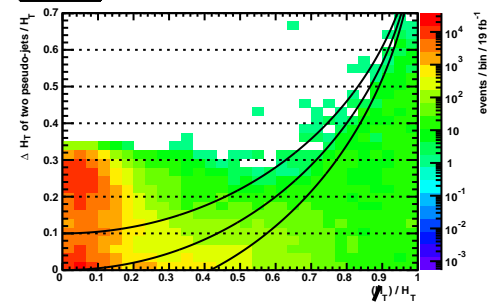
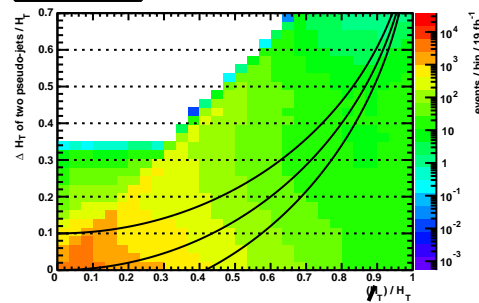
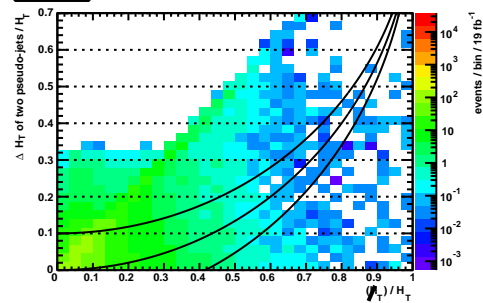
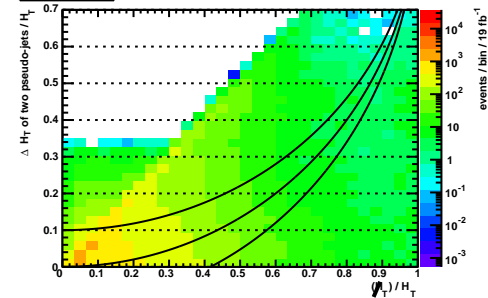
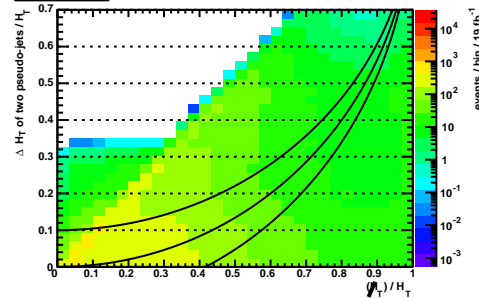
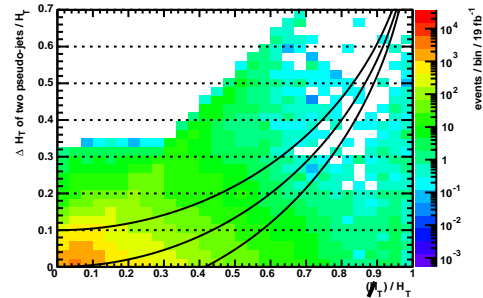
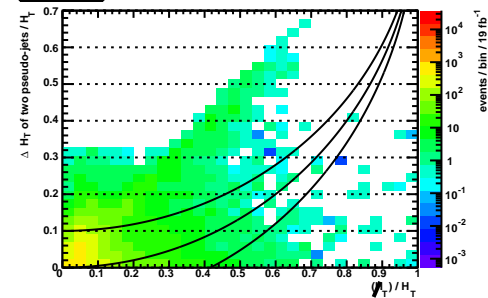
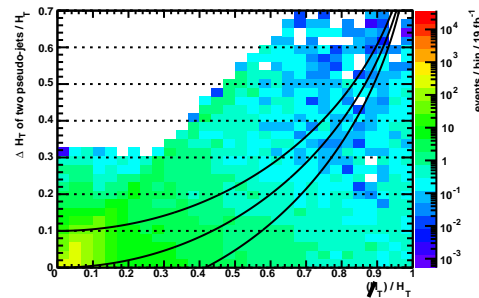


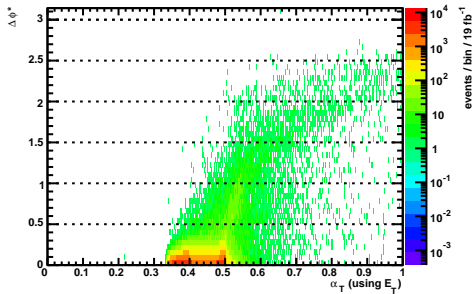
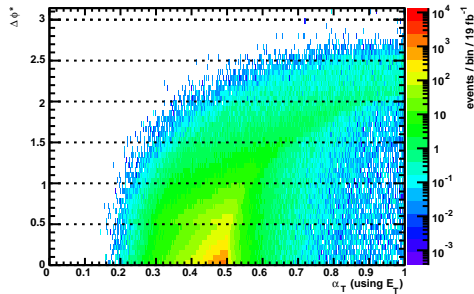
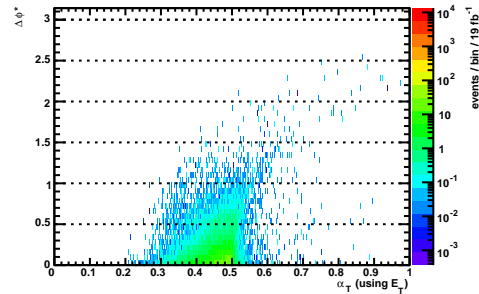
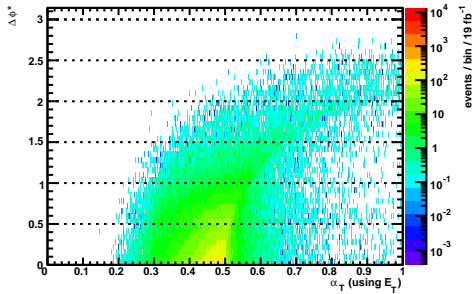
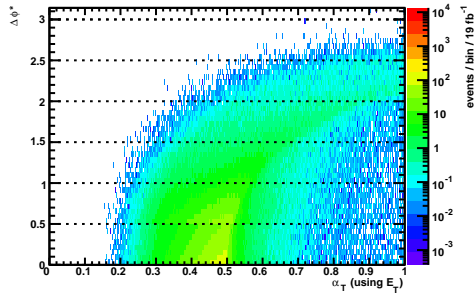
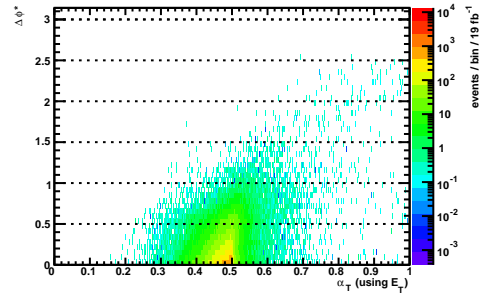
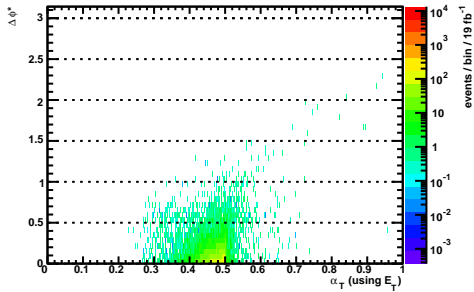
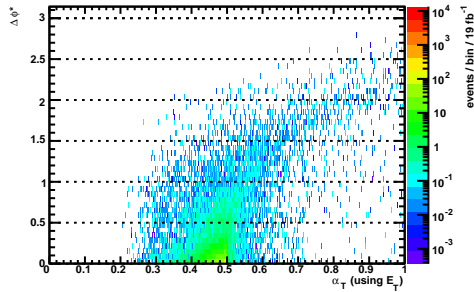
SingleTop

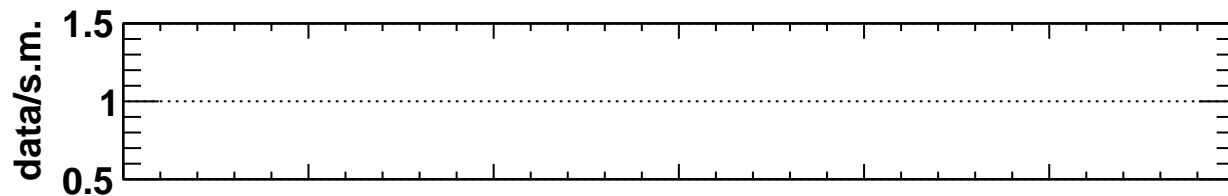
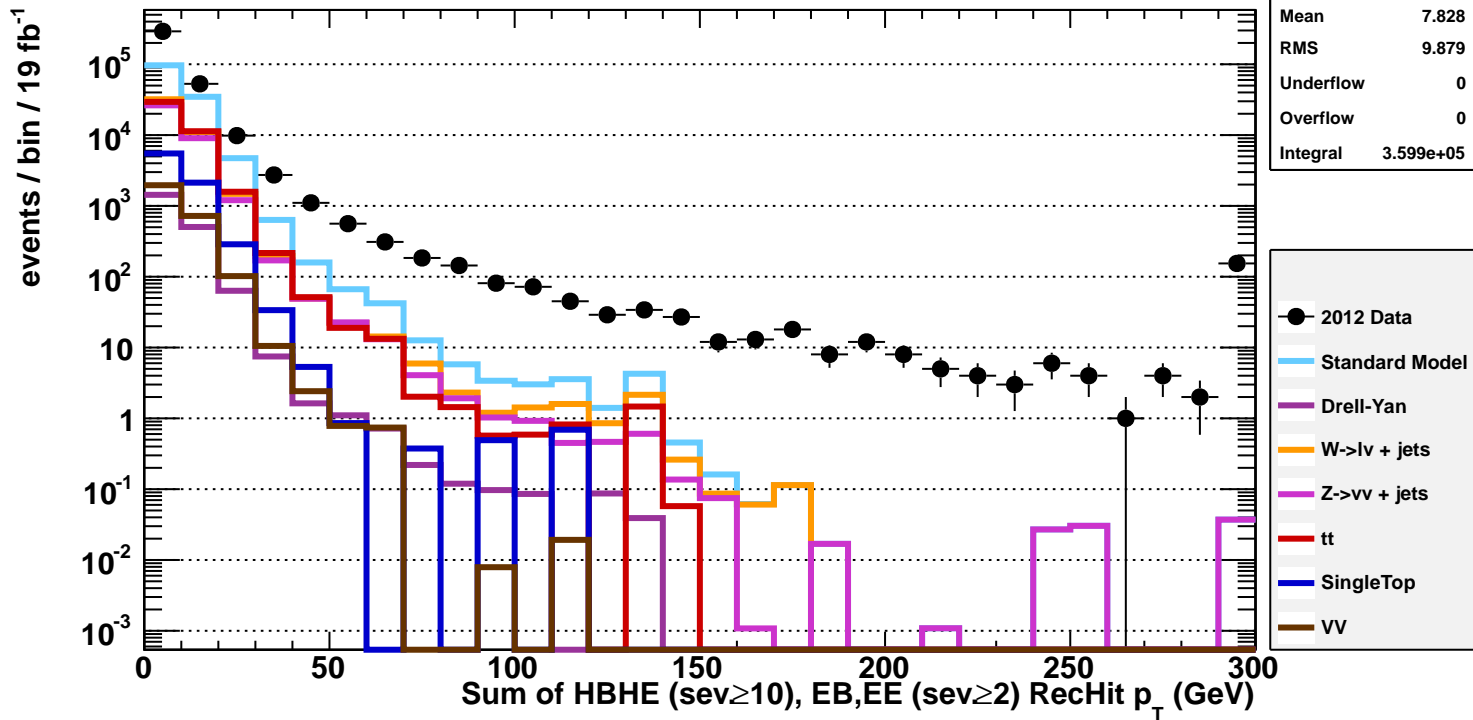


VV



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

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



```

p: jetEtaSelector          xcak5JetPat; |eta[index[0]]|<=2.5
q: jetPtSelector          xcak5JetPat; pT[index[0]]>=100.0 GeV
r: jetPtSelector          xcak5JetPat; pT[index[1]]>=100.0 GeV
s: value                  375.00<=xcak5JetSumEtPat
t: uniquelyMatchedNonisoMuons xcak5JetPat

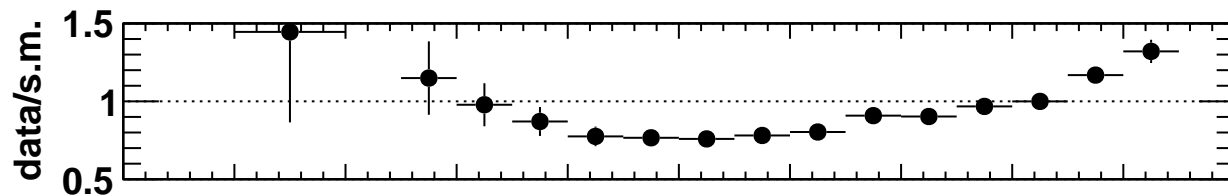
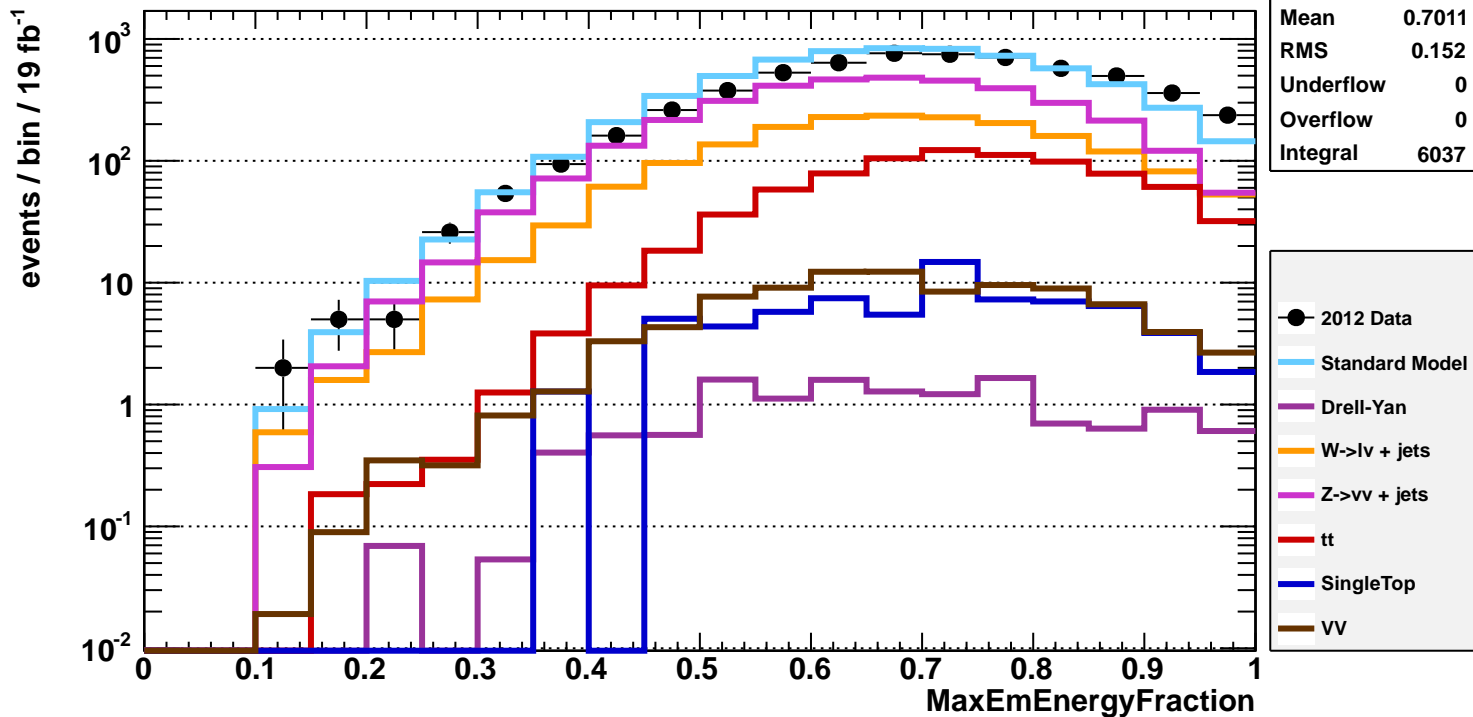
u: multiplicity           0 <= xcak5JetIndicesWithOddMuonPat <= 0
v: multiplicity           2 <= xcak5JetIndicesPat
w: multiplicity           0 <= xcak5JetIndicesOtherPat <= 0
x: multiplicity           0 <= electronIndicesPat <= 0
y: multiplicity           0 <= photonIndicesPat <= 0

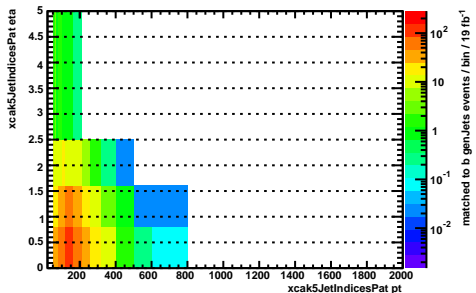
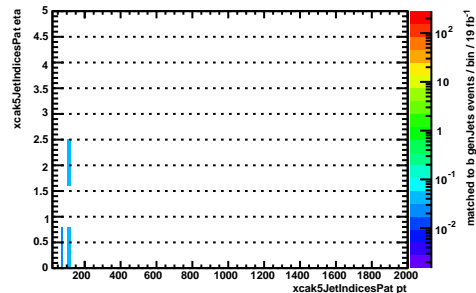
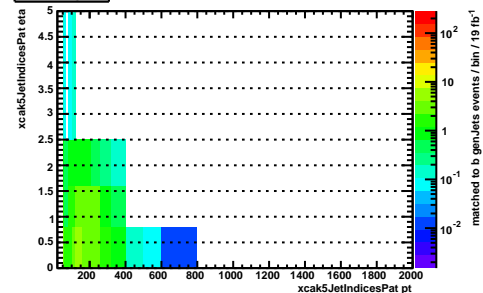
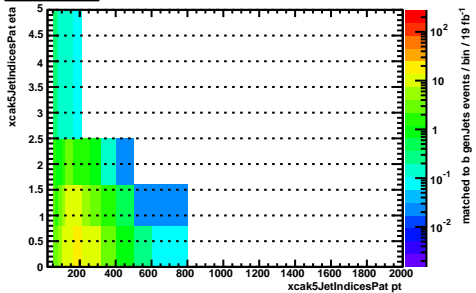
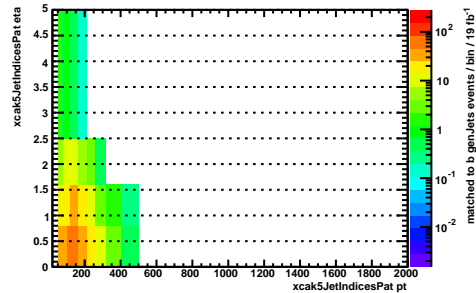
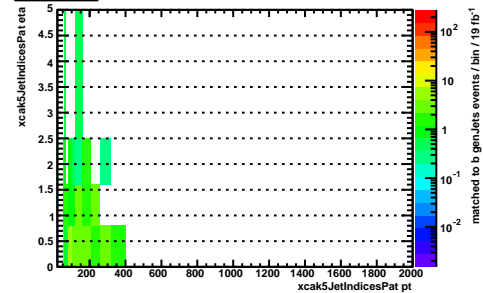
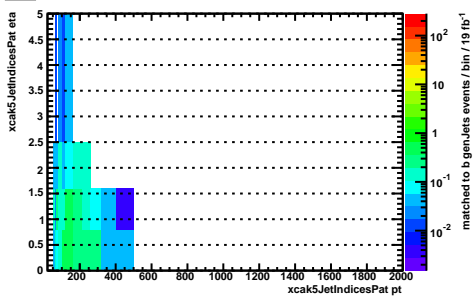
z: multiplicity           0 <= muonIndicesPat <= 0
A: multiplicity           0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
C: deadCalFilter          xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: value                  xcak5JetMhthighPtPatOvermetP4TypeIPF<=1.25

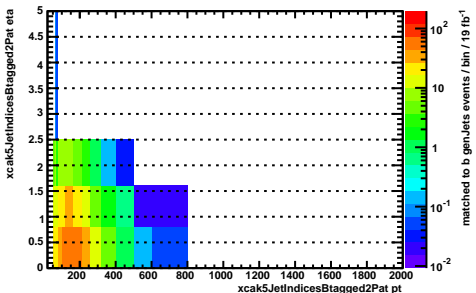
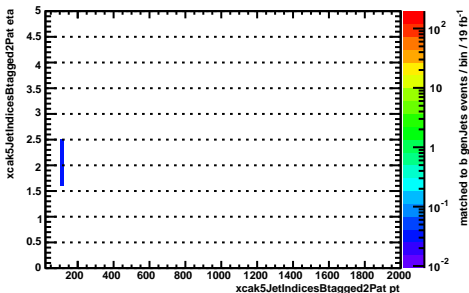
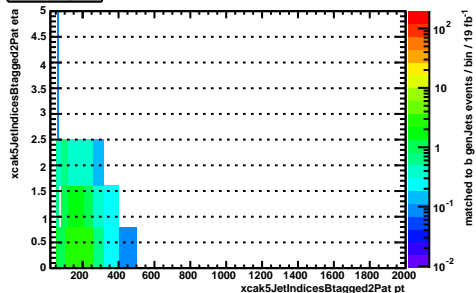
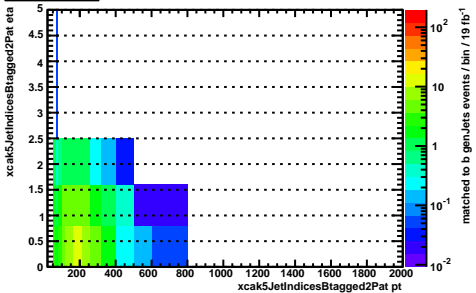
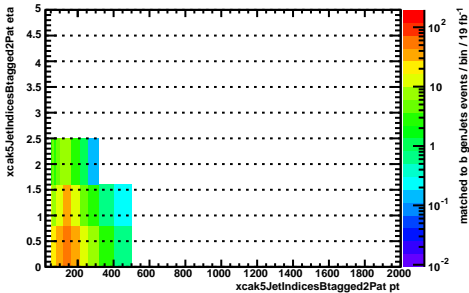
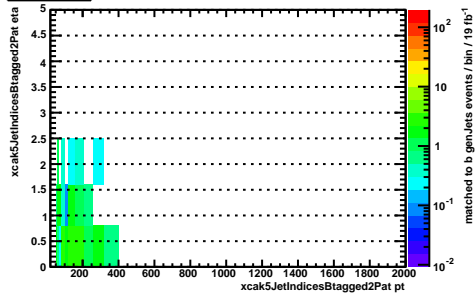
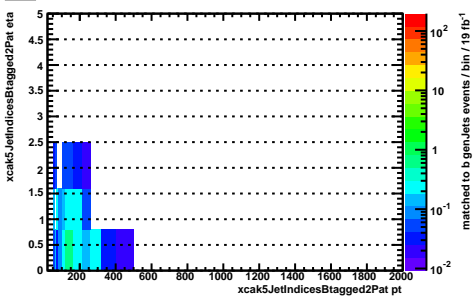
E: value                  CaloRecHitSumPt<=30.00
F: value                  0.55<=xcak5JetAlphaTETPat
G: value                  0.10<=xcak5JetMaxEmEnergyFractionPat

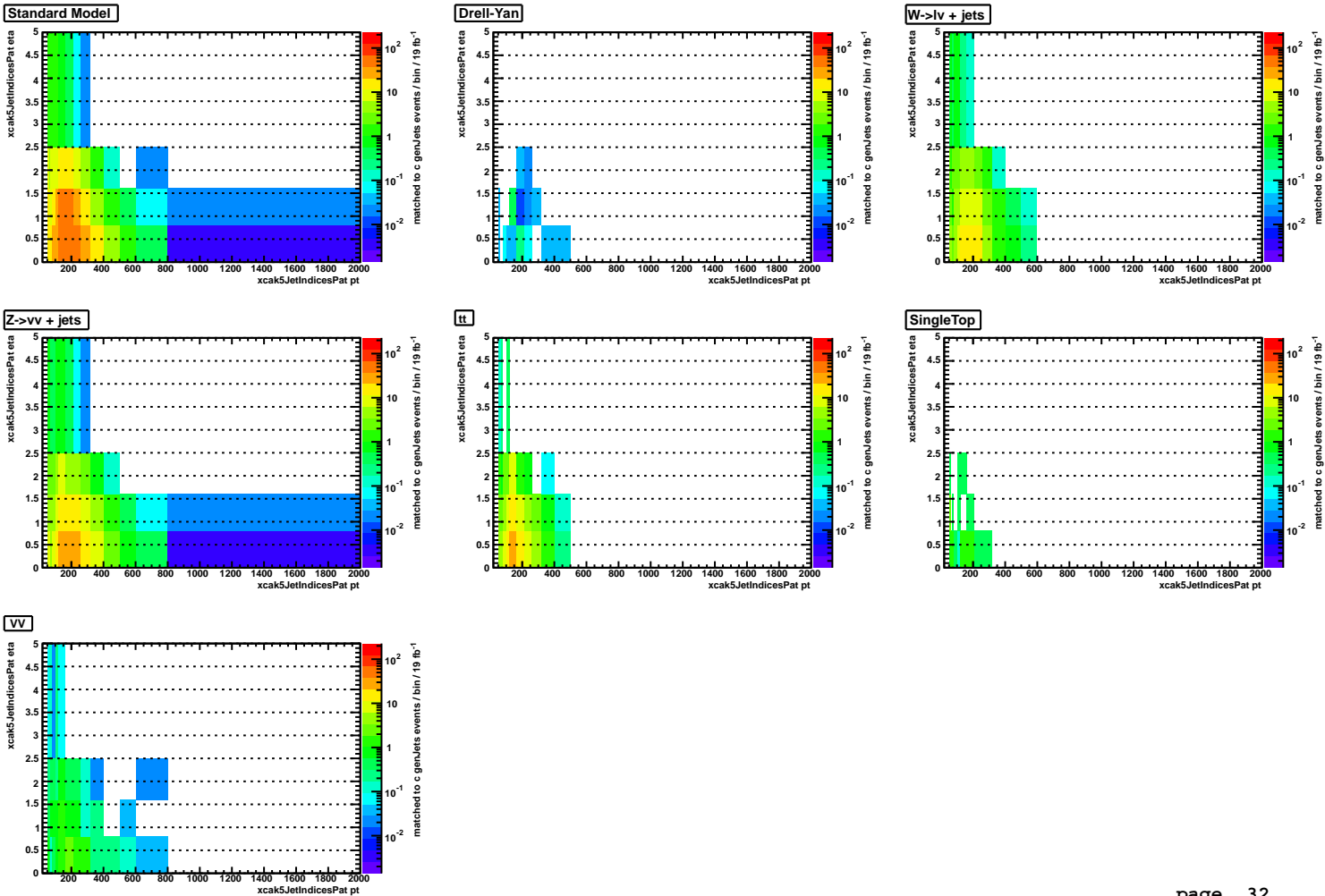
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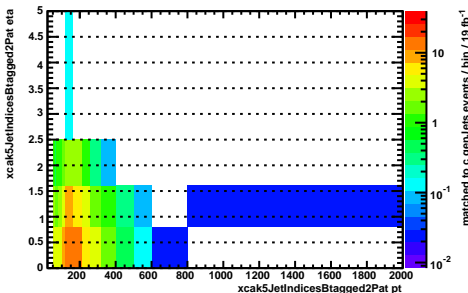
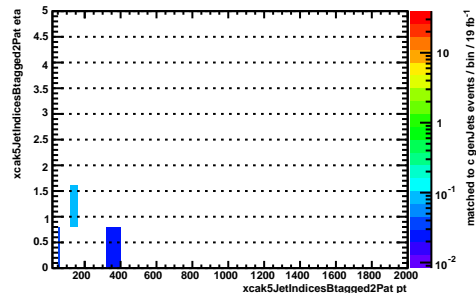
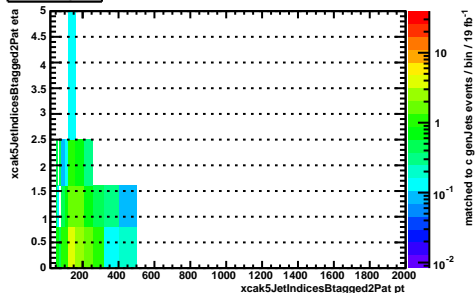
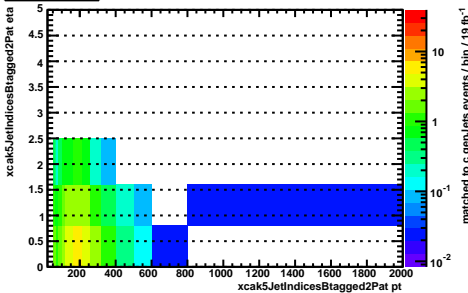
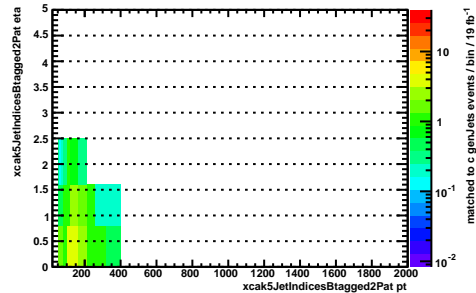
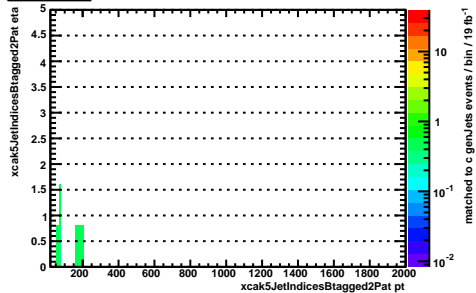
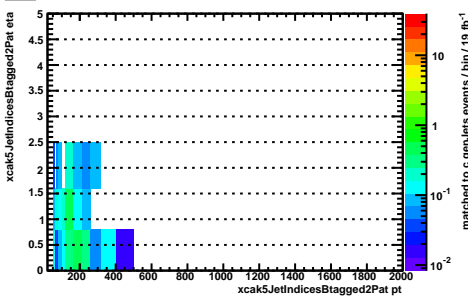
	2012 Data Standard Mod		Drell-Yan W->lv + jets		Z->vv + jets		tt	SingleTop	VV	data/s.m.
p:	9226526	4.965(2)e+7	3.777(3)e+6	3.313(2)e+7	6.331(1)e+6	3.936(-)e+6	1.5400(8)e+6	9.404(3)e+5		0.18582(9)
q:	9071768	1.1435(6)e+7	7.20(1)e+5	6.269(5)e+6	1.6026(6)e+6	2.1400(7)e+6	4.993(4)e+5	2.045(1)e+5		0.7933(5)
r:	7630042	2.542(-)e+6	1.215(2)e+5	9.909(8)e+5	2.373(1)e+5	9.405(5)e+5	1.893(3)e+5	6.268(8)e+4		3.001(2)
s:	7233757	1.2330(5)e+6	4.455(6)e+4	3.552(3)e+5	9.109(6)e+4	6.207(4)e+5	9.34(2)e+4	2.799(5)e+4		5.867(3)
t:	7220369	1.2238(5)e+6	4.415(6)e+4	3.533(3)e+5	9.104(6)e+4	6.146(4)e+5	9.28(2)e+4	2.792(5)e+4		5.900(3)
u:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4		5.923(3)
v:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4		5.923(3)
w:	6774586	1.1844(5)e+6	4.265(6)e+4	3.456(3)e+5	8.984(6)e+4	5.898(4)e+5	8.92(2)e+4	2.735(5)e+4		5.720(3)
x:	6742525	1.0119(5)e+6	2.676(5)e+4	2.539(2)e+5	8.981(6)e+4	5.315(3)e+5	8.37(2)e+4	2.618(5)e+4		6.663(4)
y:	6713053	1.0049(5)e+6	2.613(5)e+4	2.496(2)e+5	8.977(6)e+4	5.298(3)e+5	8.35(2)e+4	2.605(5)e+4		6.681(4)
z:	6688261	8.395(4)e+5	1.240(4)e+4	1.578(2)e+5	8.976(6)e+4	4.764(3)e+5	7.83(2)e+4	2.494(5)e+4		7.967(5)
A:	6680982	8.377(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.753(3)e+5	7.81(2)e+4	2.490(5)e+4		7.976(5)
B:	6680567	8.376(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.752(3)e+5	7.81(2)e+4	2.489(5)e+4		7.975(5)
C:	1463167	2.631(2)e+5	3.82(2)e+3	6.42(1)e+4	4.598(4)e+4	1.213(2)e+5	2.111(9)e+4	6.68(3)e+3		5.561(7)
D:	359924	1.370(1)e+5	2.01(2)e+3	4.482(9)e+4	3.679(4)e+4	4.265(9)e+4	7.96(6)e+3	2.80(2)e+3		2.627(5)
E:	354346	1.361(1)e+5	2.00(2)e+3	4.452(9)e+4	3.653(4)e+4	4.235(9)e+4	7.92(6)e+3	2.78(2)e+3		2.604(5)
F:	6047	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)		0.93(1)
G:	6037	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)		0.92(1)

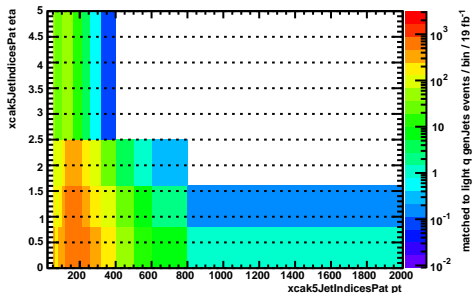
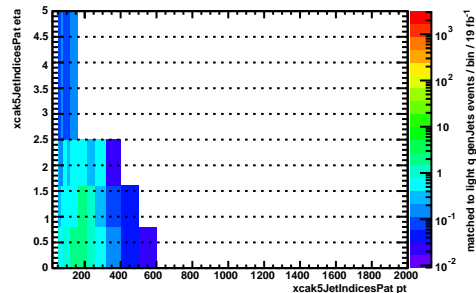
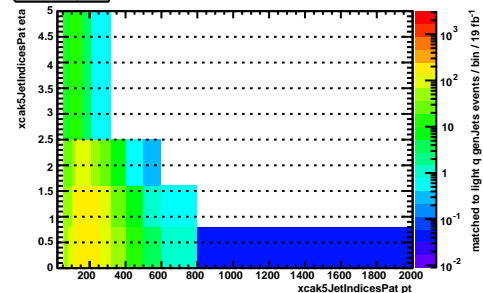
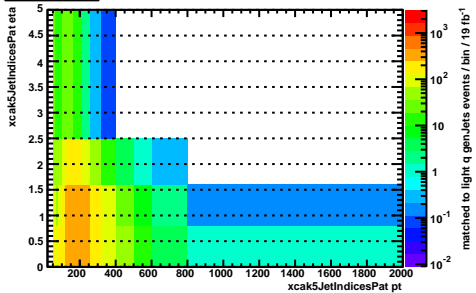
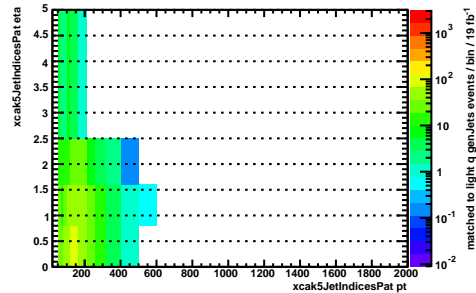
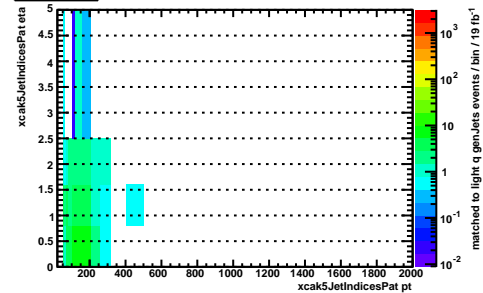
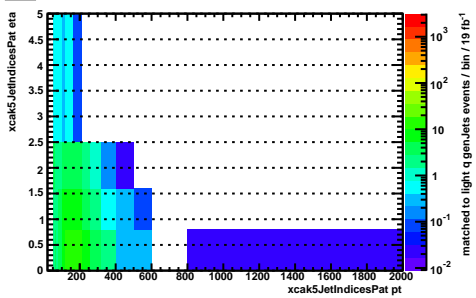


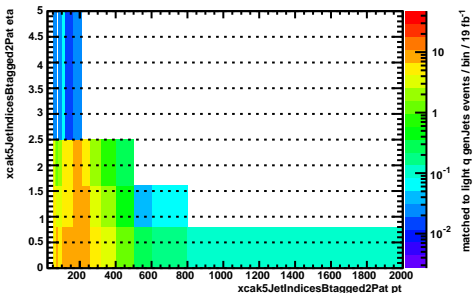
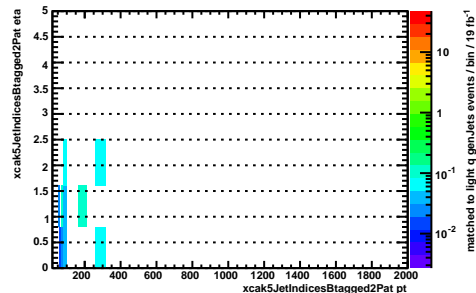
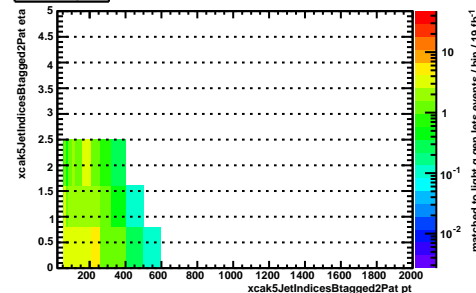
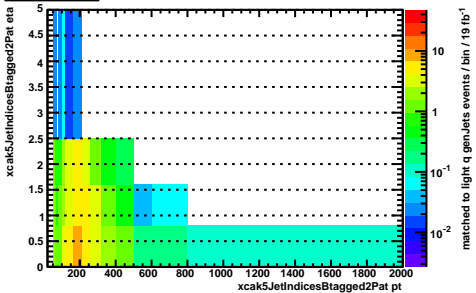
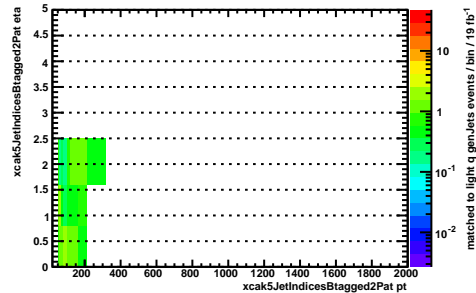
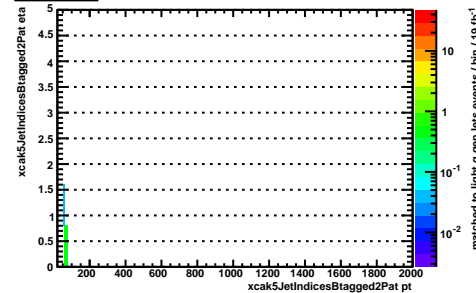
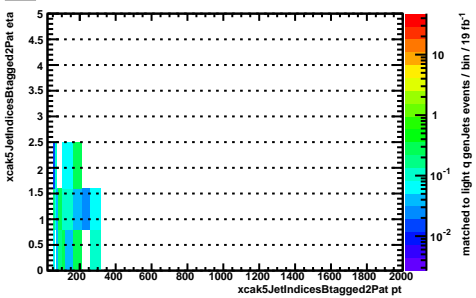
Standard Model**Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**

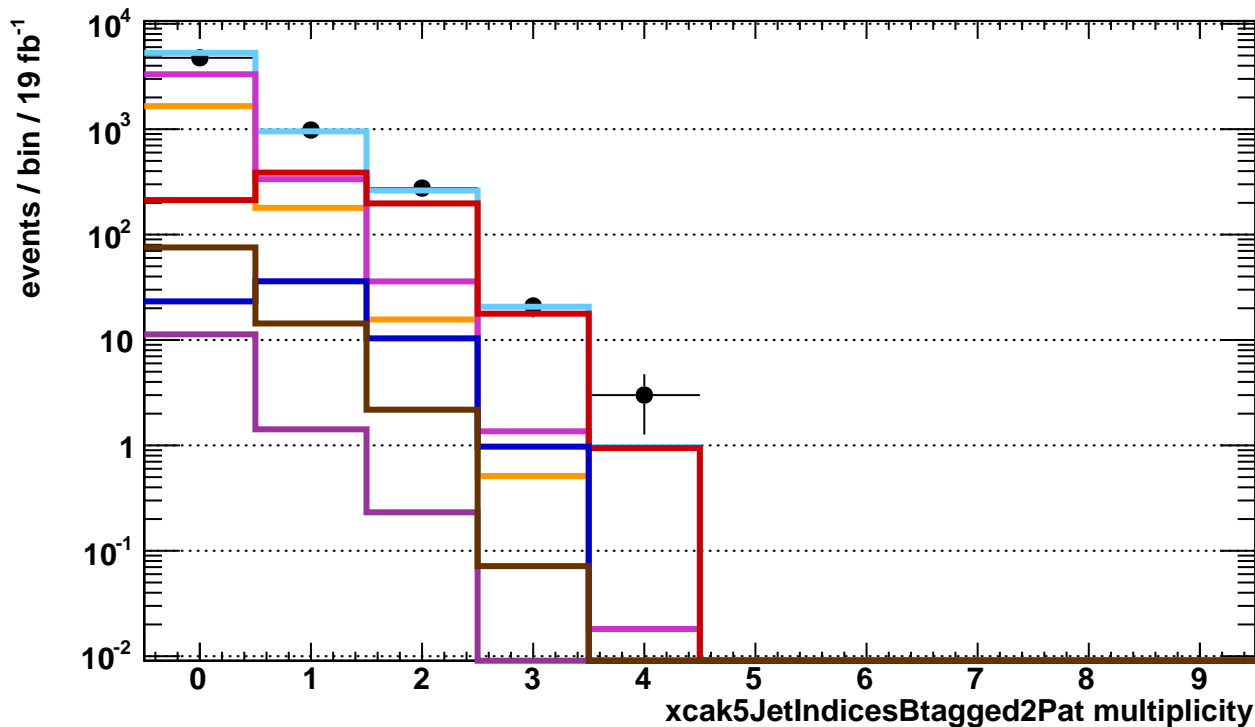
Standard Model**Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**



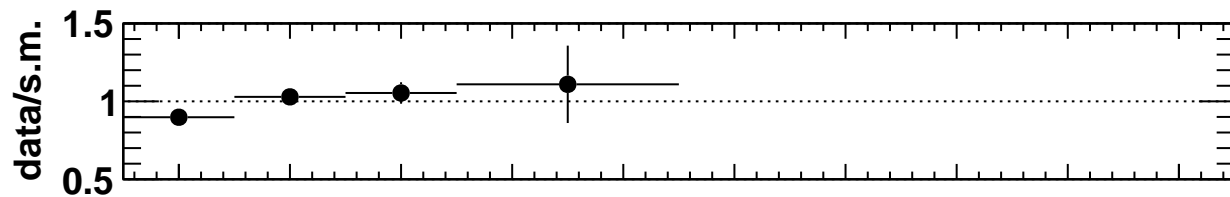
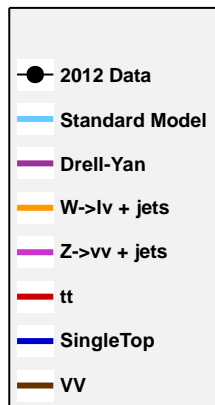
Standard Model**Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**

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

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



xcaK5JetIndicesBtagged2PatMultiplicity	
Entries	6037
Mean	0.2664
RMS	0.5601
Underflow	0
Overflow	0
Integral	6037



```

r: jetPtSelector          xcak5JetPat; pT[index[1]]>=100.0 GeV
s: value                  375.00<=xcak5JetSumEtPat
t: uniquelyMatchedNonisoMuons xcak5JetPat

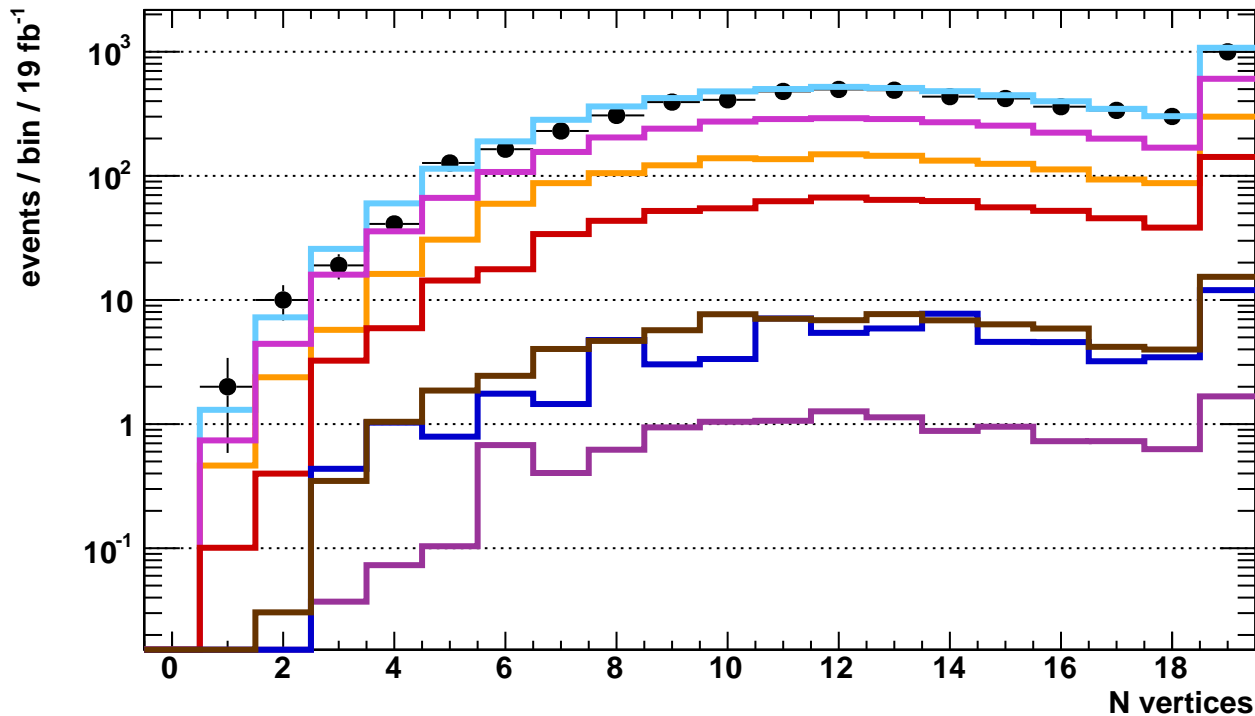
u: multiplicity           0 <= xcak5JetIndicesWithOddMuonPat <= 0
v: multiplicity           2 <= xcak5JetIndicesPat
w: multiplicity           0 <= xcak5JetIndicesOtherPat <= 0
x: multiplicity           0 <= electronIndicesPat <= 0
y: multiplicity           0 <= photonIndicesPat <= 0

z: multiplicity           0 <= muonIndicesPat <= 0
A: multiplicity           0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter         xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: value                  xcak5JetMhthighPtPatOvermetP4TypeIPF<=1.25

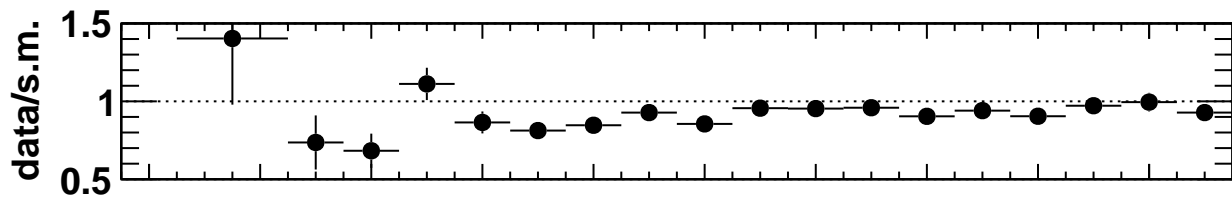
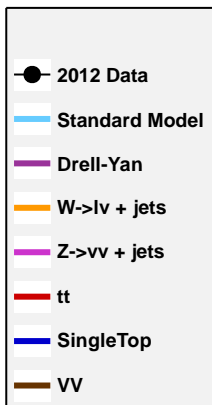
E: value                  CaloRecHitSumPt<=30.00
F: value                  0.55<=xcak5JetAlphaTEtPat
G: value                  0.10<=xcak5JetMaxEmEnergyFractionPat
H: value                  1.00<=hcalLaserEvent2012
I: value                  1.00<=ecalLaserCalibEvent2012

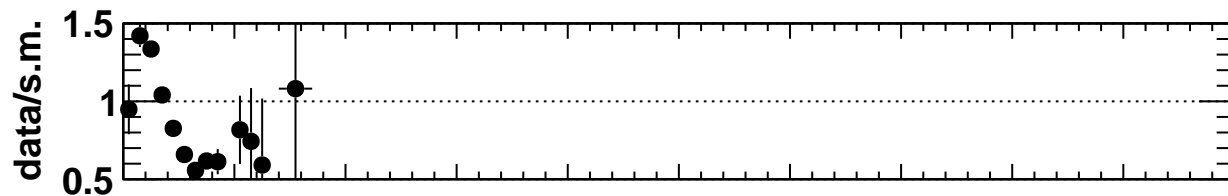
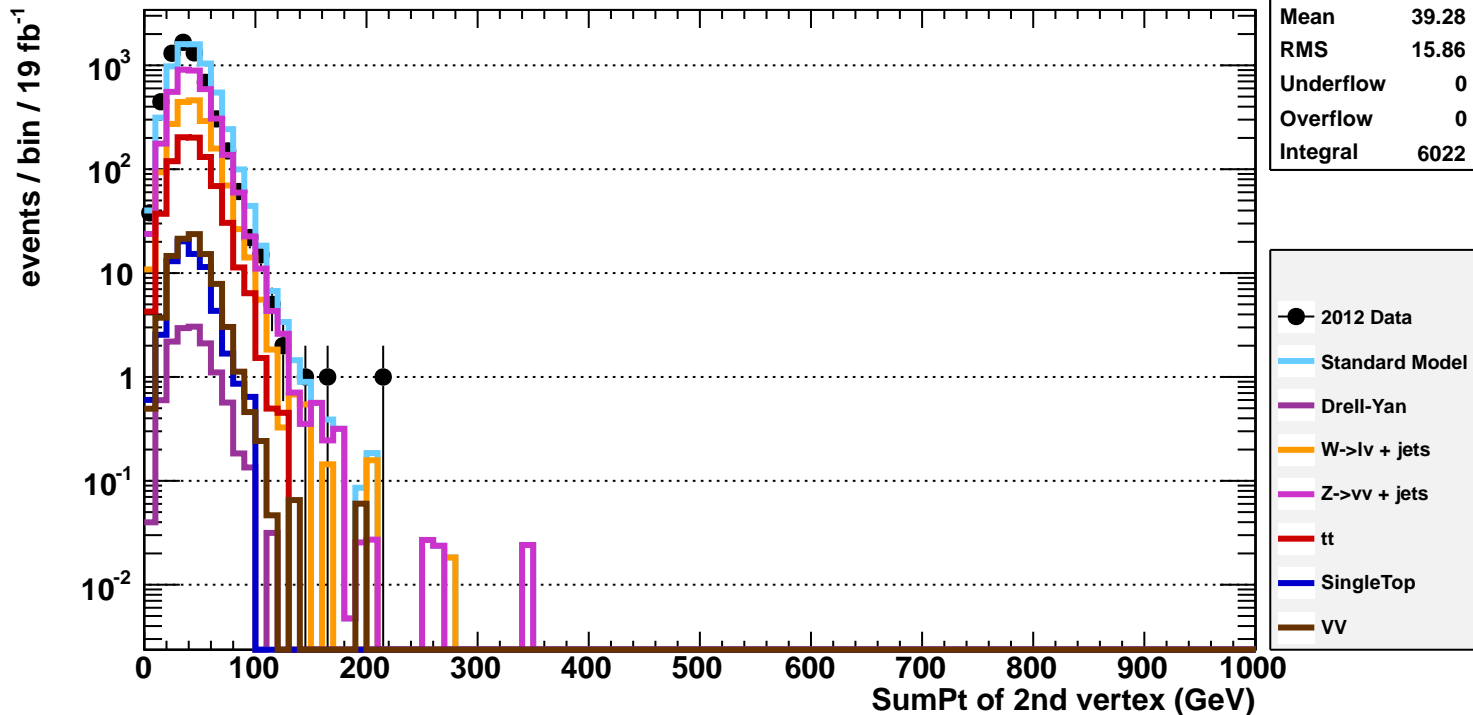
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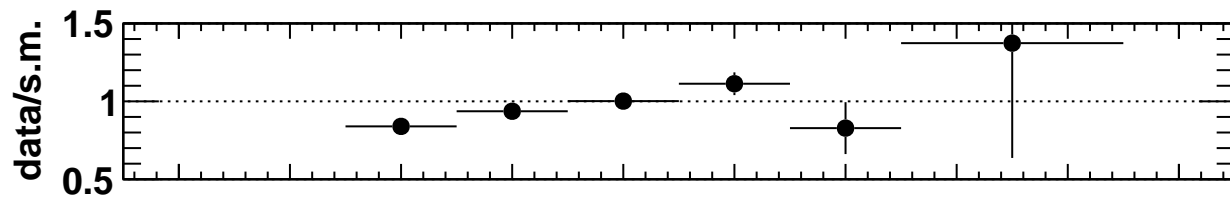
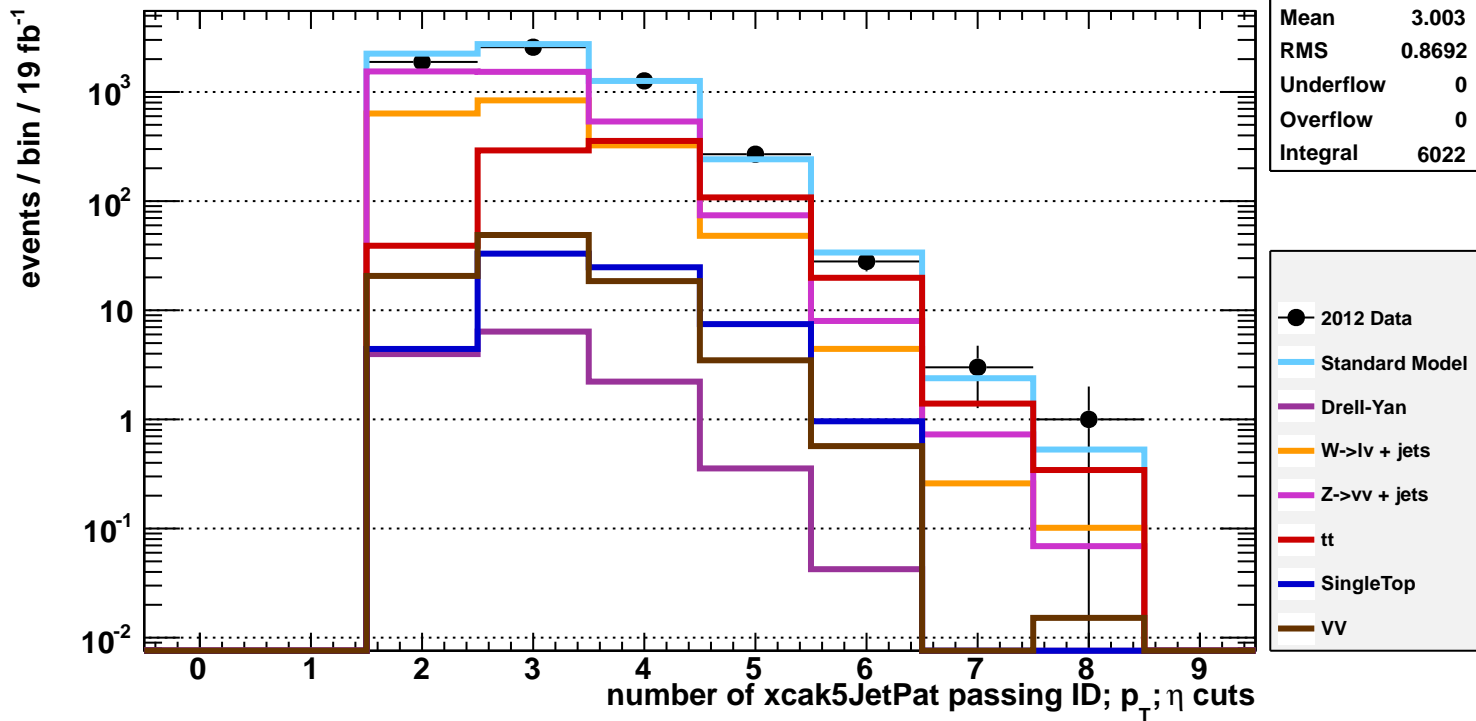
	2012 Data	Standard Mod	Drell-Yan W->lv + jets Z->vv + jets				tt	SingleTop	VV	data/s.m.
r:	7630042	2.542(-)e+6	1.215(2)e+5	9.909(8)e+5	2.373(1)e+5	9.405(5)e+5	1.893(3)e+5	6.268(8)e+4	3.001(2)	
s:	7233757	1.2330(5)e+6	4.455(6)e+4	3.552(3)e+5	9.109(6)e+4	6.207(4)e+5	9.34(2)e+4	2.799(5)e+4	5.867(3)	
t:	7220369	1.2238(5)e+6	4.415(6)e+4	3.533(3)e+5	9.104(6)e+4	6.146(4)e+5	9.28(2)e+4	2.792(5)e+4	5.900(3)	
u:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4	5.923(3)	
v:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4	5.923(3)	
w:	6774586	1.1844(5)e+6	4.265(6)e+4	3.456(3)e+5	8.984(6)e+4	5.898(4)e+5	8.92(2)e+4	2.735(5)e+4	5.720(3)	
x:	6742525	1.0119(5)e+6	2.676(5)e+4	2.539(2)e+5	8.981(6)e+4	5.315(3)e+5	8.37(2)e+4	2.618(5)e+4	6.663(4)	
y:	6713053	1.0049(5)e+6	2.613(5)e+4	2.496(2)e+5	8.977(6)e+4	5.298(3)e+5	8.35(2)e+4	2.605(5)e+4	6.681(4)	
z:	6688261	8.395(4)e+5	1.240(4)e+4	1.578(2)e+5	8.976(6)e+4	4.764(3)e+5	7.83(2)e+4	2.494(5)e+4	7.967(5)	
A:	6680982	8.377(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.753(3)e+5	7.81(2)e+4	2.490(5)e+4	7.976(5)	
B:	6680567	8.376(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.752(3)e+5	7.81(2)e+4	2.489(5)e+4	7.975(5)	
C:	1463167	2.631(2)e+5	3.82(2)e+3	6.42(1)e+4	4.598(4)e+4	1.213(2)e+5	2.111(9)e+4	6.68(3)e+3	5.561(7)	
D:	359924	1.370(1)e+5	2.01(2)e+3	4.482(9)e+4	3.679(4)e+4	4.265(9)e+4	7.96(6)e+3	2.80(2)e+3	2.627(5)	
E:	354346	1.361(1)e+5	2.00(2)e+3	4.452(9)e+4	3.653(4)e+4	4.235(9)e+4	7.92(6)e+3	2.78(2)e+3	2.604(5)	
F:	6047	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)	0.93(1)	
G:	6037	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)	0.92(1)	
H:	6037	-	-	-	-	-	-	-	-	
I:	6022	-	-	-	-	-	-	-	-	

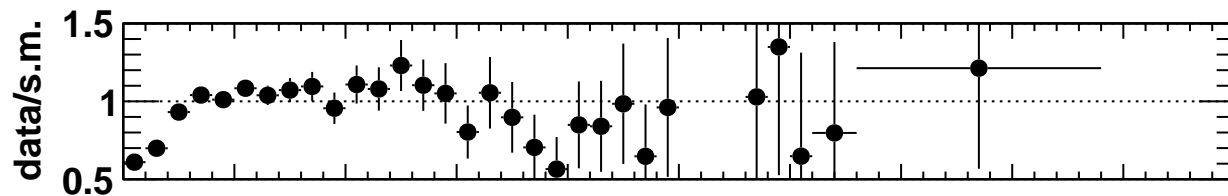
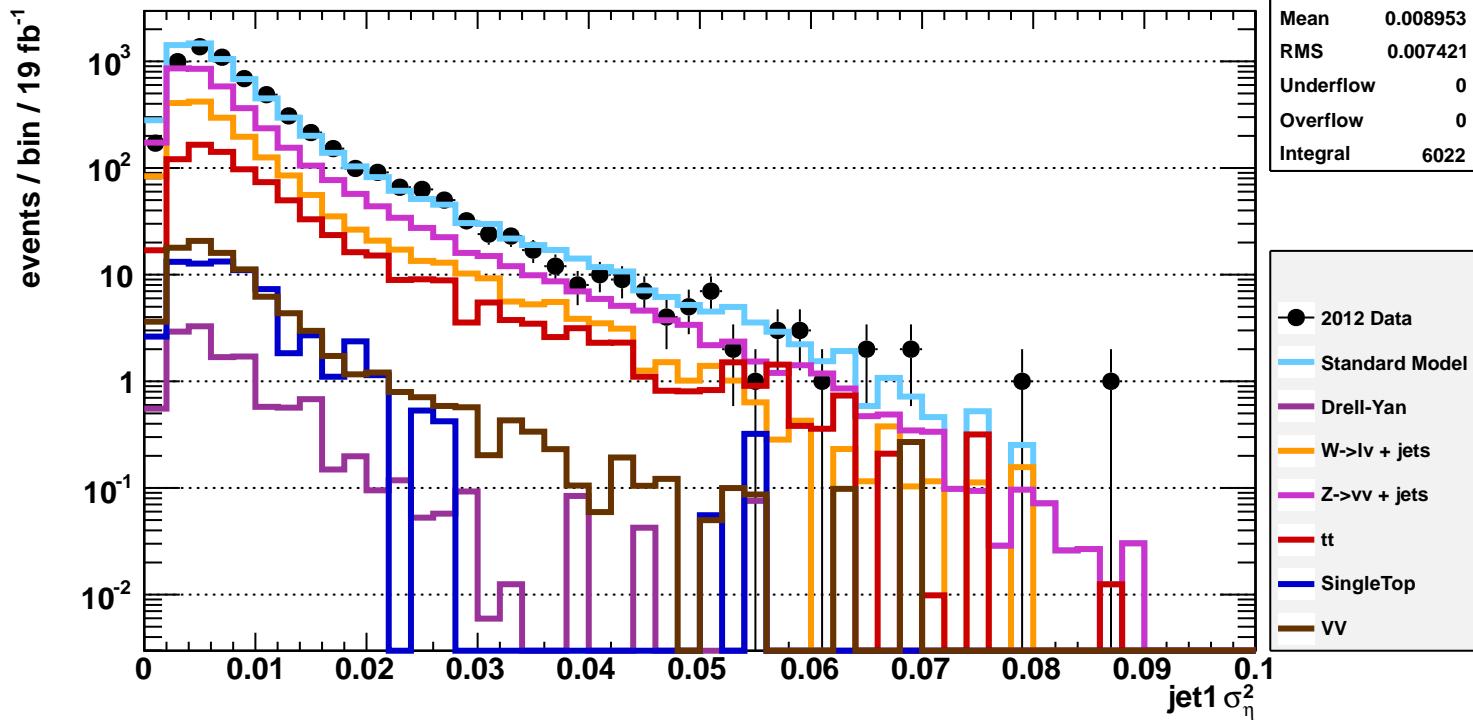


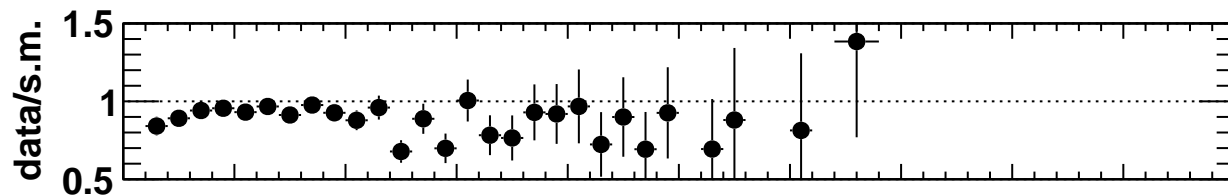
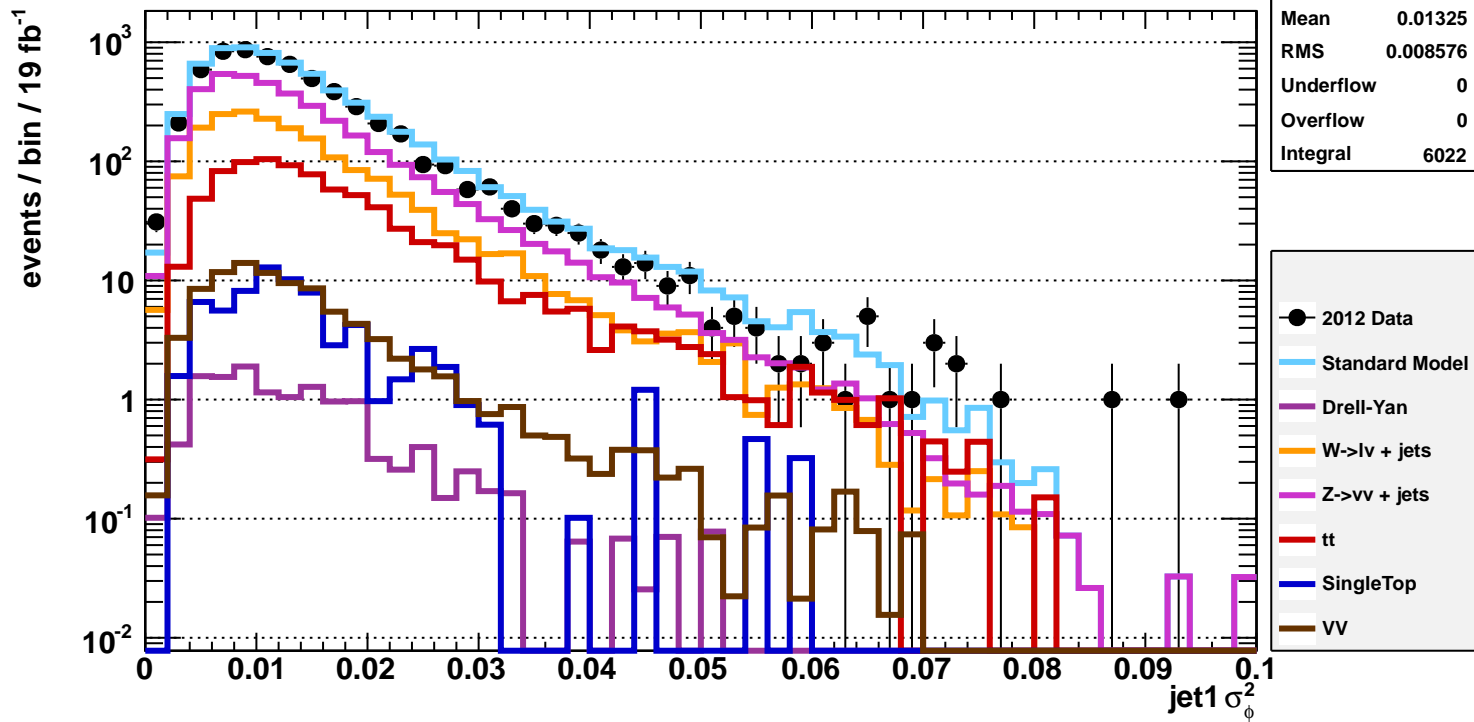
vertexIndices	
Entries	6022
Mean	13.2
RMS	4.181
Underflow	0
Overflow	0
Integral	6022

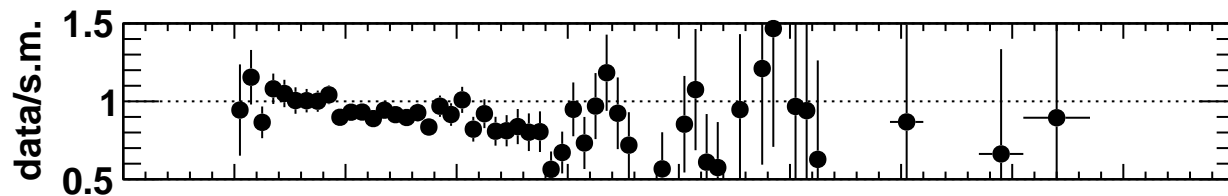
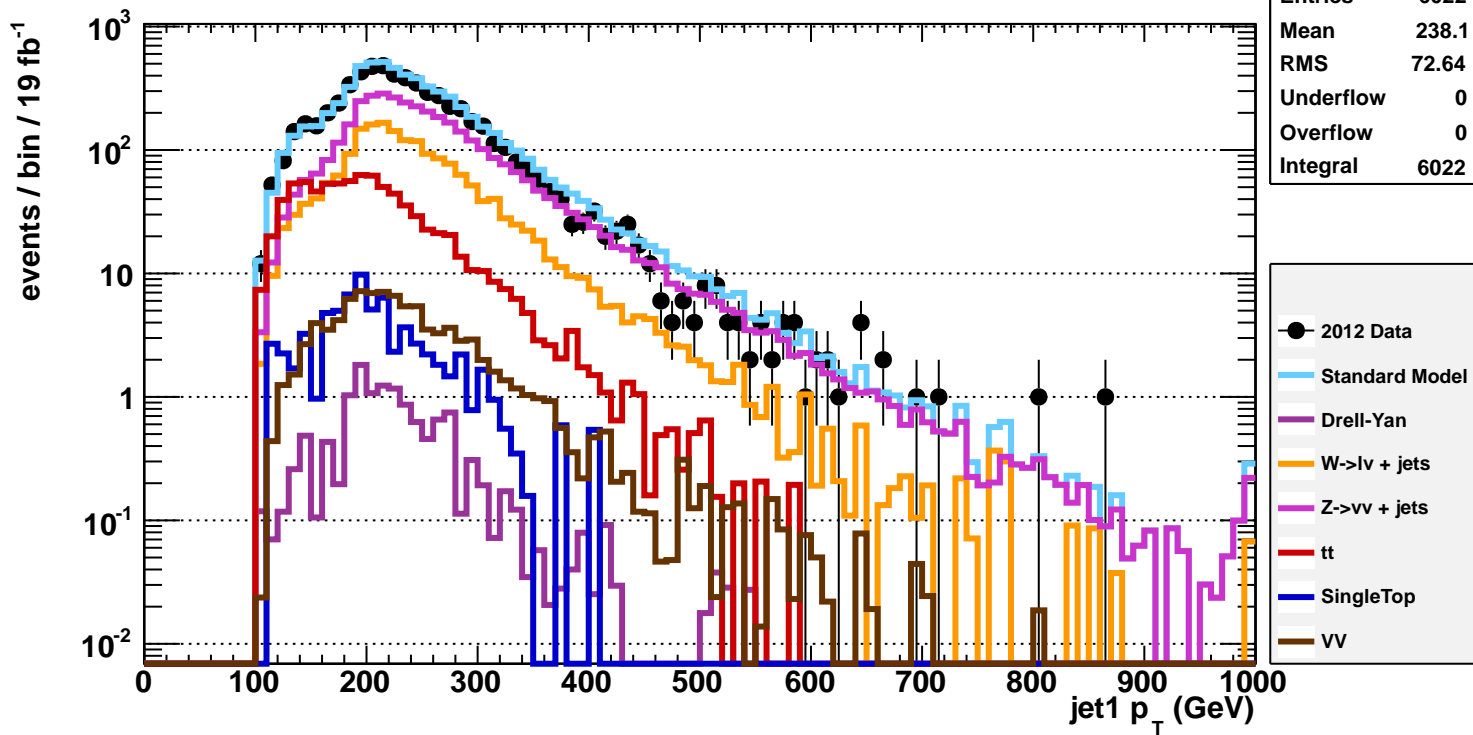


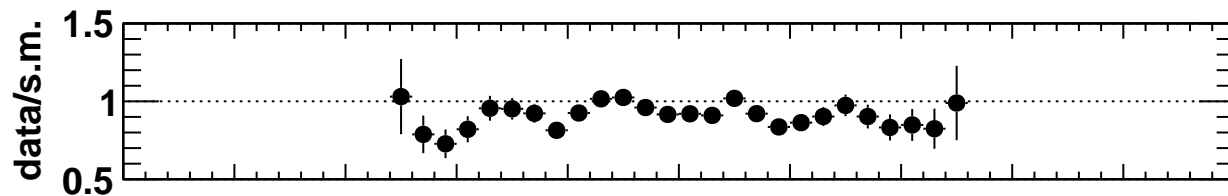
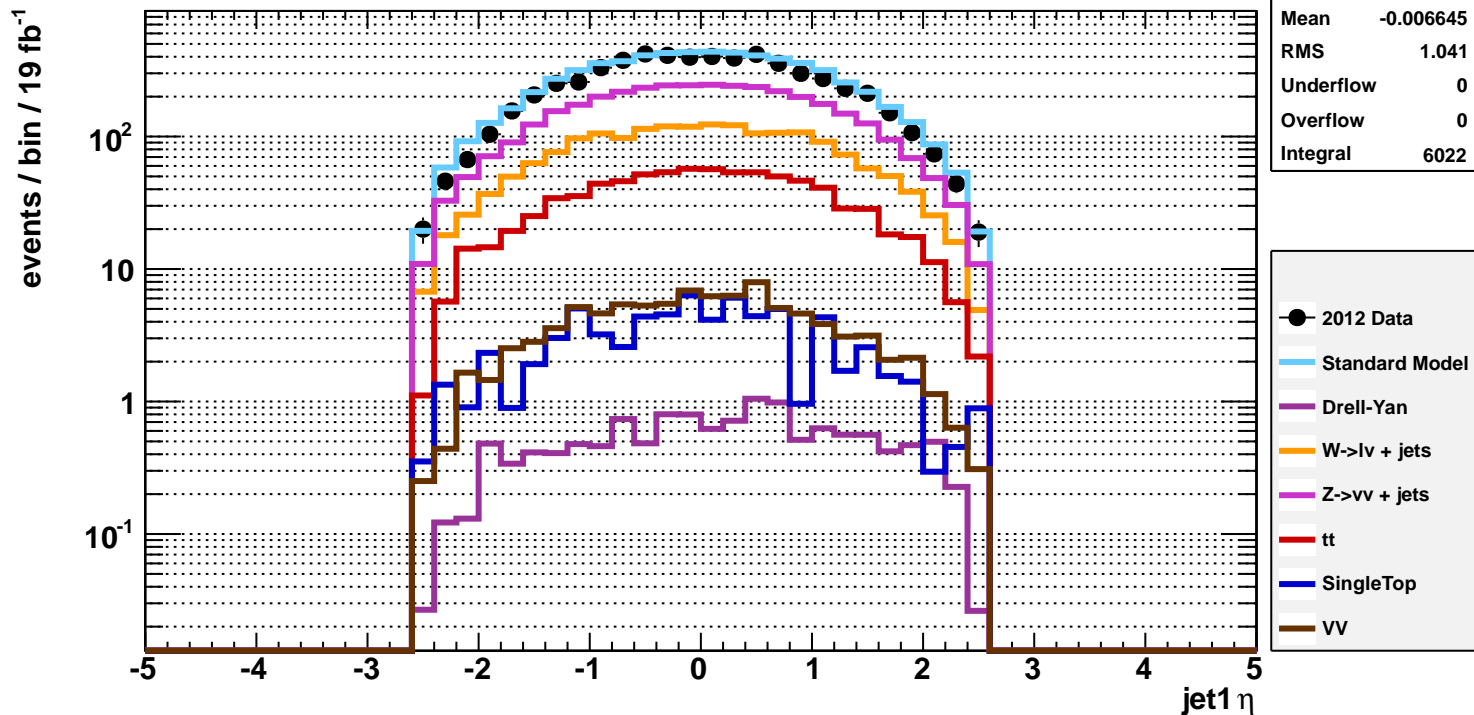


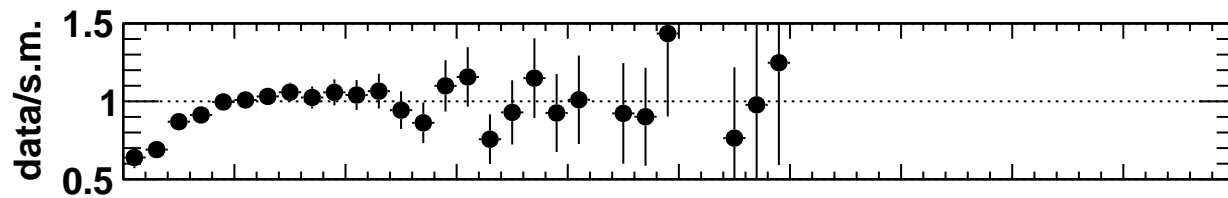
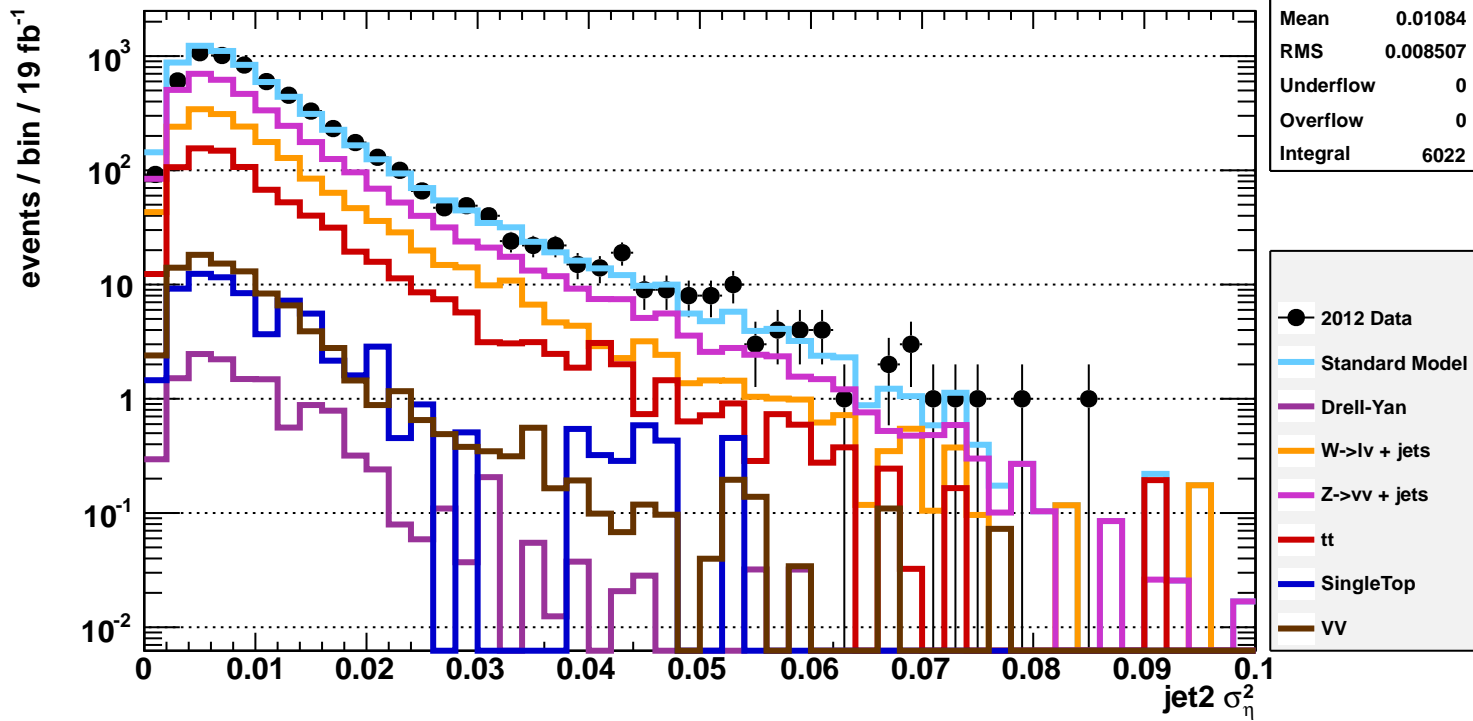


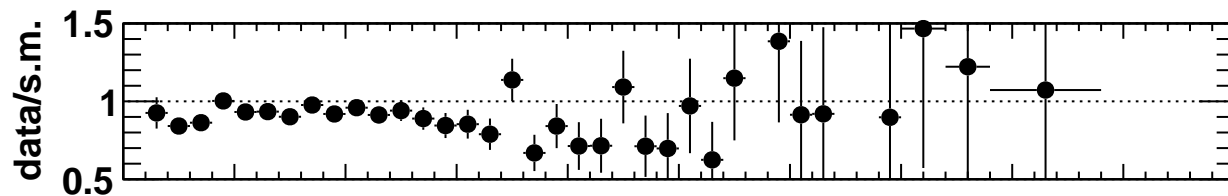
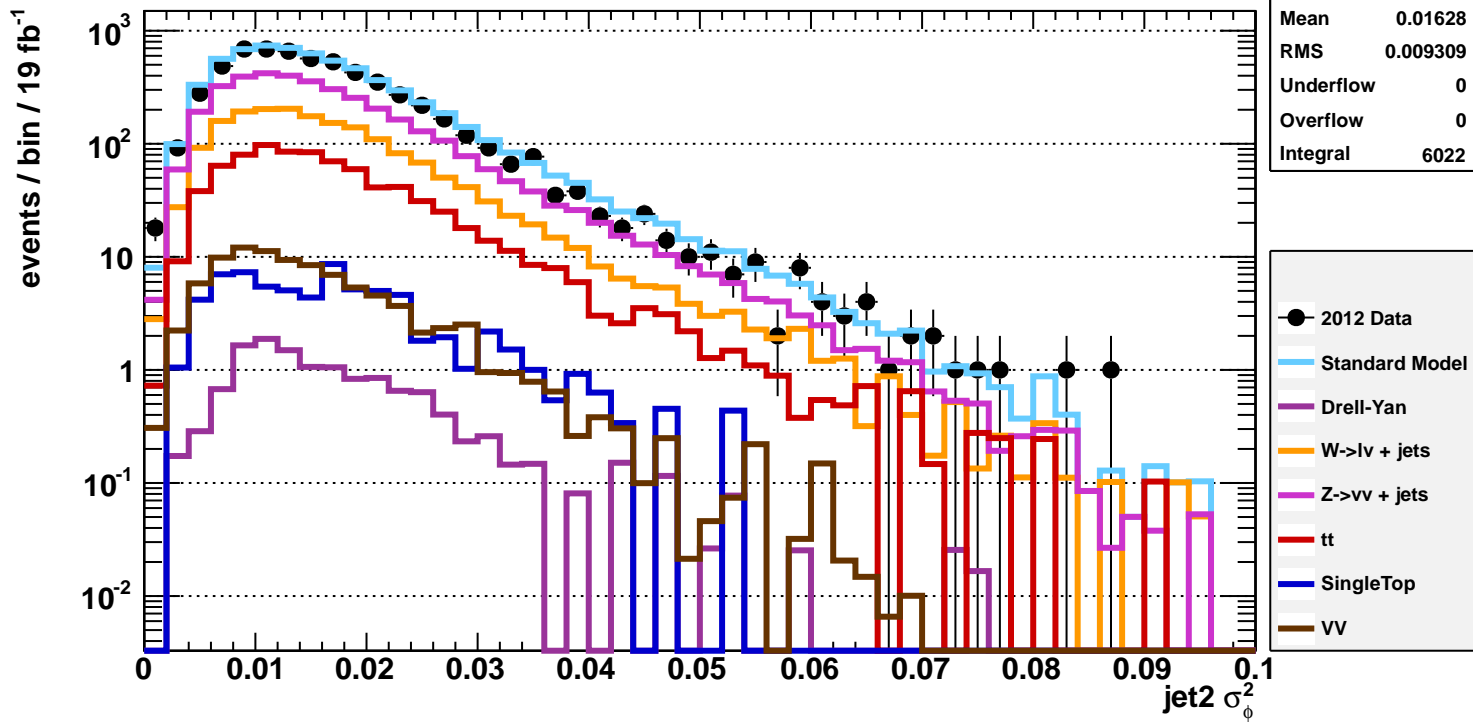


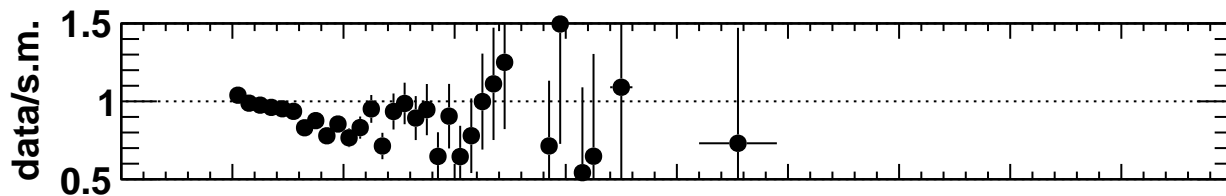
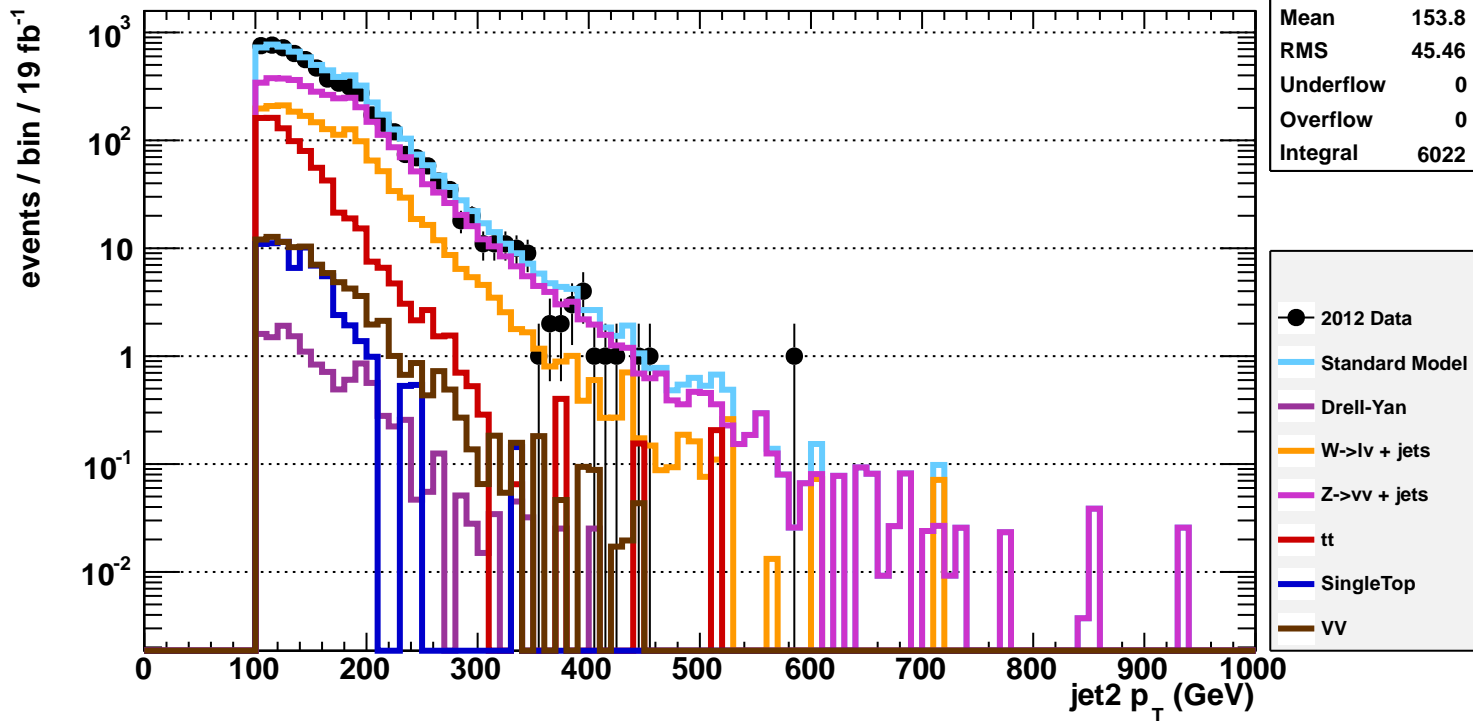




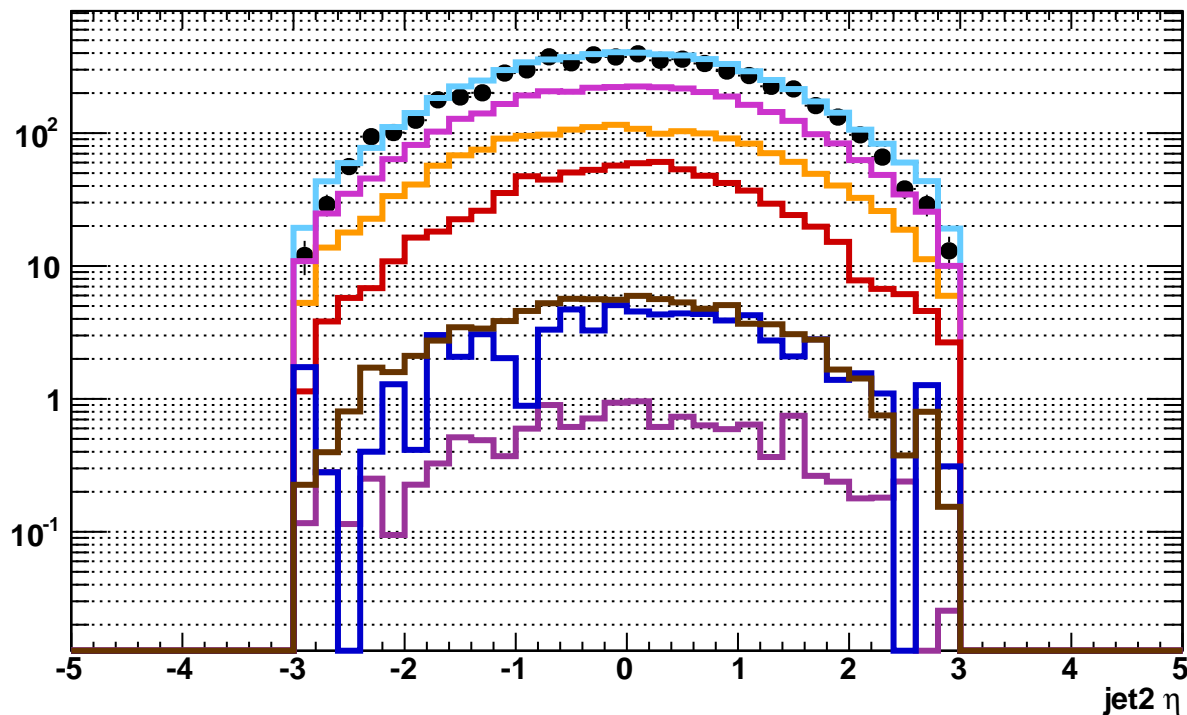






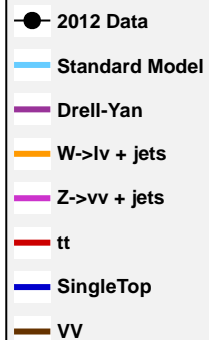


events / bin / 19 fb⁻¹

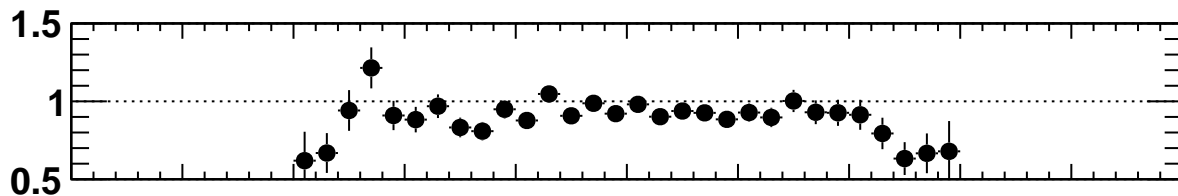


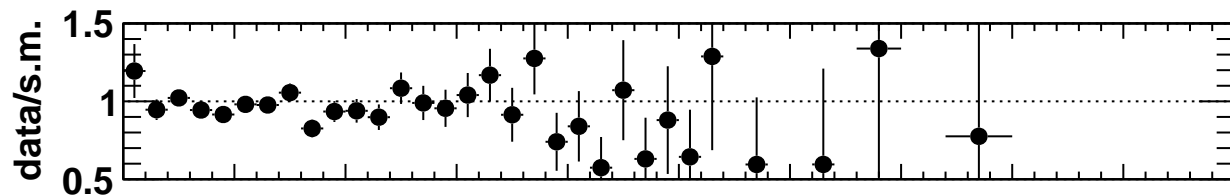
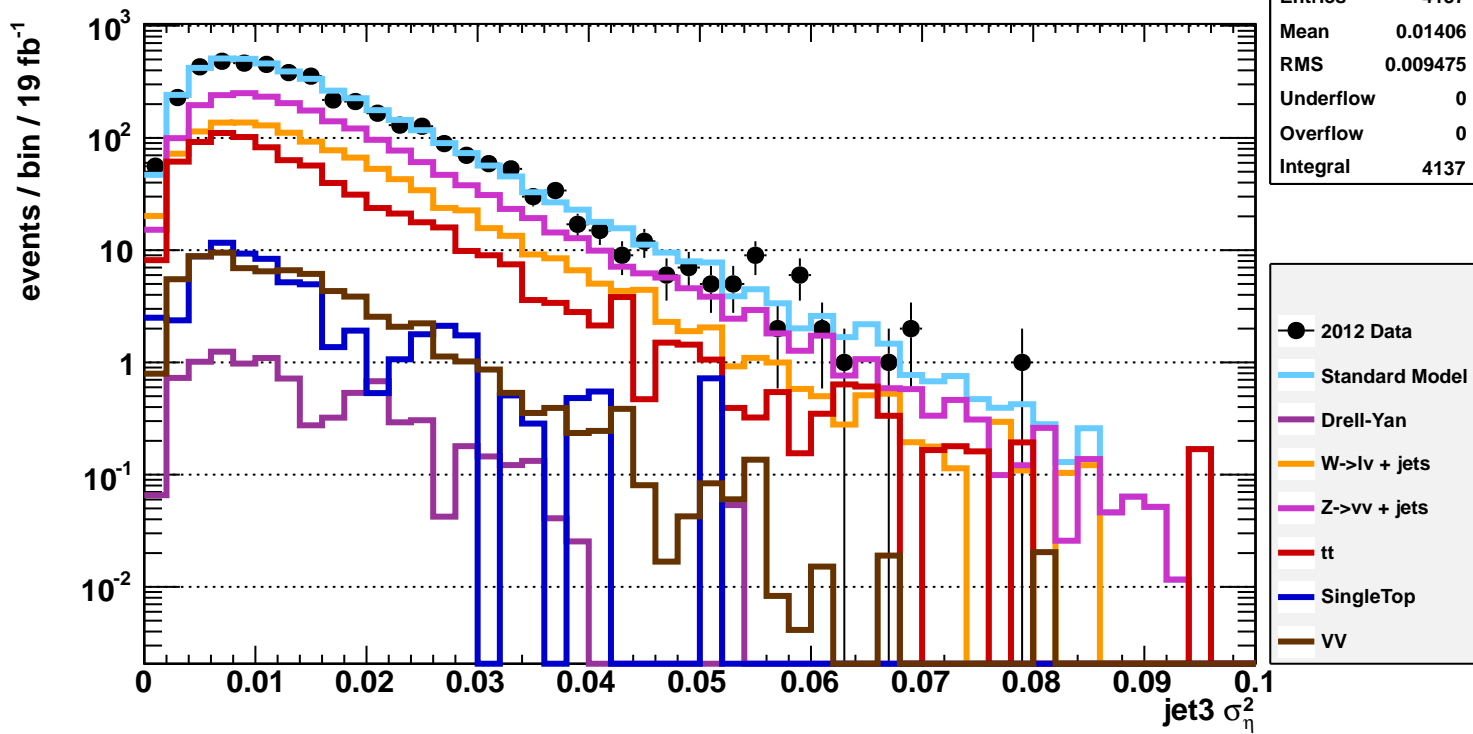
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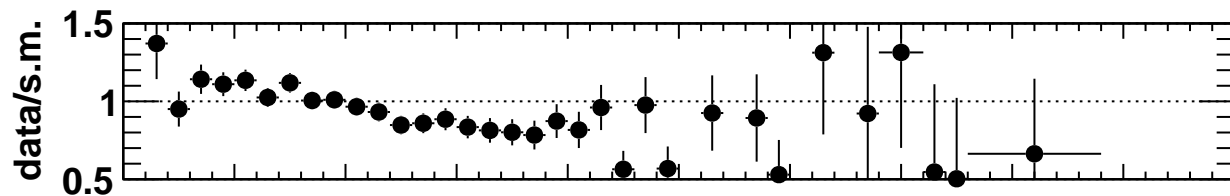
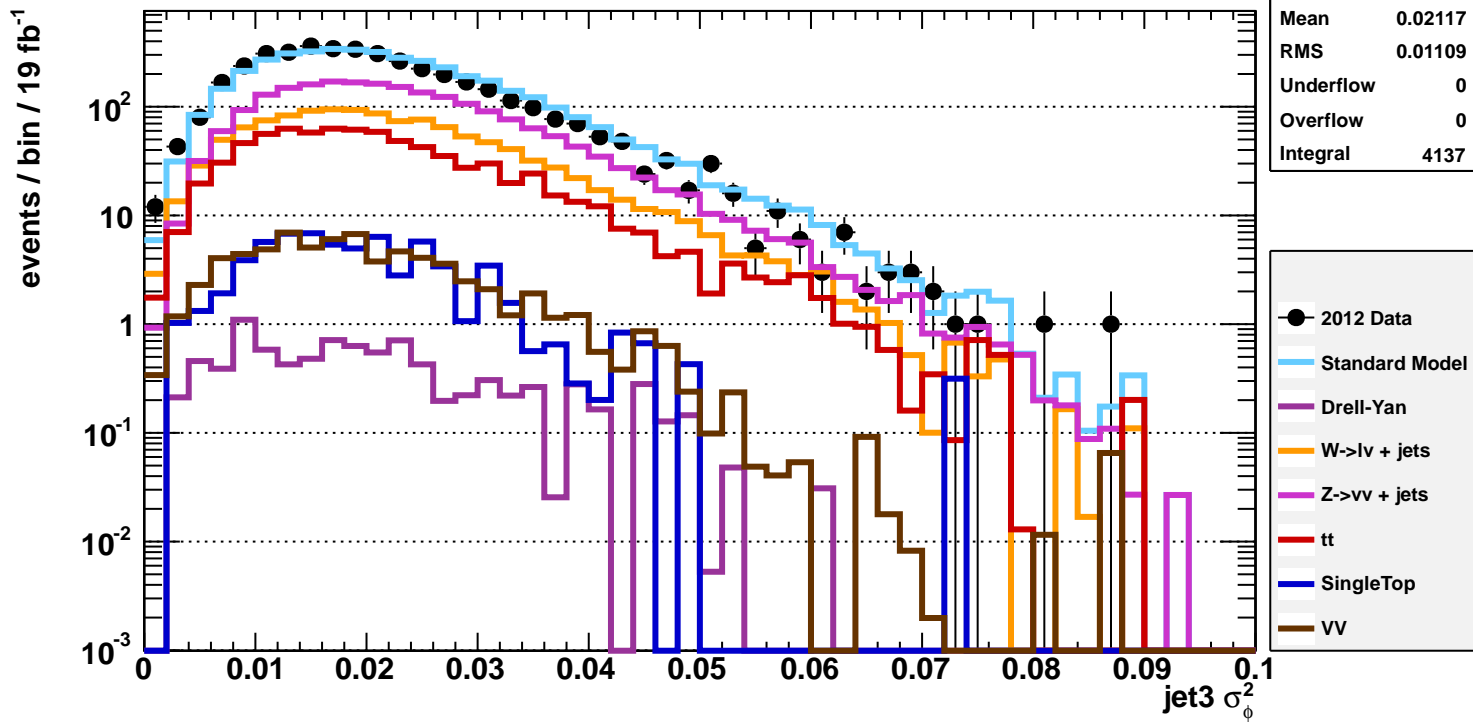
Entries	6022
Mean	-0.01642
RMS	1.167
Underflow	0
Overflow	0
Integral	6022

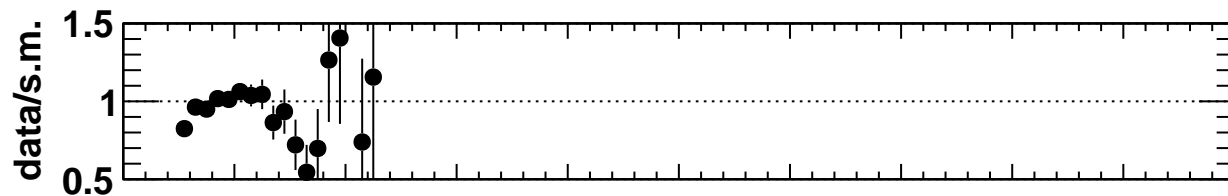
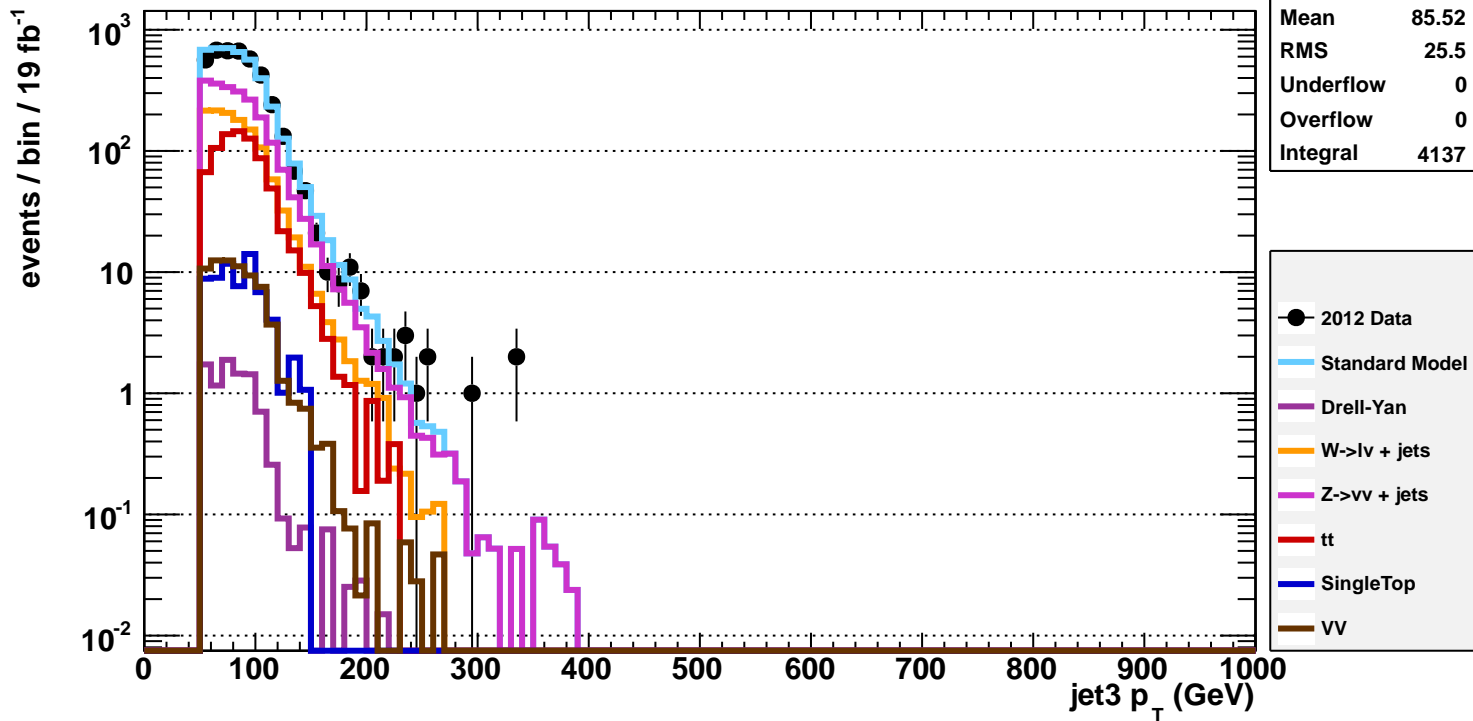


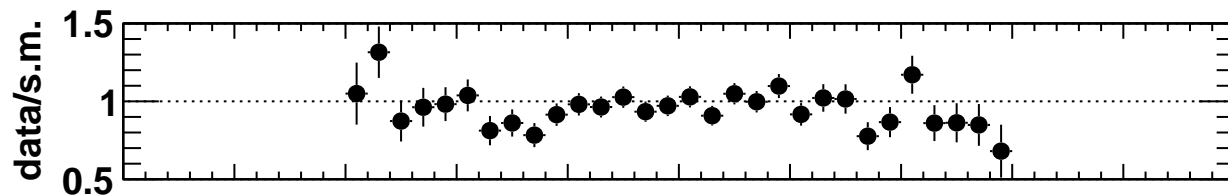
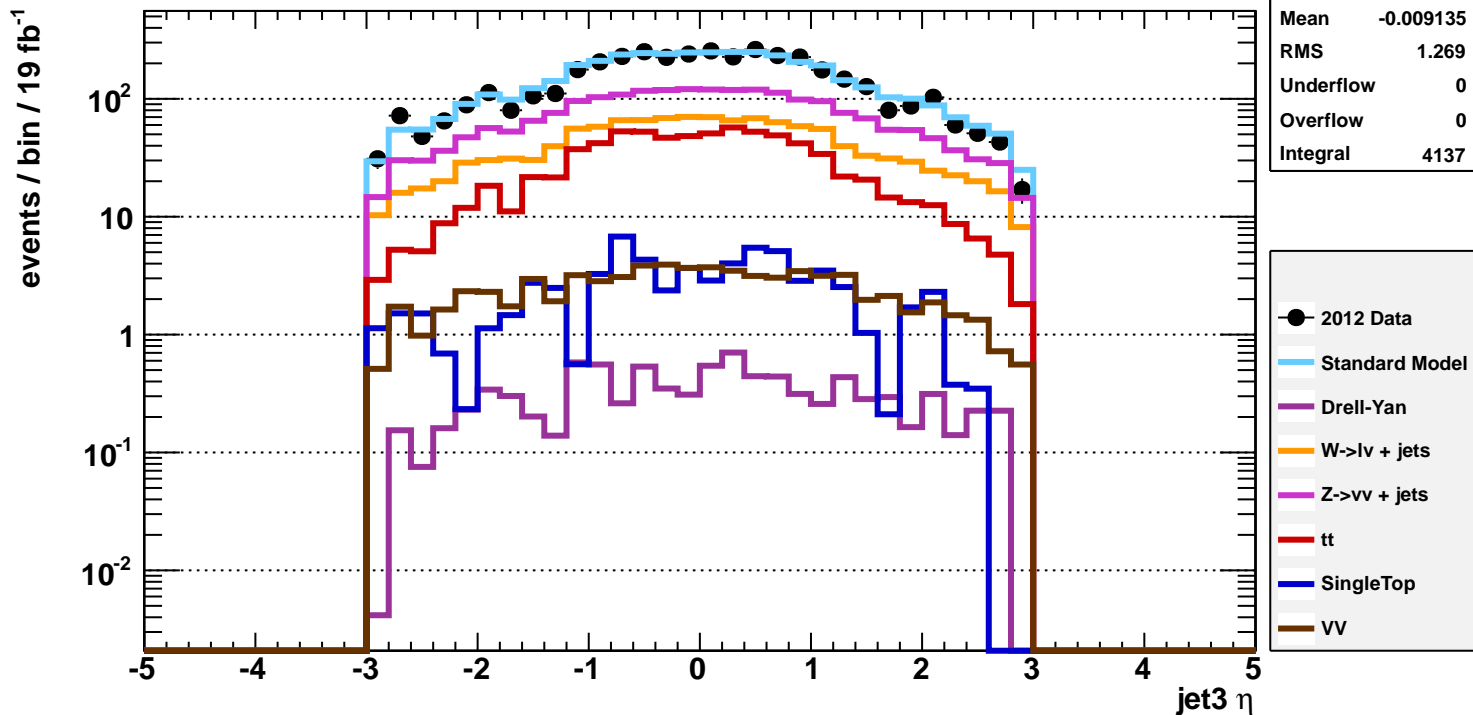
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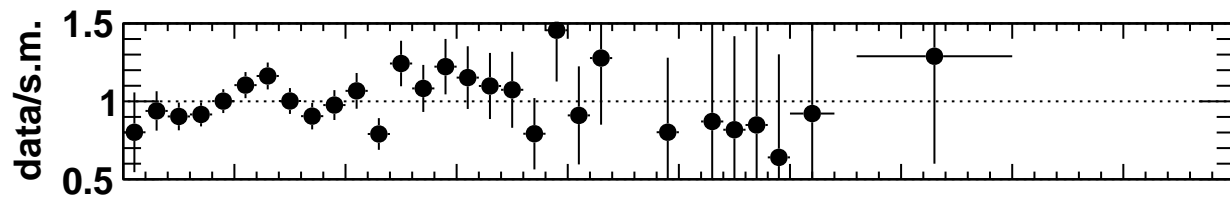
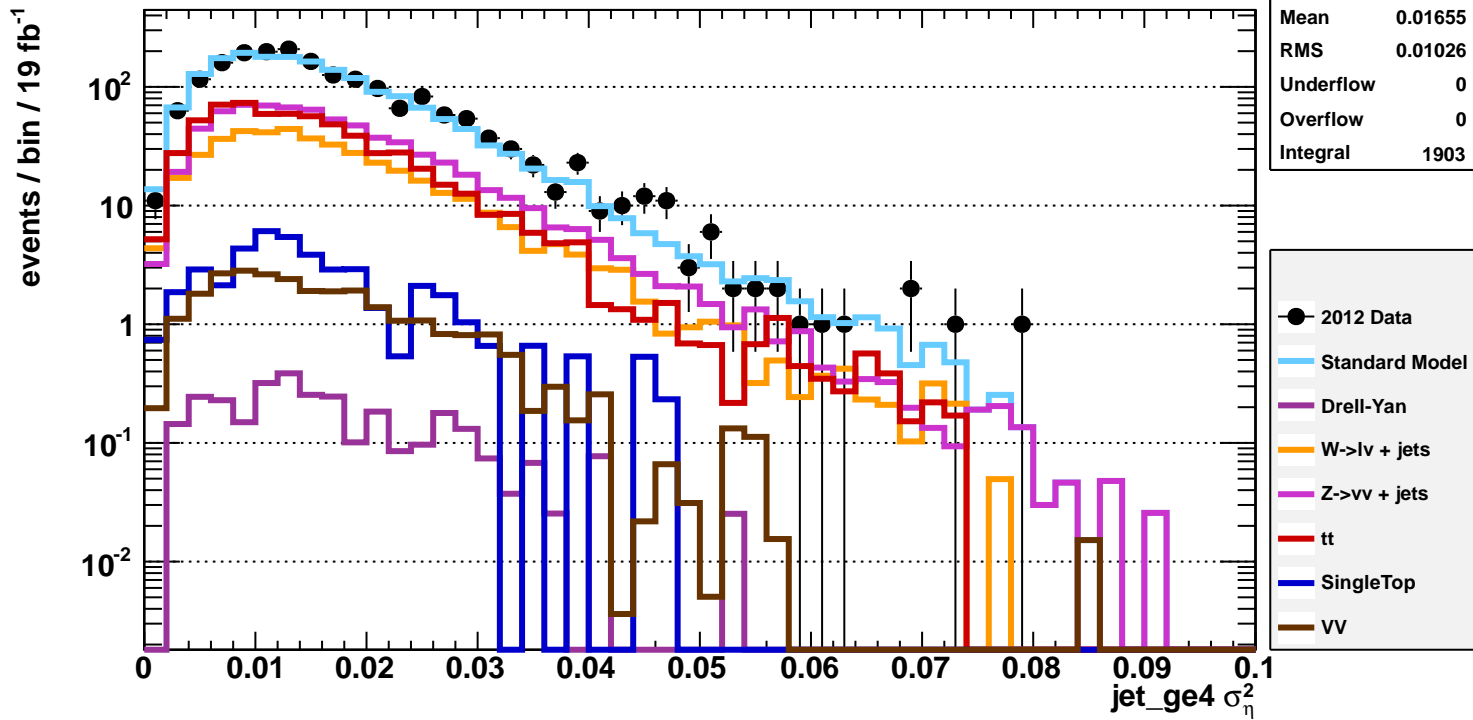


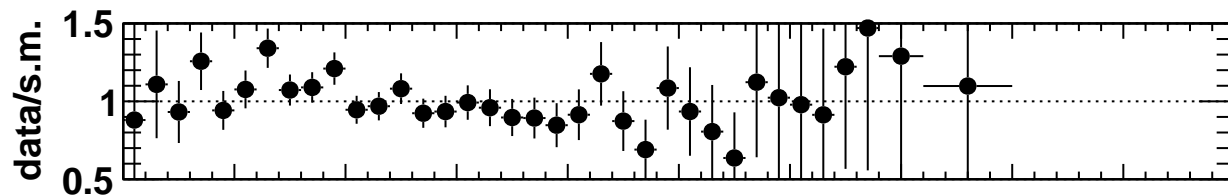
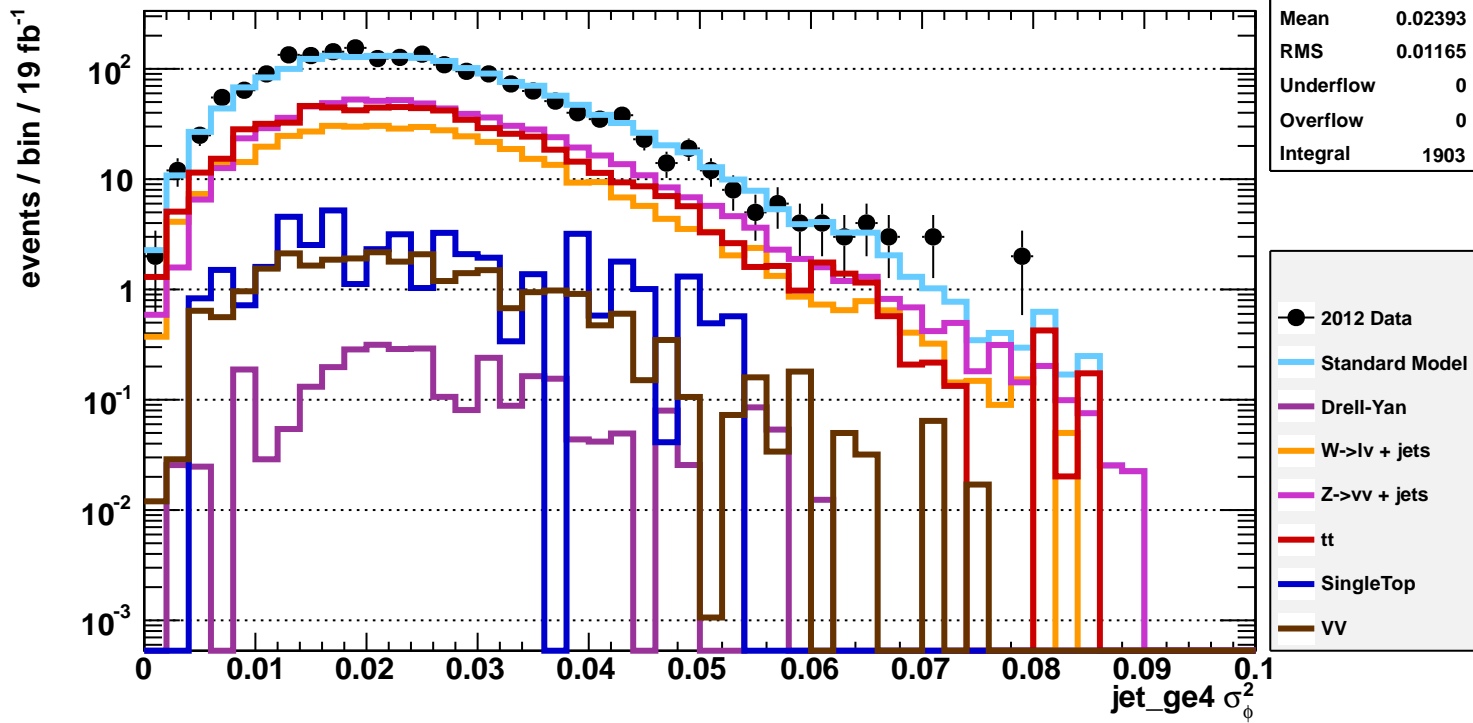


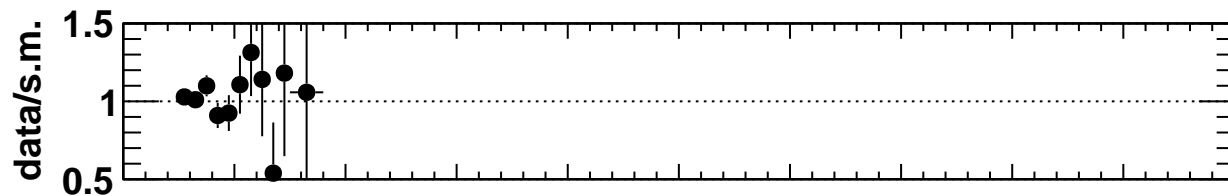
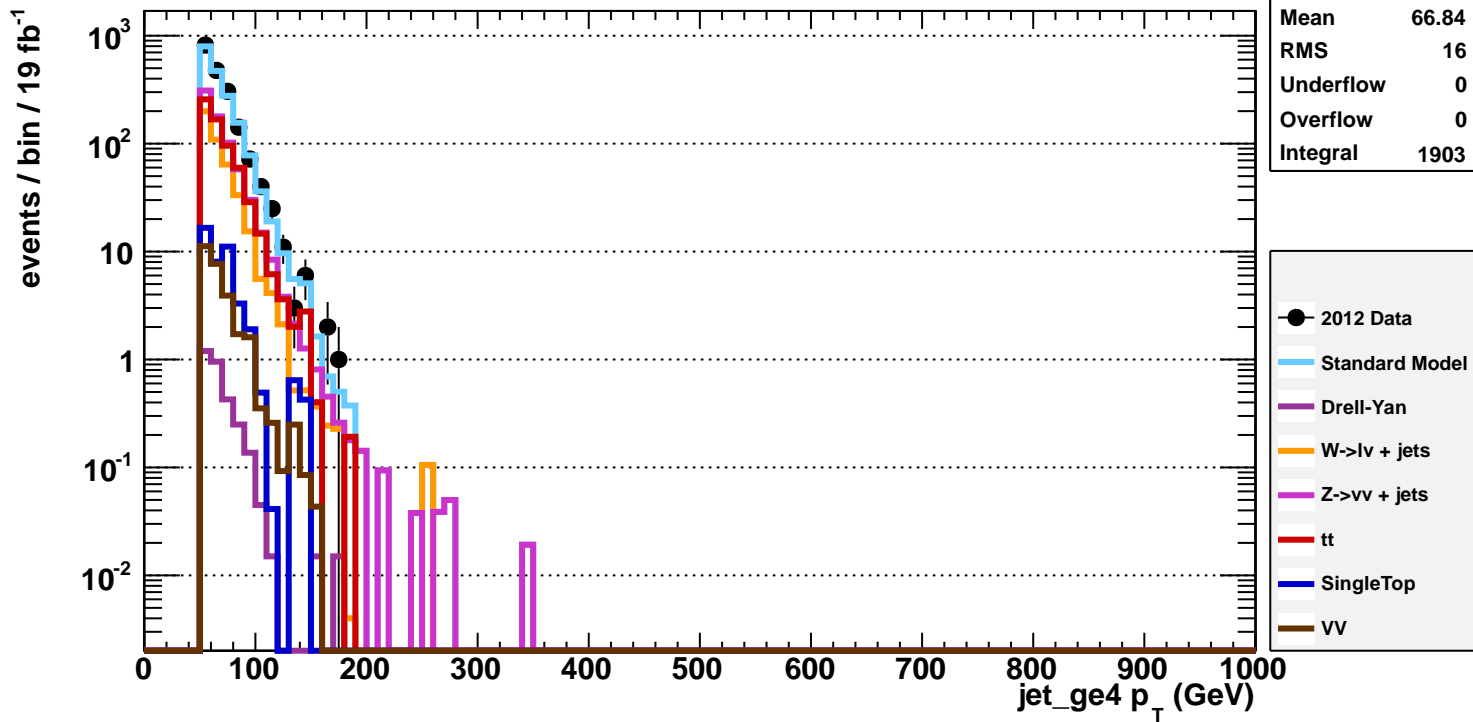


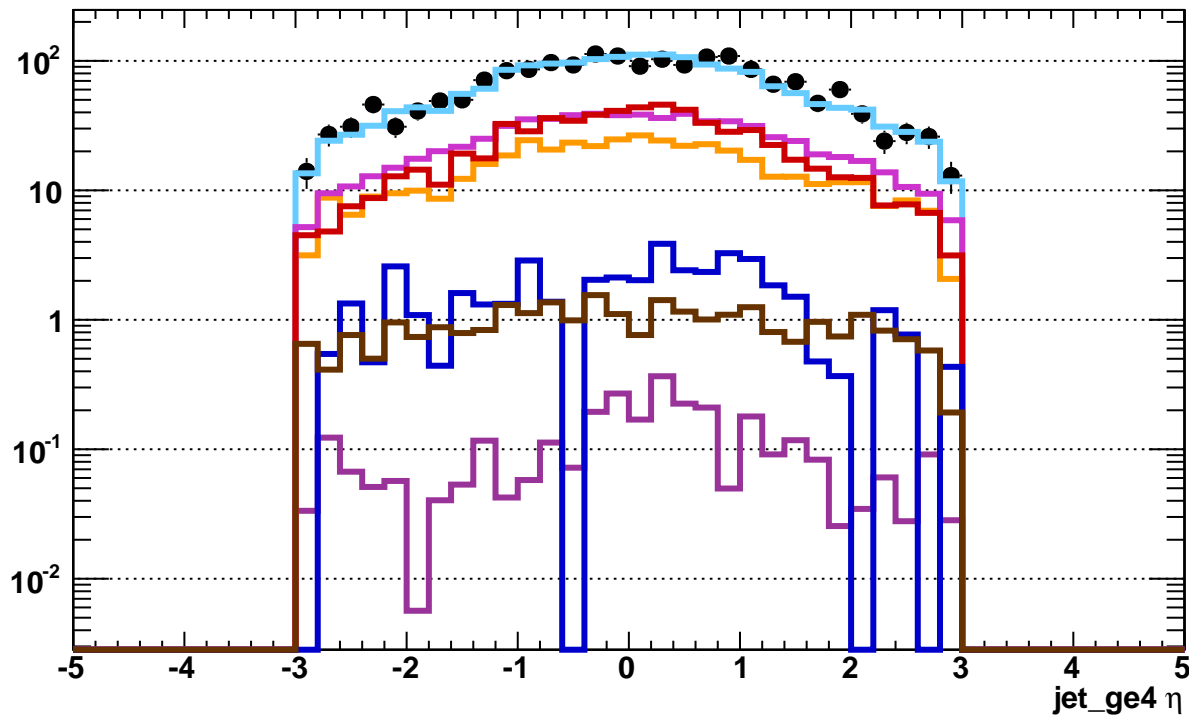




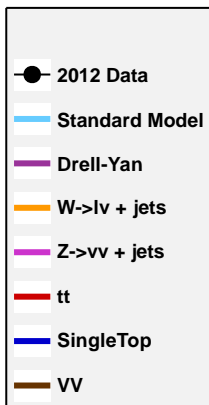




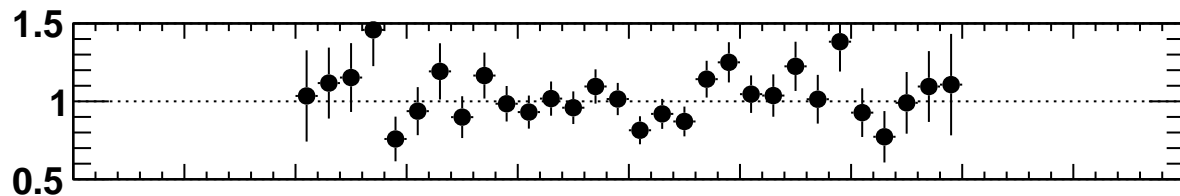


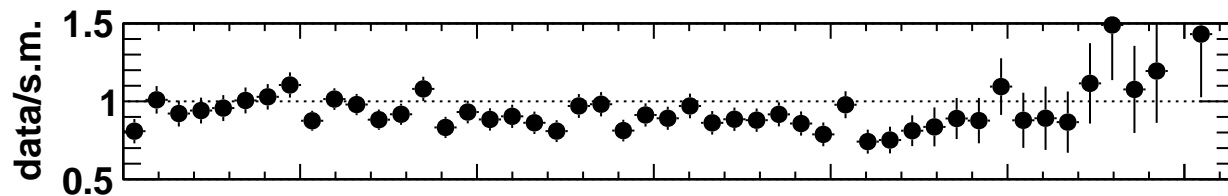
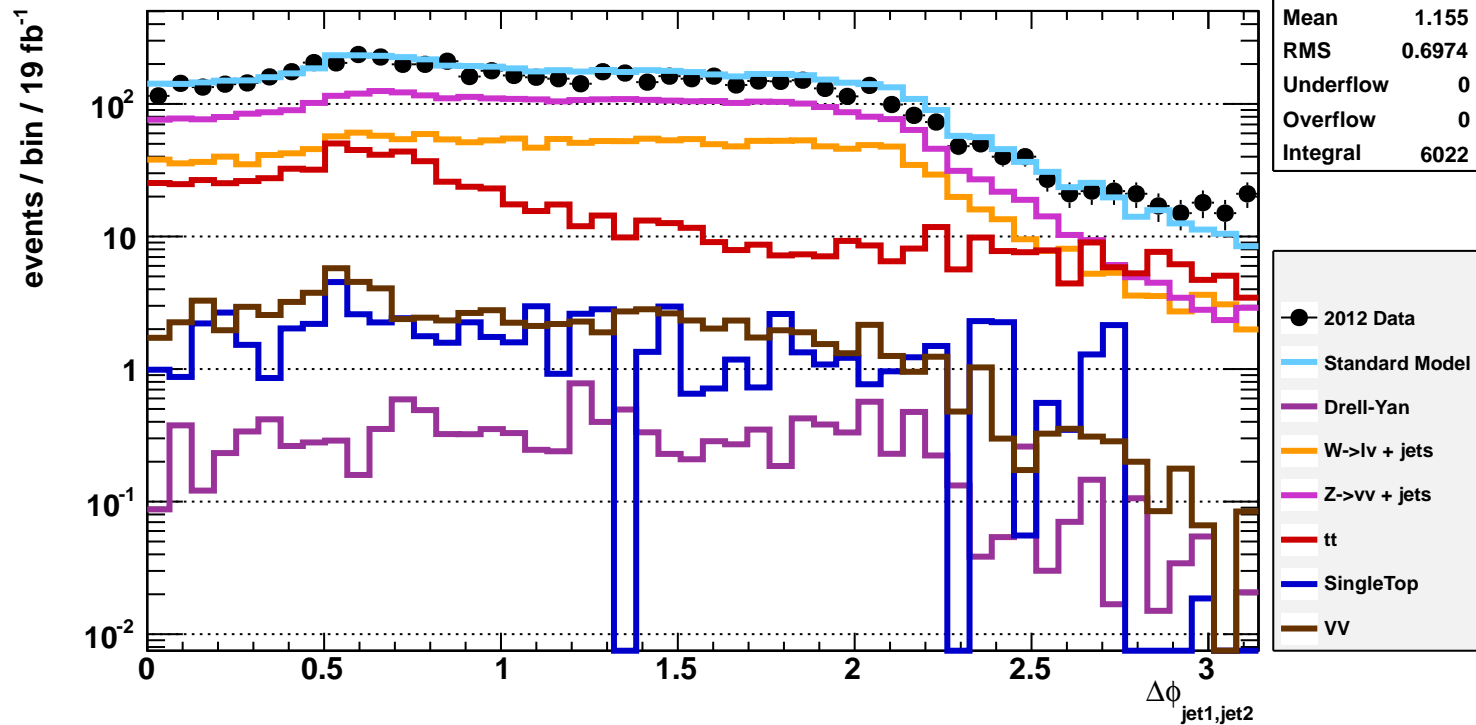
events / bin / 19 fb⁻¹

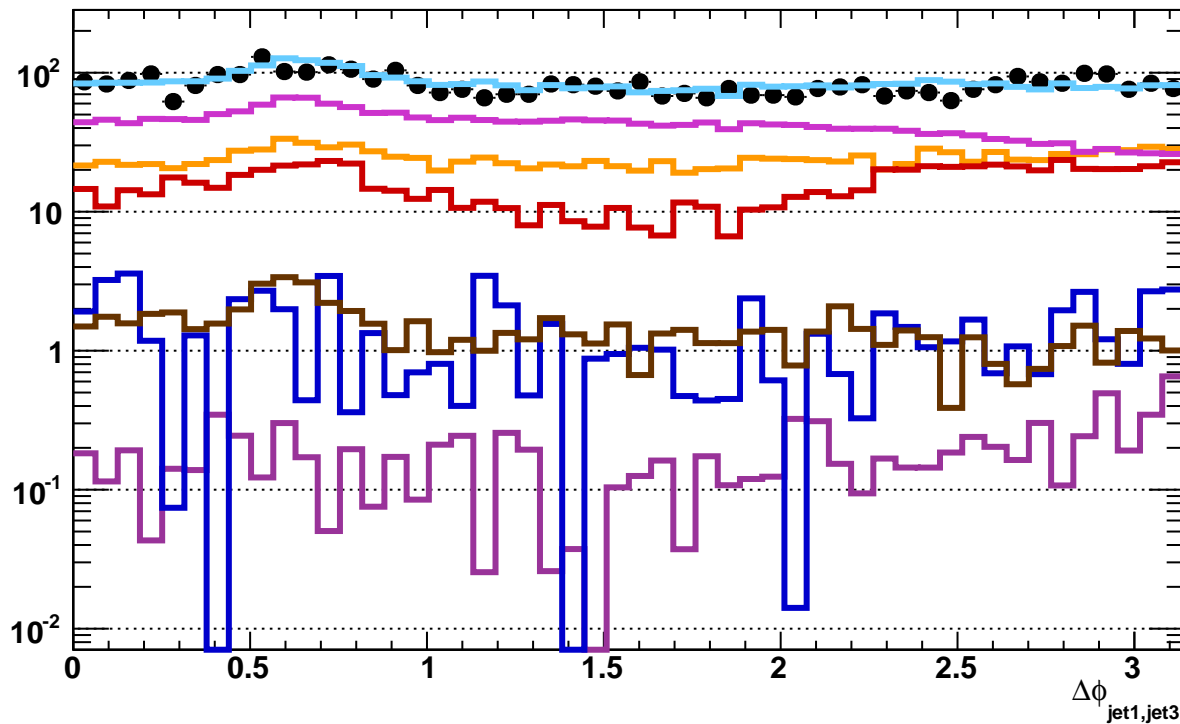
xcak5JetPat_ge4eta	
Entries	1903
Mean	0.02056
RMS	1.321
Underflow	0
Overflow	0
Integral	1903



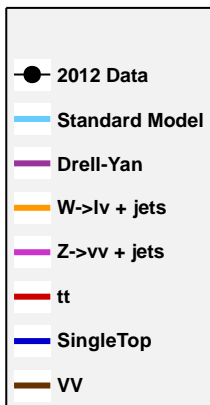
data/s.m.



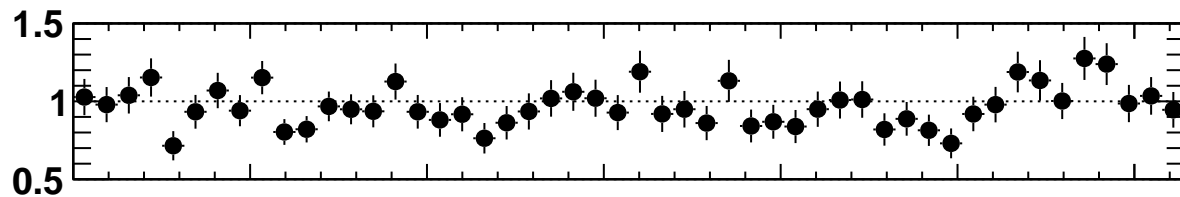


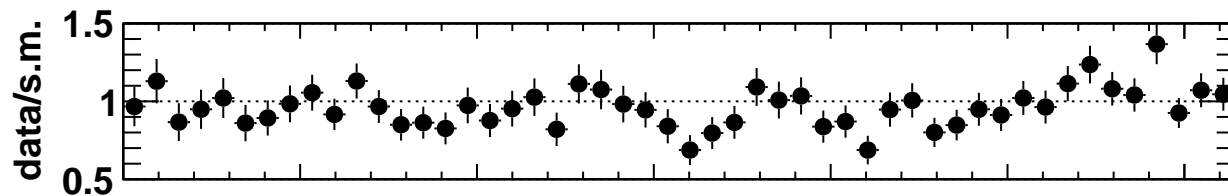
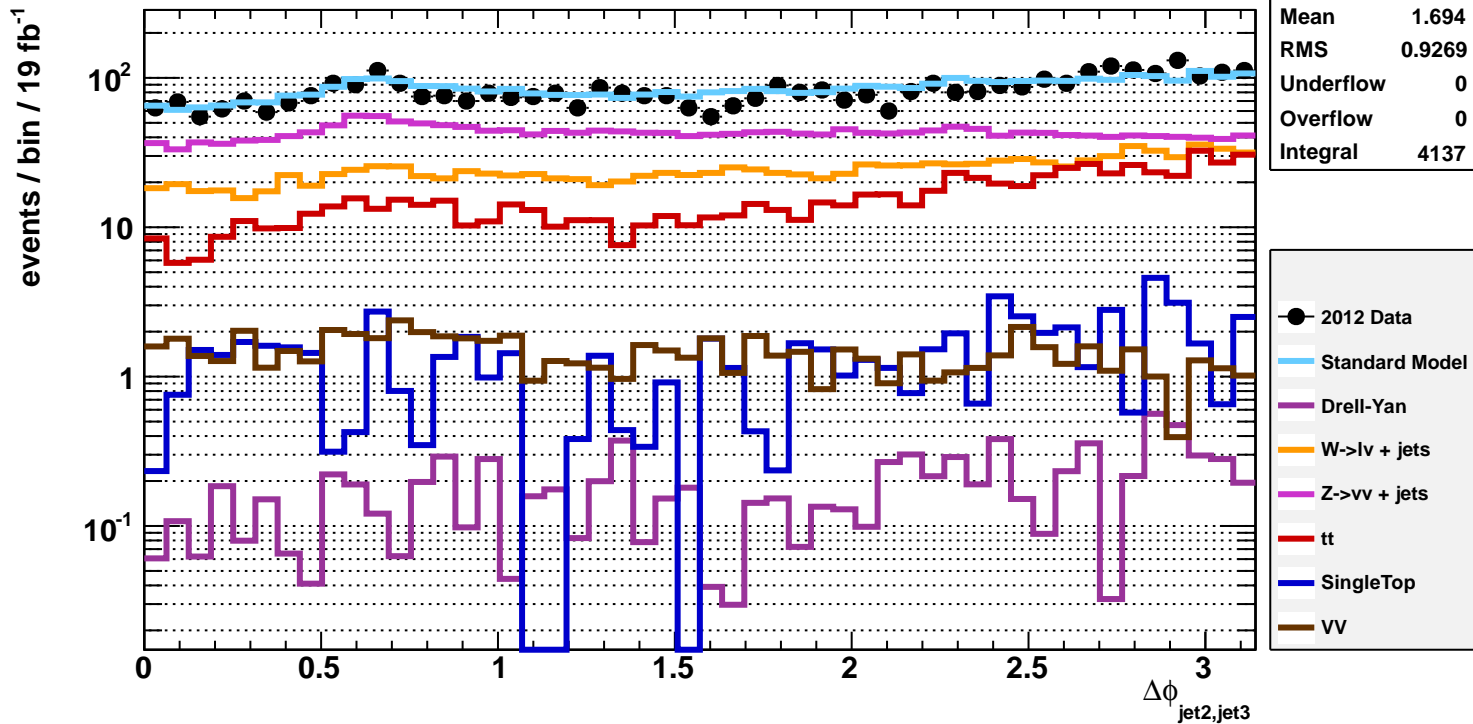
events / bin / 19 fb⁻¹

xcak5JetPatdphi13	
Entries	4137
Mean	1.522
RMS	0.9272
Underflow	0
Overflow	0
Integral	4137



data/s.m.





```

s: value 375.00<=xcak5JetSumEtPat
t: uniquelyMatchedNonisoMuons xcak5JetPat

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

z: multiplicity 0 <= muonIndicesPat <= 0
A: multiplicity 0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity 0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: value xcak5JetMhthighPtPatOvermetP4TypeIPF<=1.25

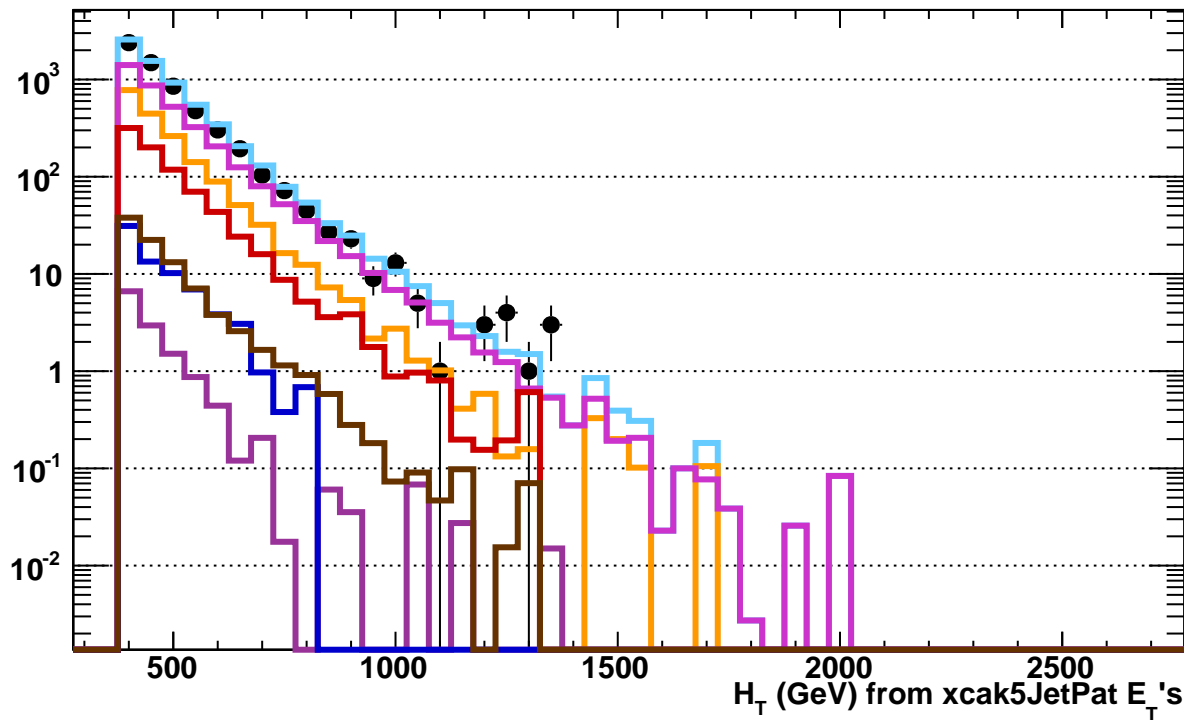
E: value CaloRecHitSumPt<=30.00
F: value 0.55<=xcak5JetAlphaTETPat
G: value 0.10<=xcak5JetMaxEmEnergyFractionPat
H: value 1.00<=hcalLaserEvent2012
I: value 1.00<=ecalLaserCalibEvent2012

```

[jetSumPlots1]

	2012 Data	Standard Mod	Drell-Yan W->lv + jets Z->vv + jets				tt	SingleTop	VV	data/s.m.
s:	7233757	1.2330(5)e+6	4.455(6)e+4	3.552(3)e+5	9.109(6)e+4	6.207(4)e+5	9.34(2)e+4	2.799(5)e+4		5.867(3)
t:	7220369	1.2238(5)e+6	4.415(6)e+4	3.533(3)e+5	9.104(6)e+4	6.146(4)e+5	9.28(2)e+4	2.792(5)e+4		5.900(3)
u:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4		5.923(3)
v:	7190235	1.2139(5)e+6	4.383(6)e+4	3.519(3)e+5	9.099(6)e+4	6.074(4)e+5	9.19(2)e+4	2.787(5)e+4		5.923(3)
w:	6774586	1.1844(5)e+6	4.265(6)e+4	3.456(3)e+5	8.984(6)e+4	5.898(4)e+5	8.92(2)e+4	2.735(5)e+4		5.720(3)
x:	6742525	1.0119(5)e+6	2.676(5)e+4	2.539(2)e+5	8.981(6)e+4	5.315(3)e+5	8.37(2)e+4	2.618(5)e+4		6.663(4)
y:	6713053	1.0049(5)e+6	2.613(5)e+4	2.496(2)e+5	8.977(6)e+4	5.298(3)e+5	8.35(2)e+4	2.605(5)e+4		6.681(4)
z:	6688261	8.395(4)e+5	1.240(4)e+4	1.578(2)e+5	8.976(6)e+4	4.764(3)e+5	7.83(2)e+4	2.494(5)e+4		7.967(5)
A:	6680982	8.377(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.753(3)e+5	7.81(2)e+4	2.490(5)e+4		7.976(5)
B:	6680567	8.376(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.752(3)e+5	7.81(2)e+4	2.489(5)e+4		7.975(5)
C:	1463167	2.631(2)e+5	3.82(2)e+3	6.42(1)e+4	4.598(4)e+4	1.213(2)e+5	2.111(9)e+4	6.68(3)e+3		5.561(7)
D:	359924	1.370(1)e+5	2.01(2)e+3	4.482(9)e+4	3.679(4)e+4	4.265(9)e+4	7.96(6)e+3	2.80(2)e+3		2.627(5)
E:	354346	1.361(1)e+5	2.00(2)e+3	4.452(9)e+4	3.653(4)e+4	4.235(9)e+4	7.92(6)e+3	2.78(2)e+3		2.604(5)
F:	6047	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)		0.93(1)
G:	6037	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)		0.92(1)
H:	6037	-	-	-	-	-	-	-		-
I:	6022	-	-	-	-	-	-	-		-

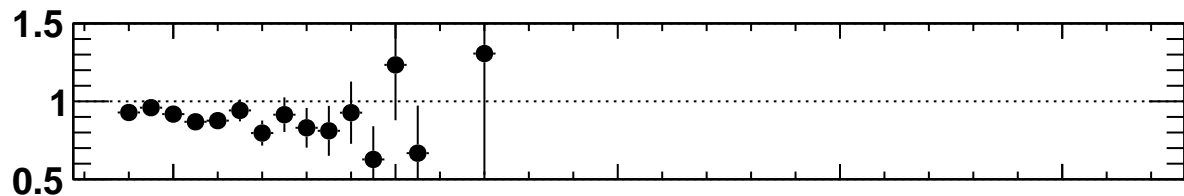
[jetSumPlots1]

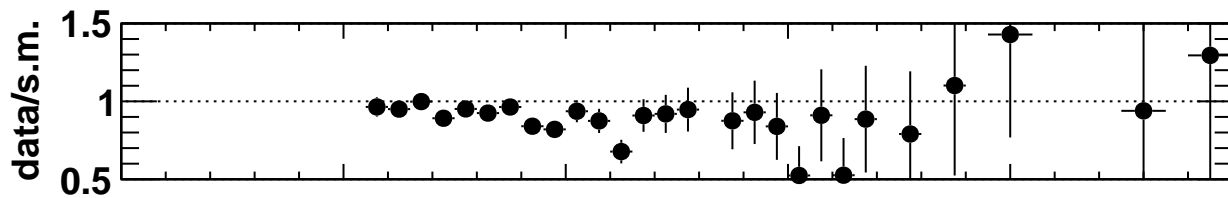
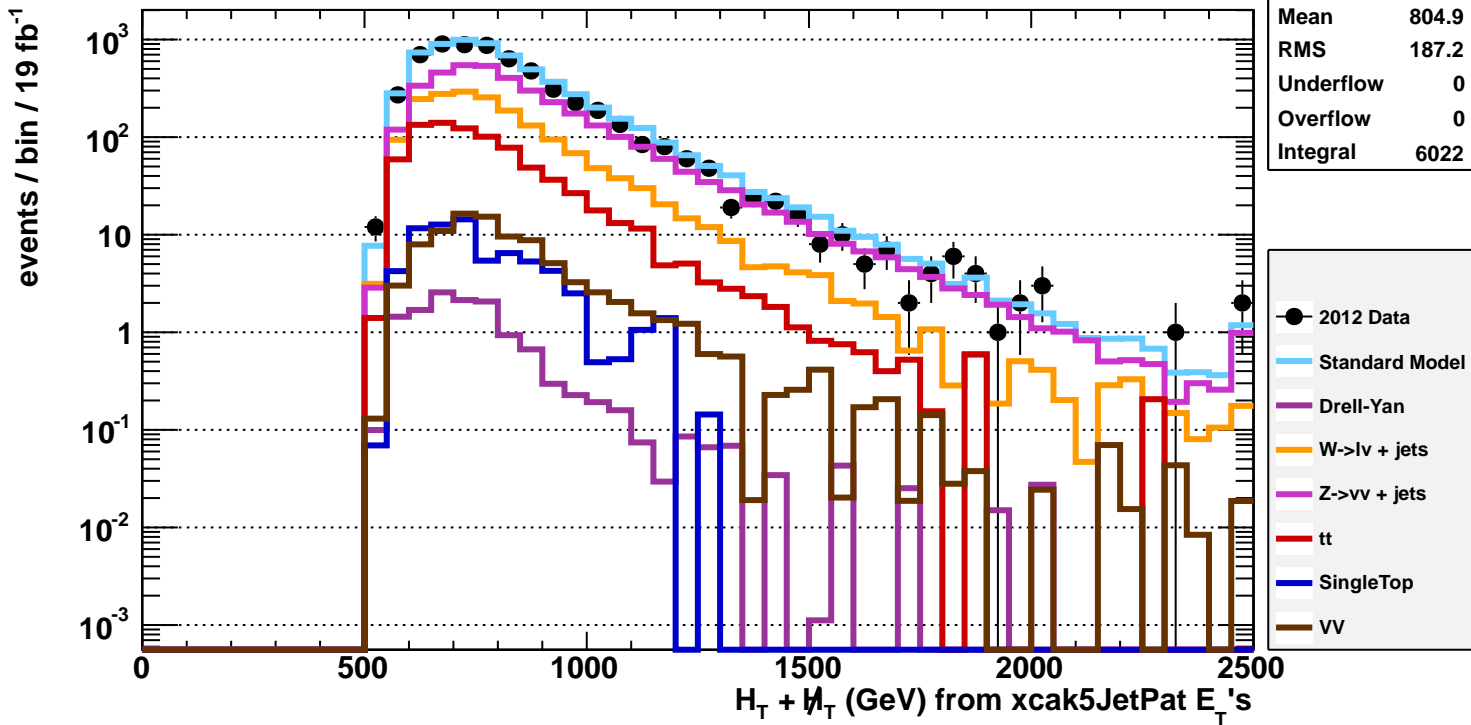
events / bin / 19 fb⁻¹**xcak5JetHtPat**

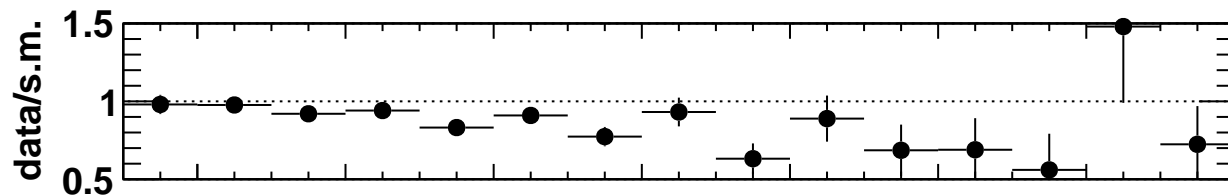
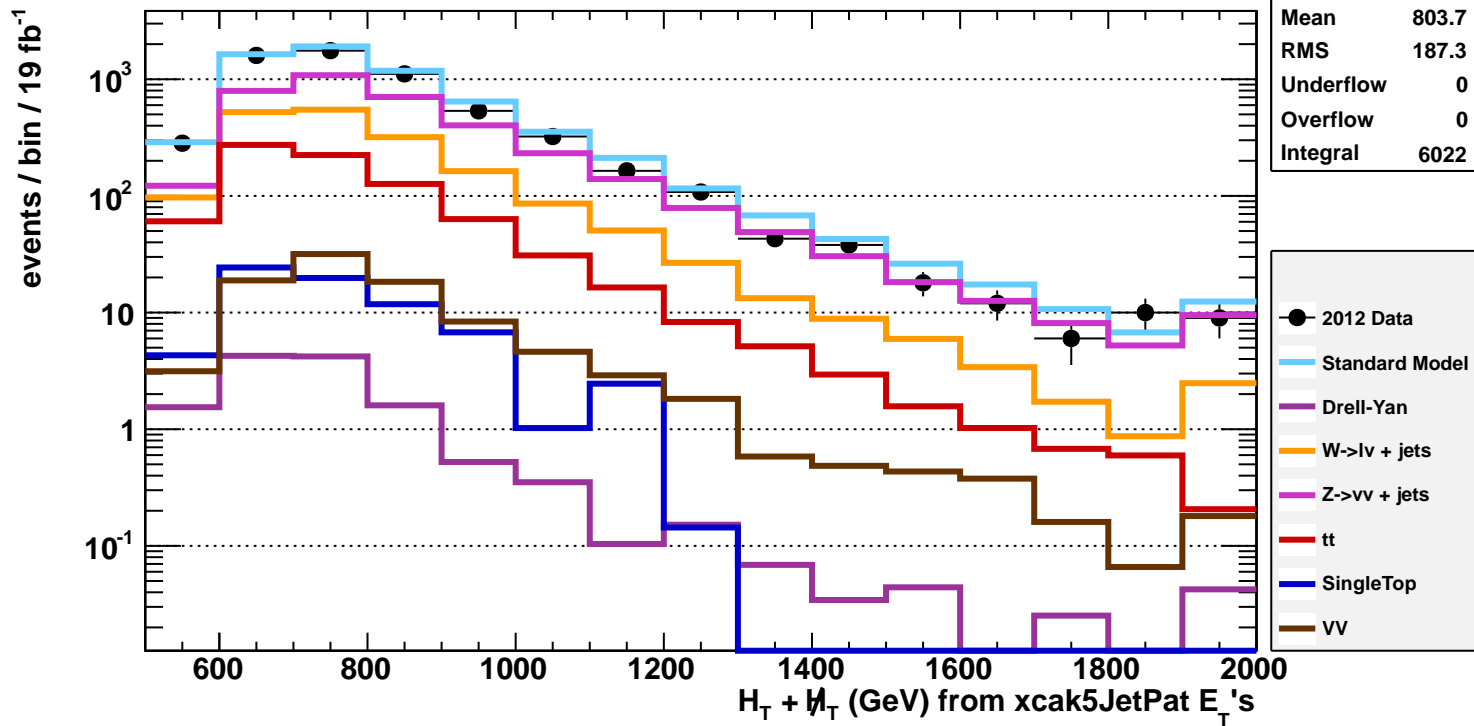
Entries	6022
Mean	475
RMS	105.8
Underflow	0
Overflow	0
Integral	6022

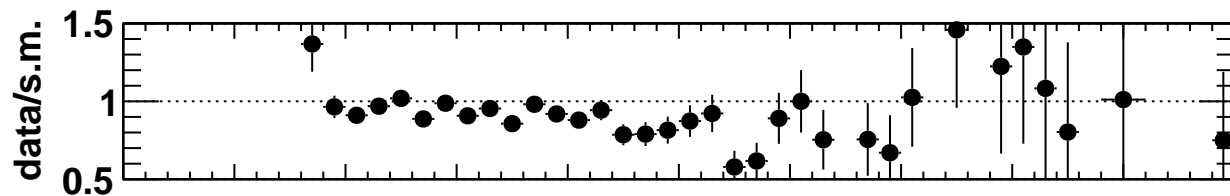
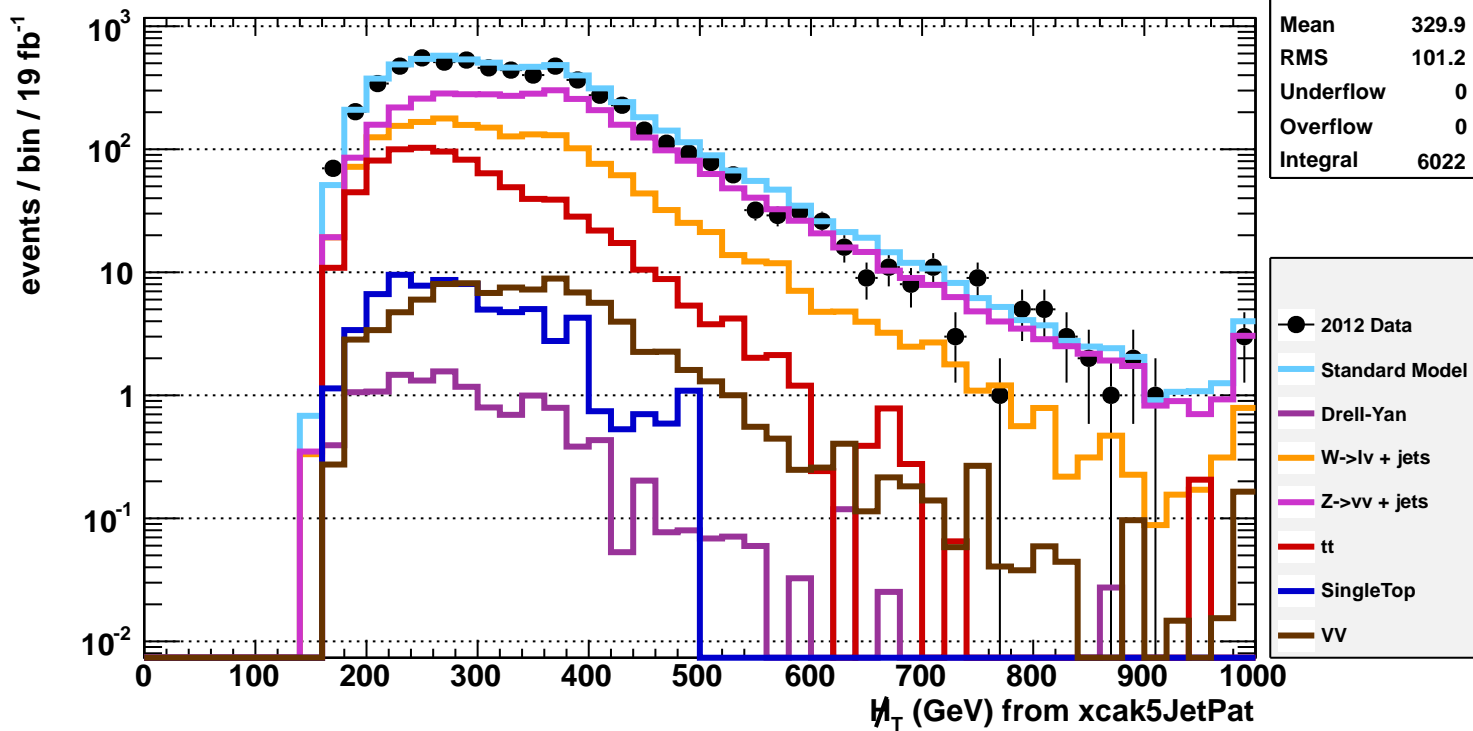


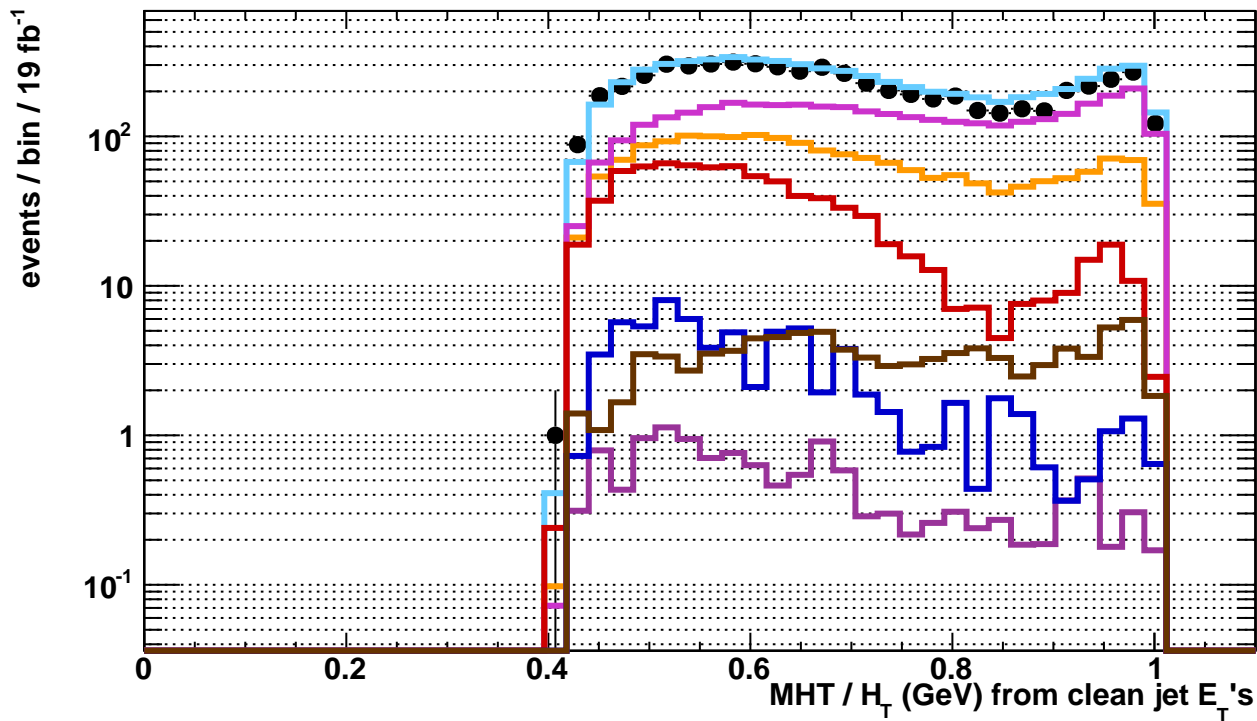
data/s.m.



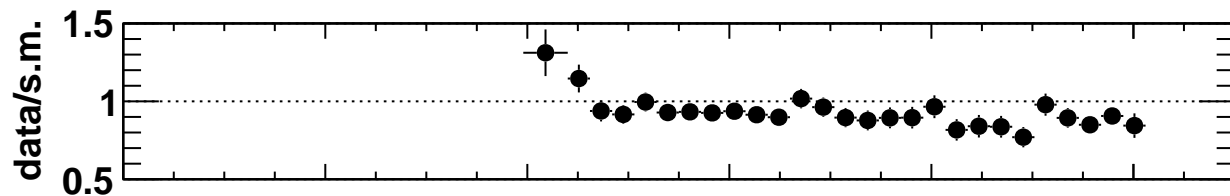
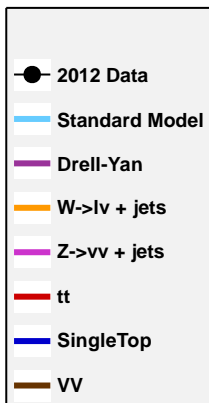


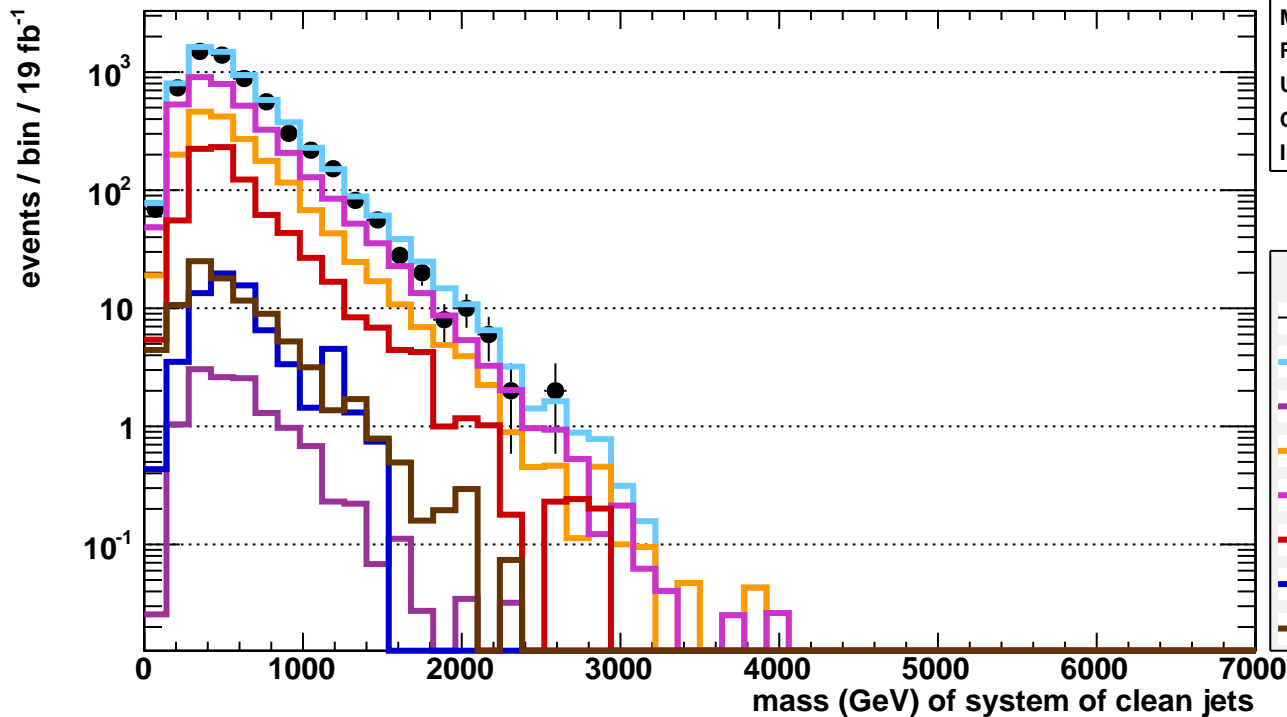




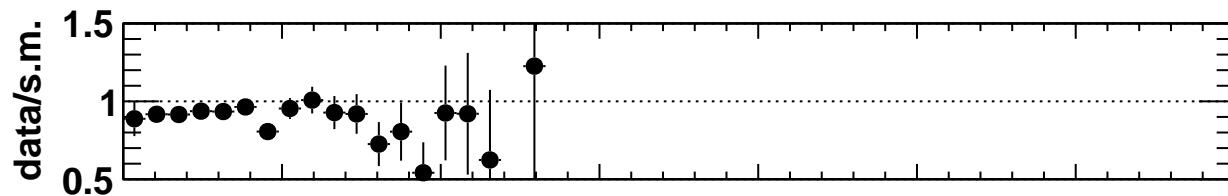
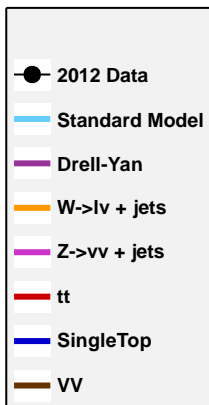


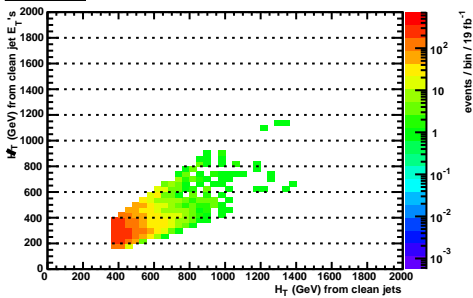
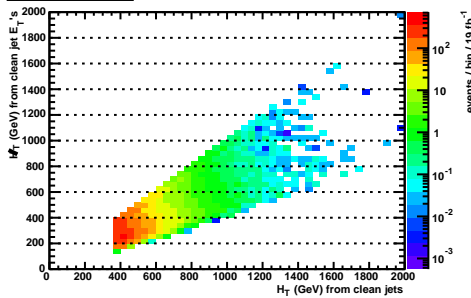
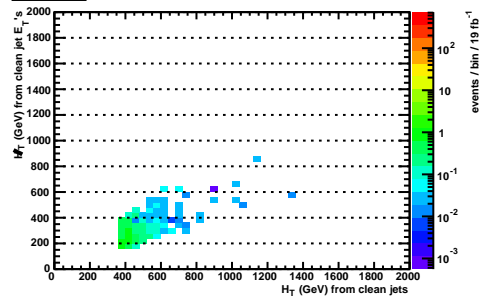
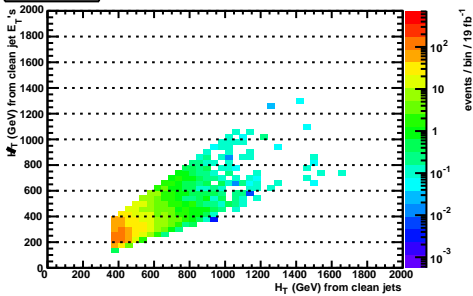
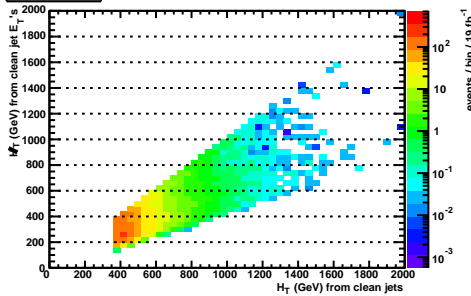
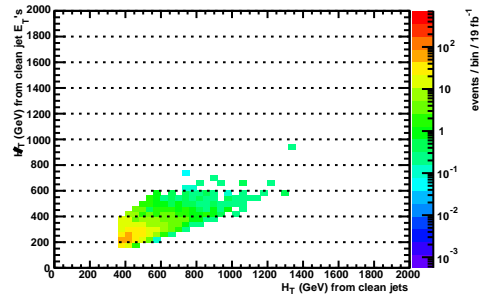
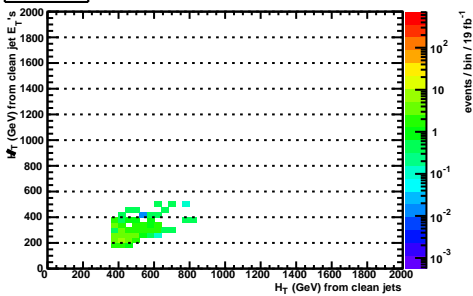
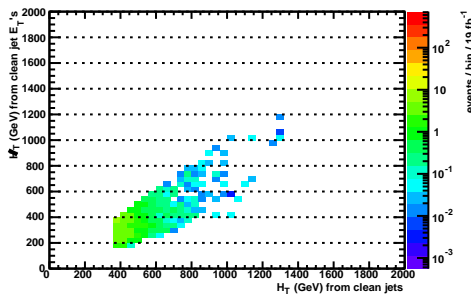
xcak5JetmHtOverHtPat	
Entries	6022
Mean	0.698
RMS	0.1636
Underflow	0
Overflow	0
Integral	6022



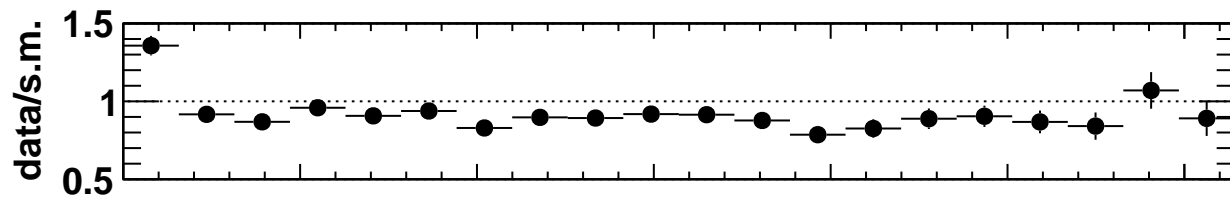
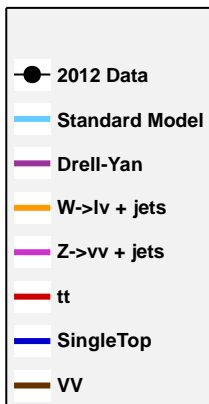
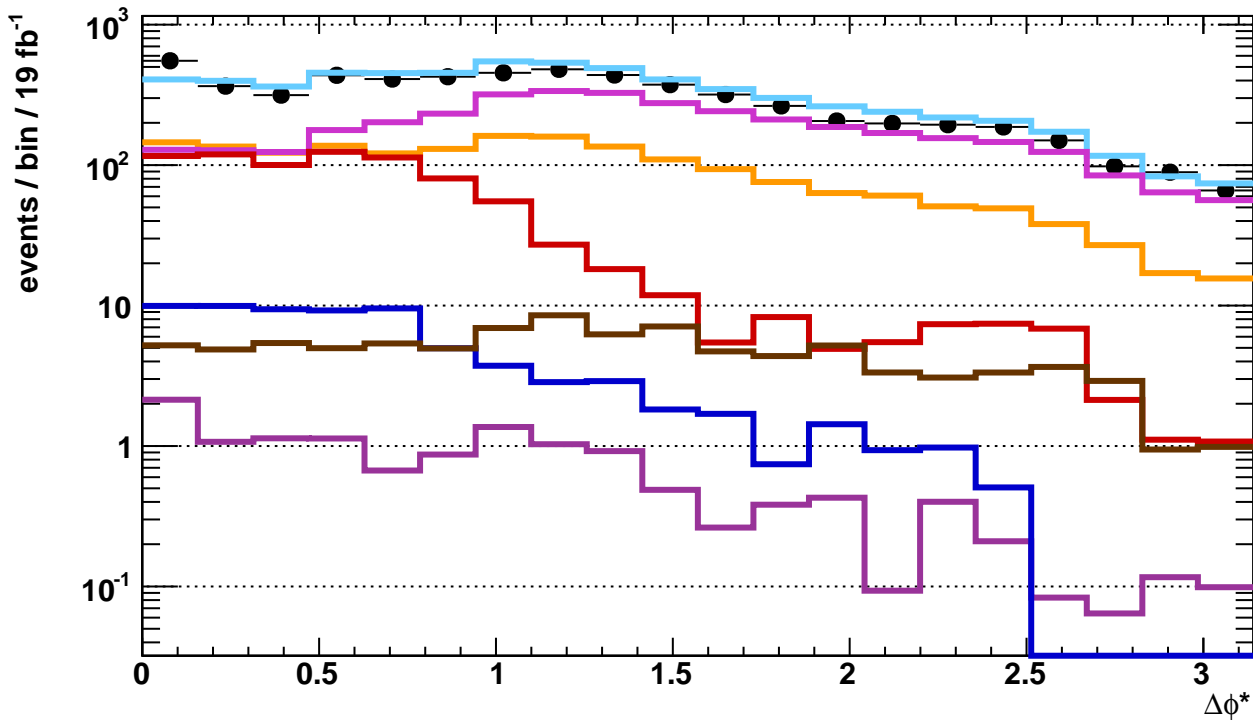


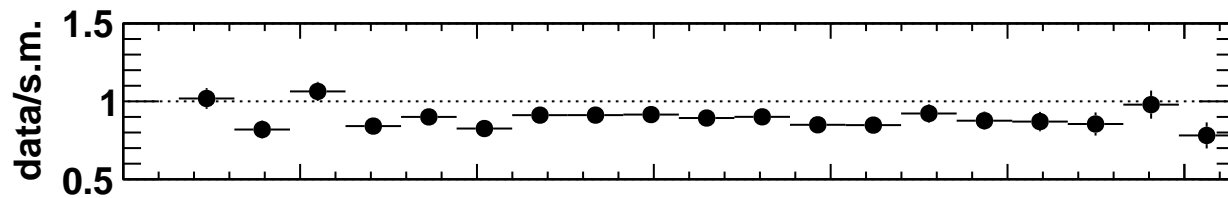
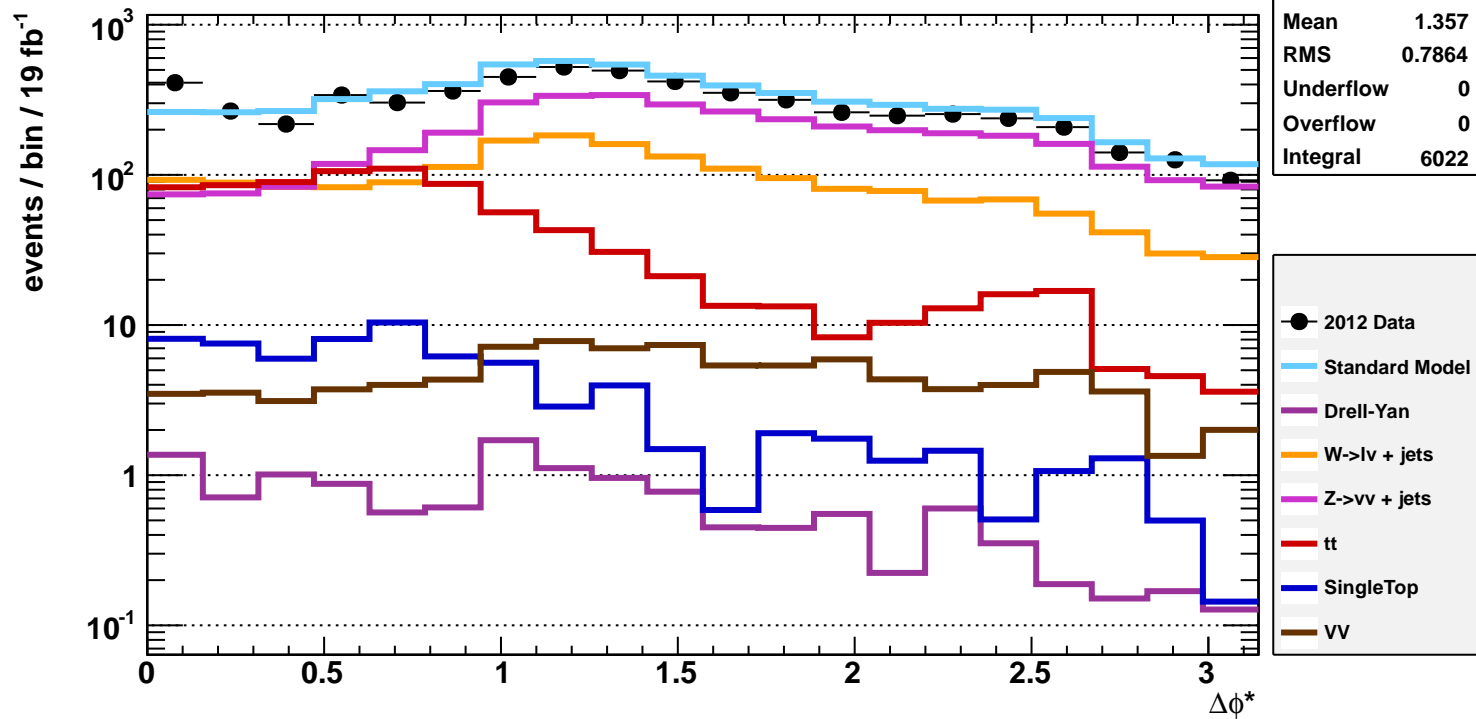
xcak5JetmPat	
Entries	6022
Mean	559.2
RMS	308
Underflow	0
Overflow	0
Integral	6022



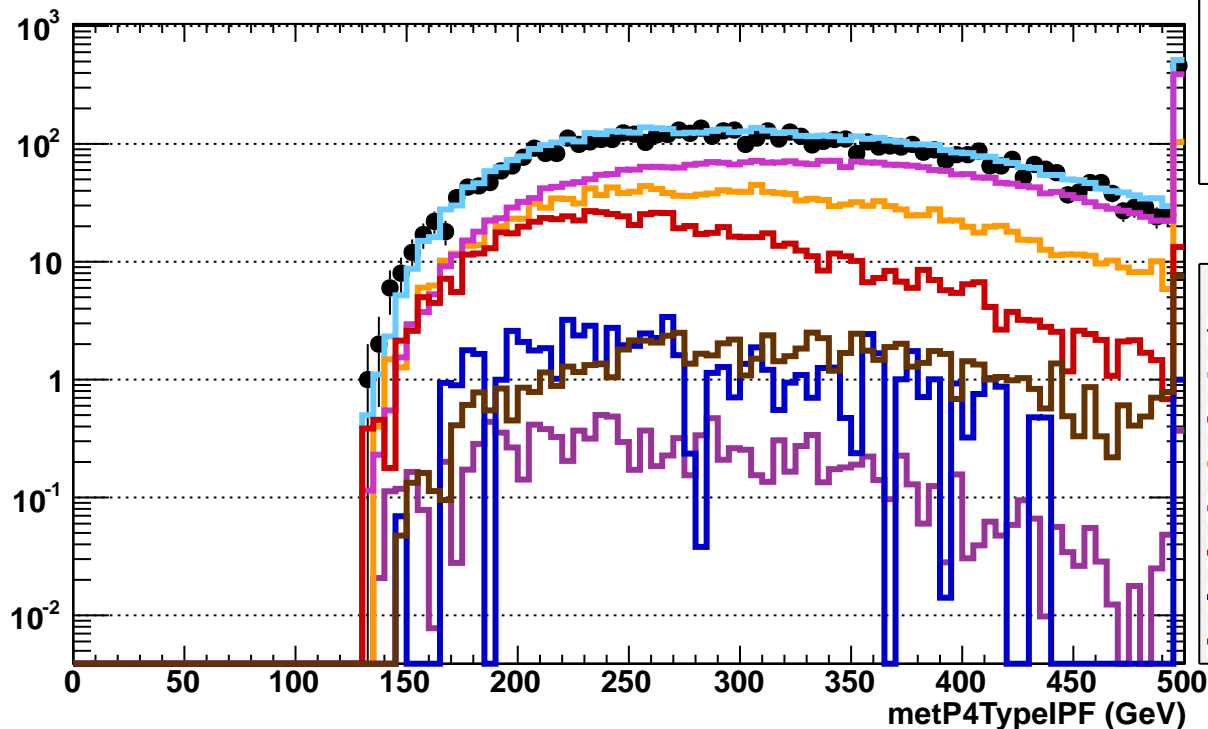
2012 Data**Standard Model****Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**

xcak5JetDeltaPhiStarlowPtPat	
Entries	6022
Mean	1.189
RMS	0.7751
Underflow	0
Overflow	0
Integral	6022

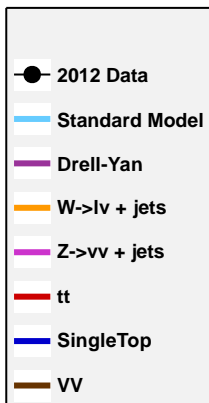




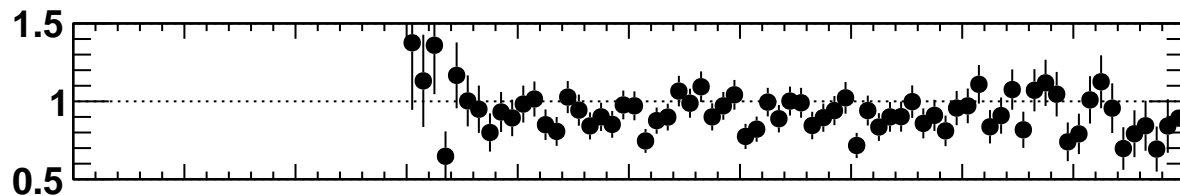
events / bin / 19 fb⁻¹

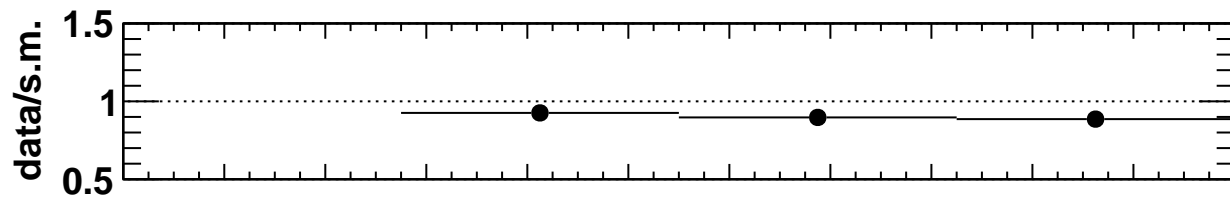
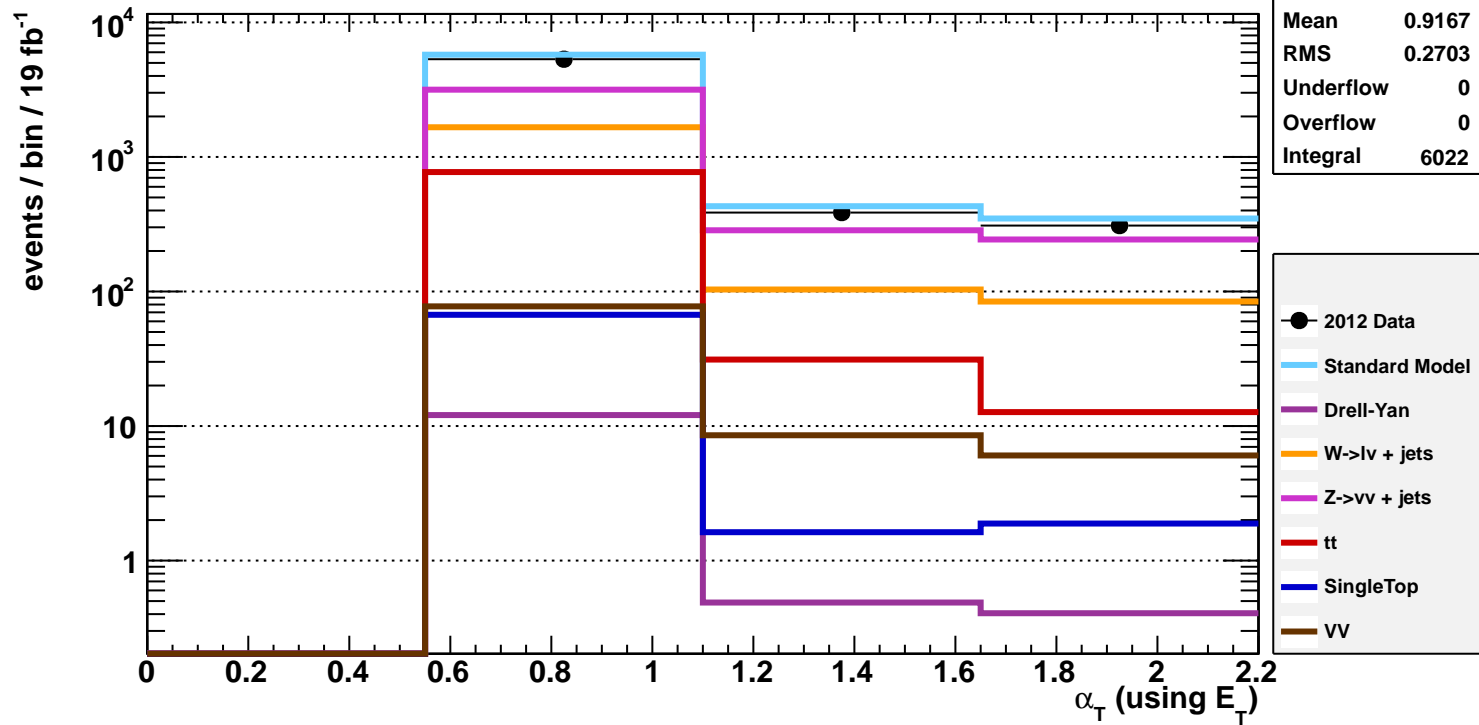


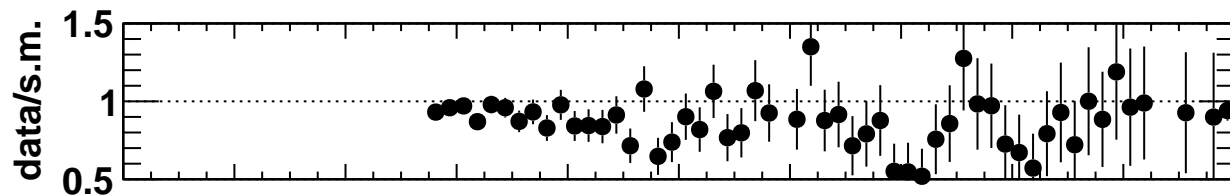
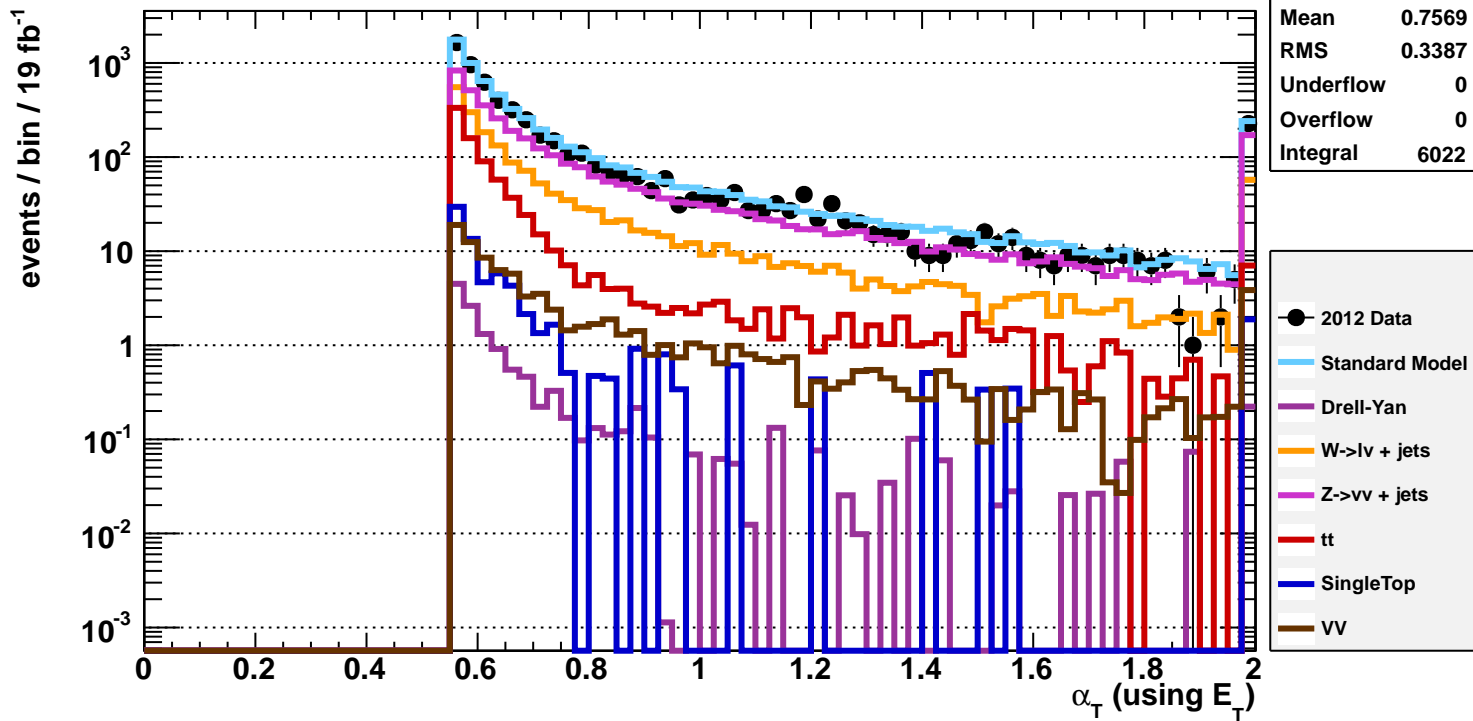
metP4TypeIPF	
Entries	6022
Mean	327.9
RMS	91.09
Underflow	0
Overflow	0
Integral	6022

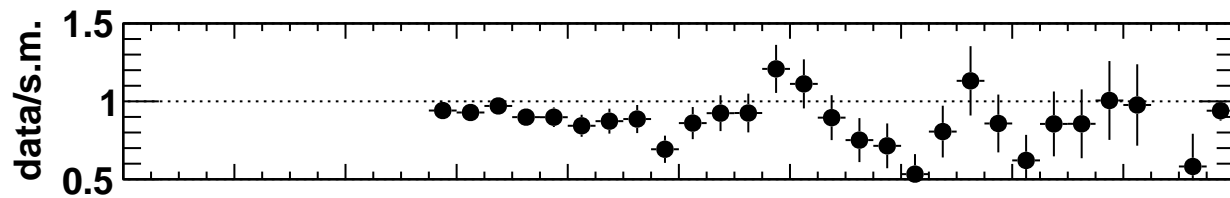
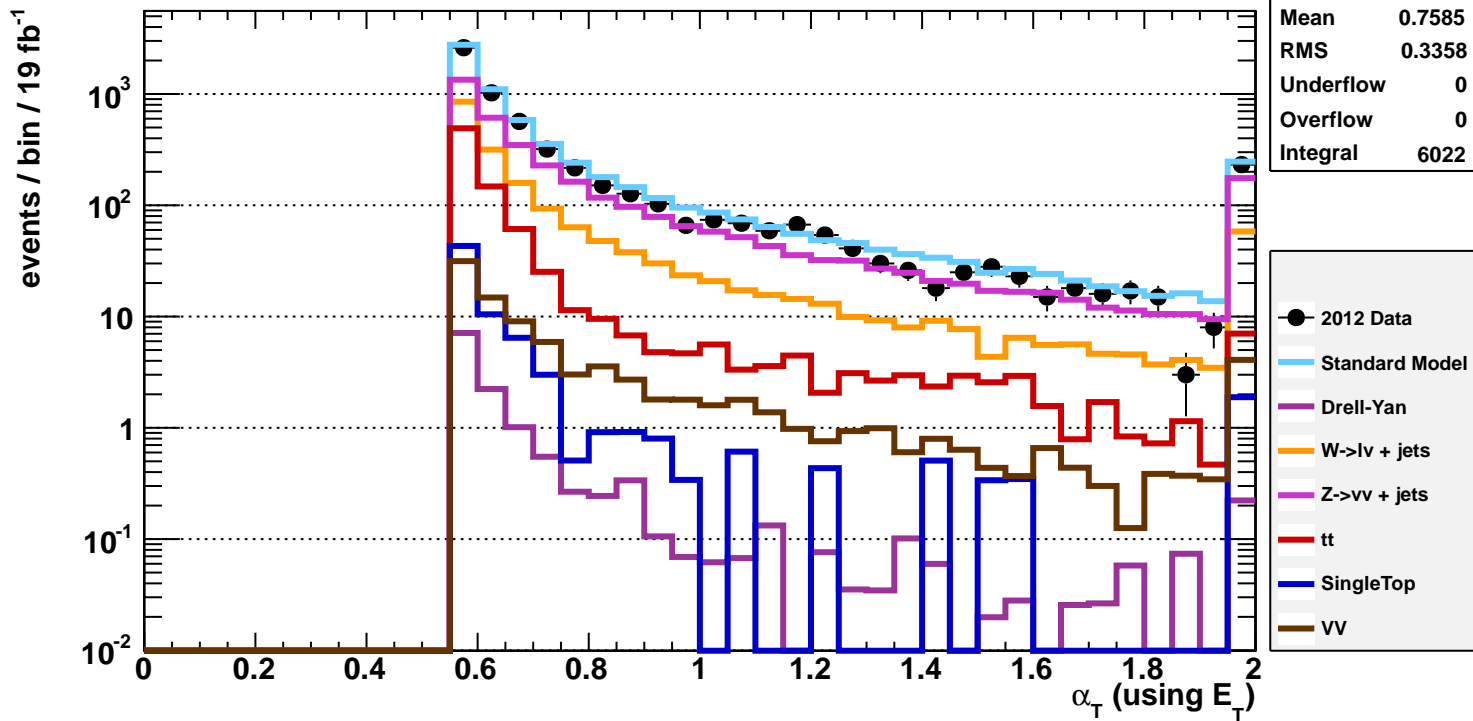


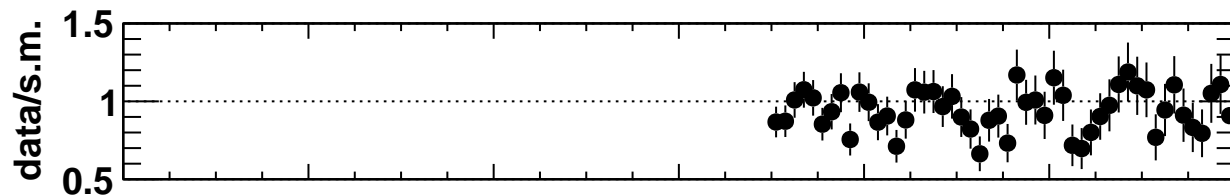
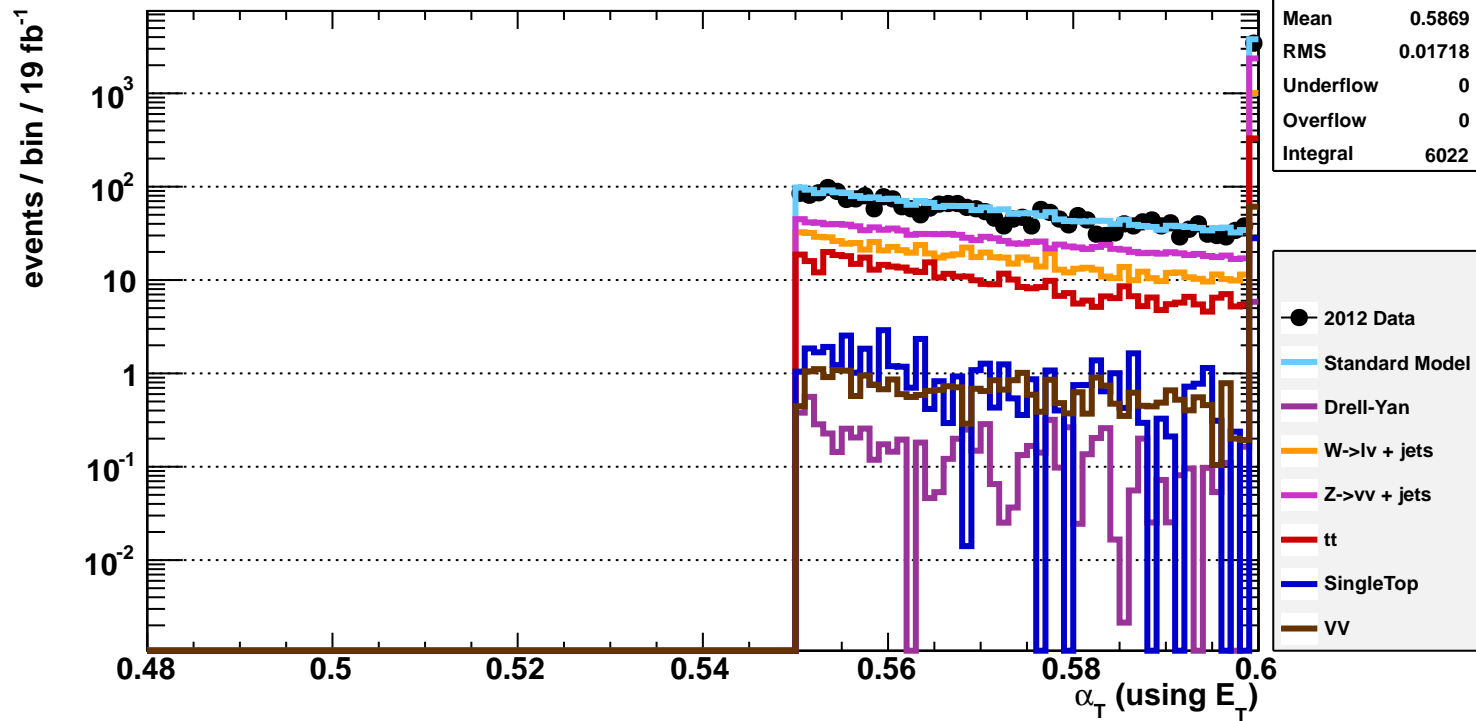
data/s.m.

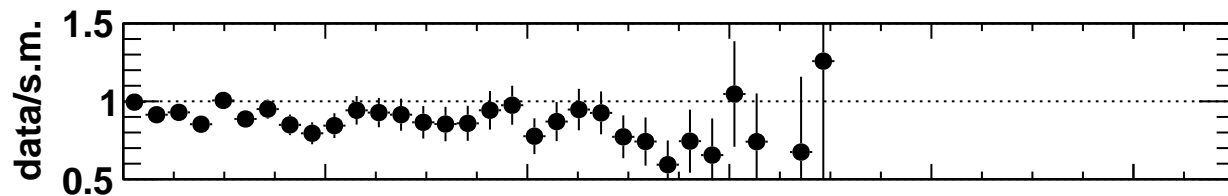
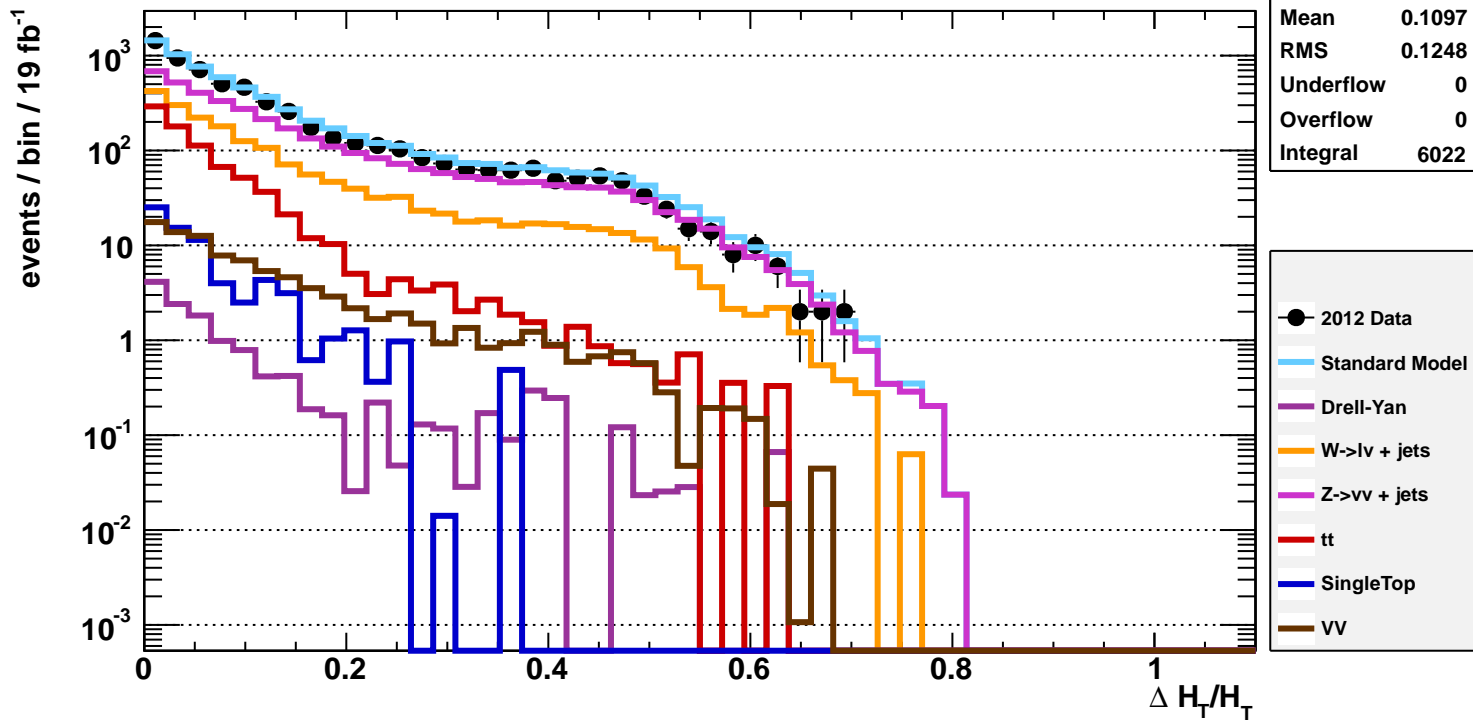


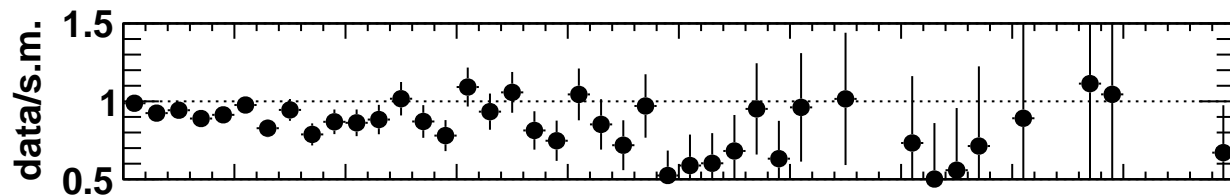
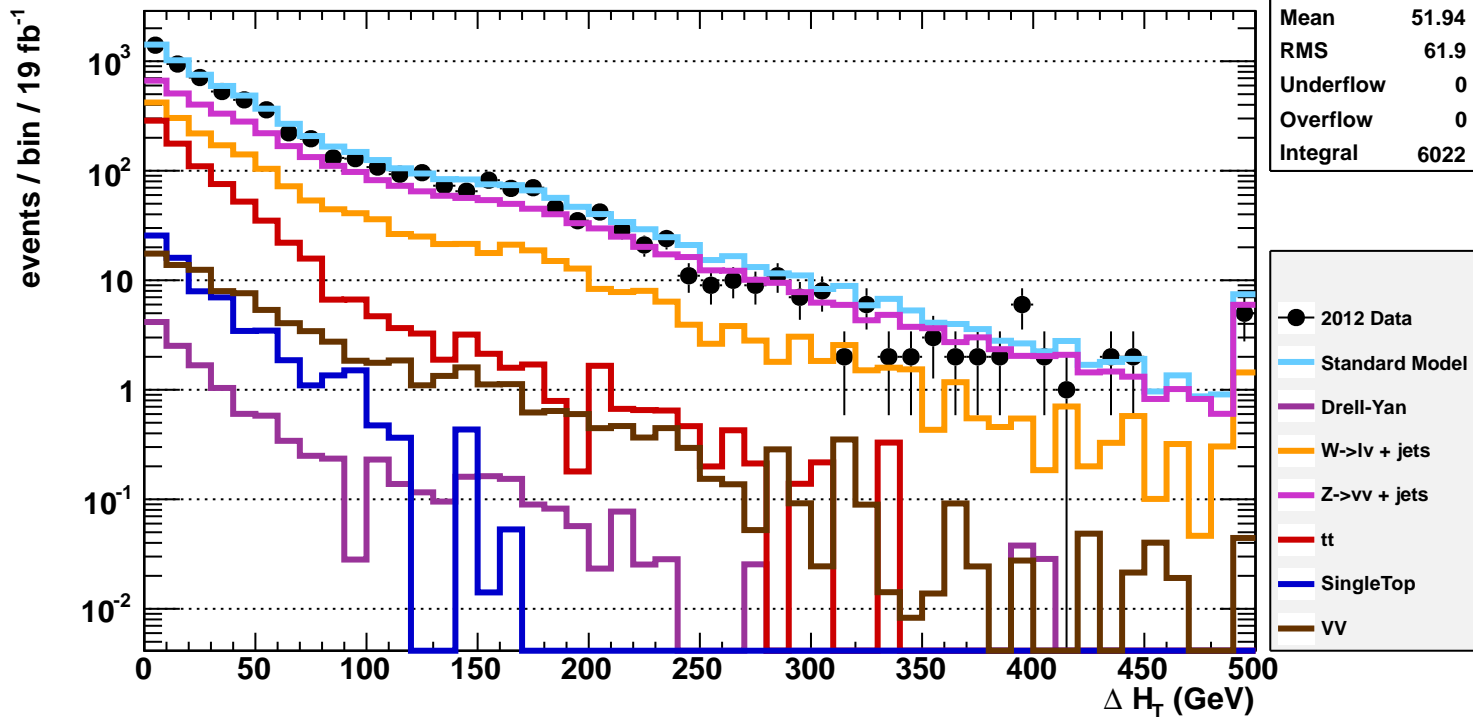




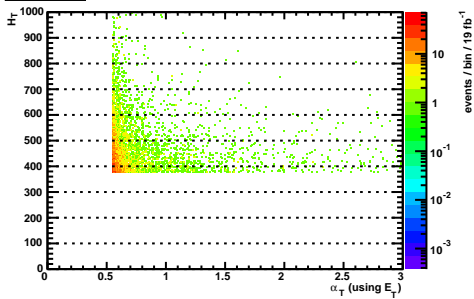




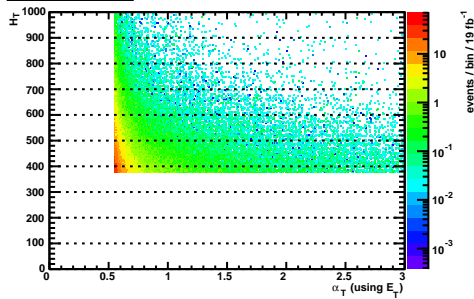




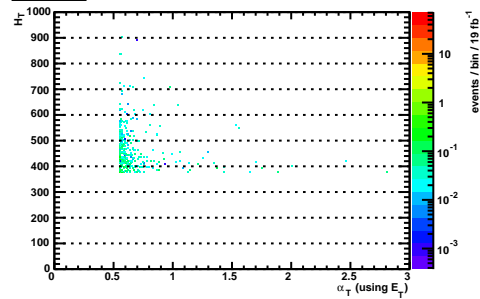
2012 Data



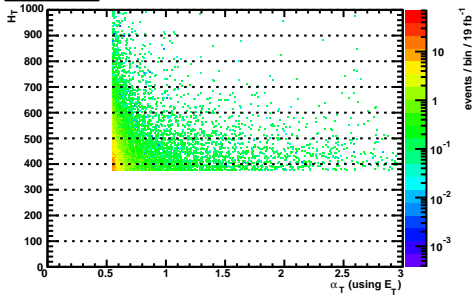
Standard Model



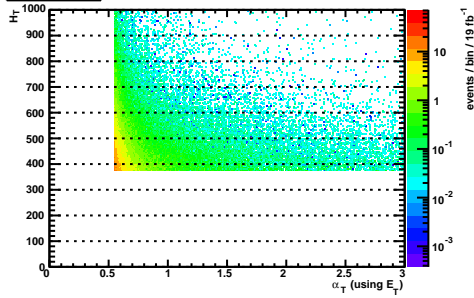
Drell-Yan



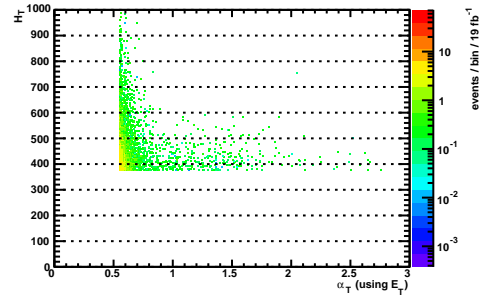
W->lv + jets



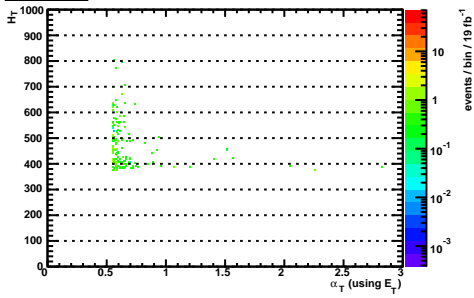
Z->vv + jets



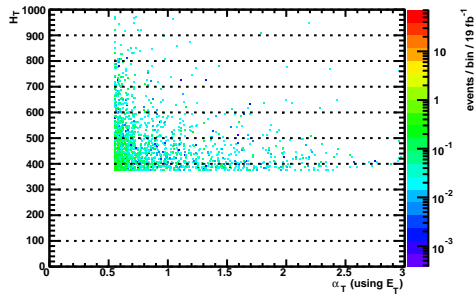
tt

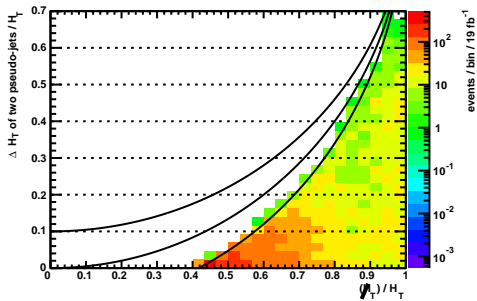
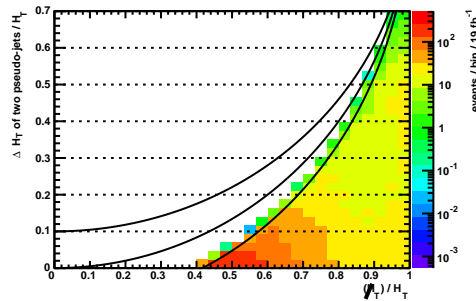
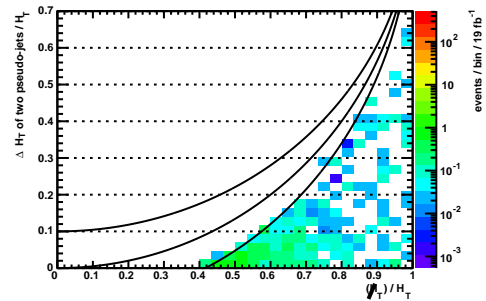
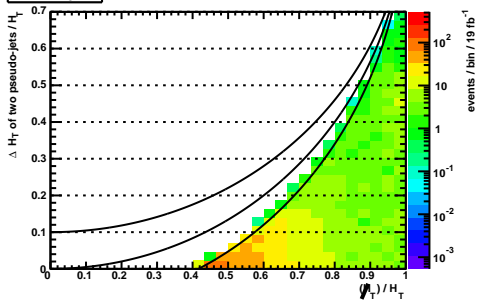
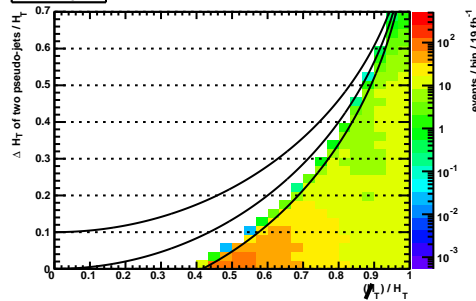
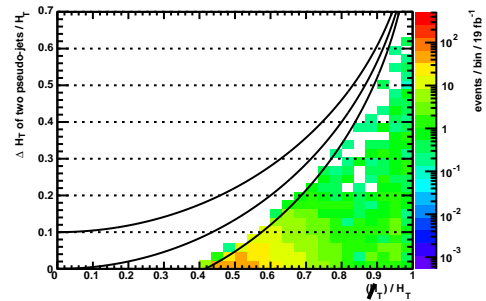
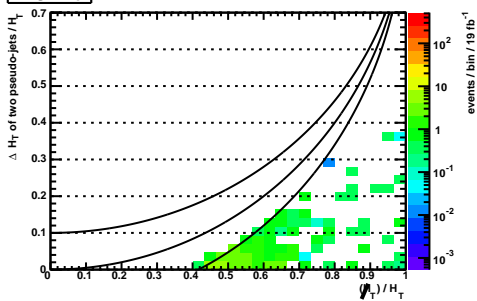
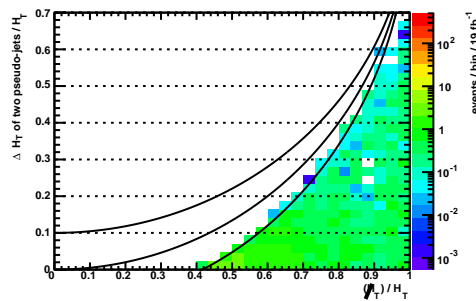


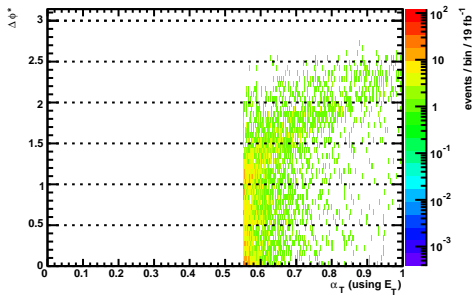
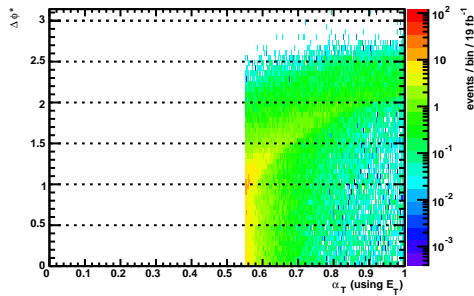
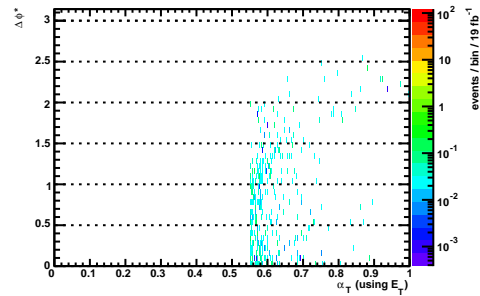
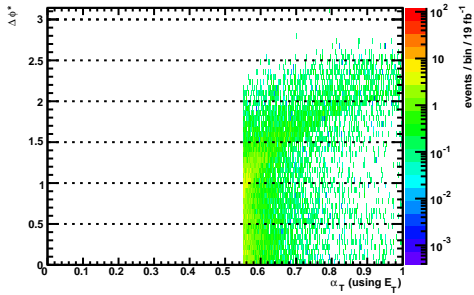
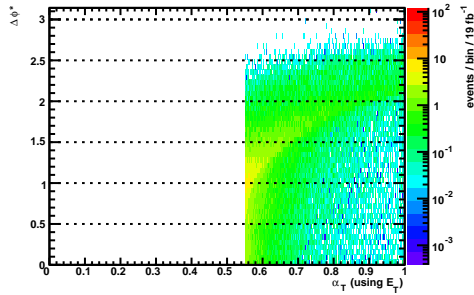
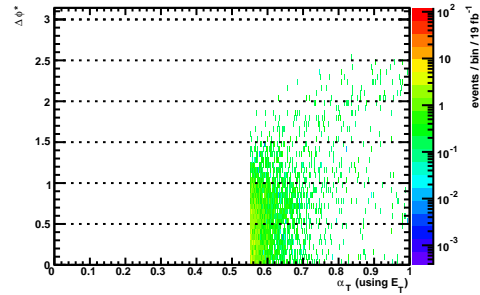
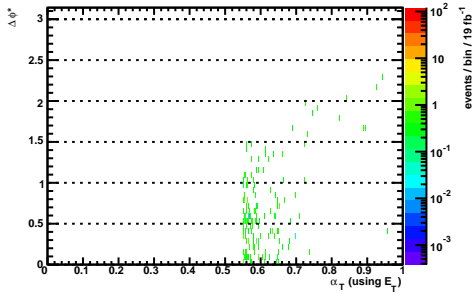
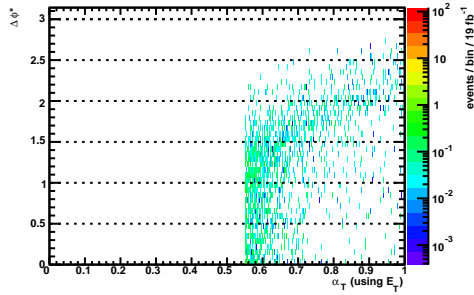
SingleTop

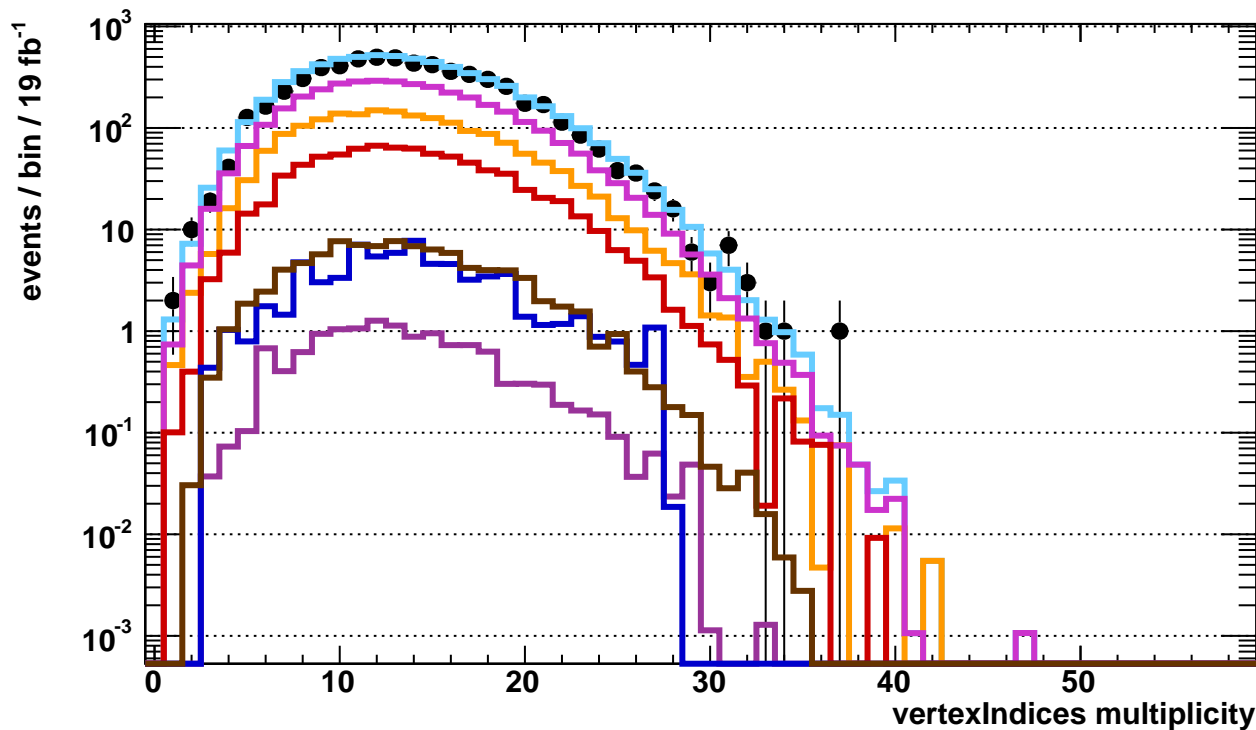


VV

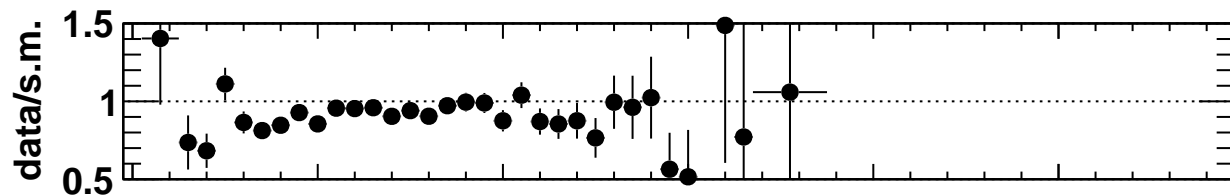
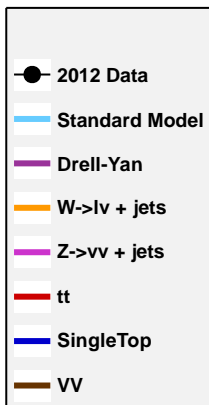


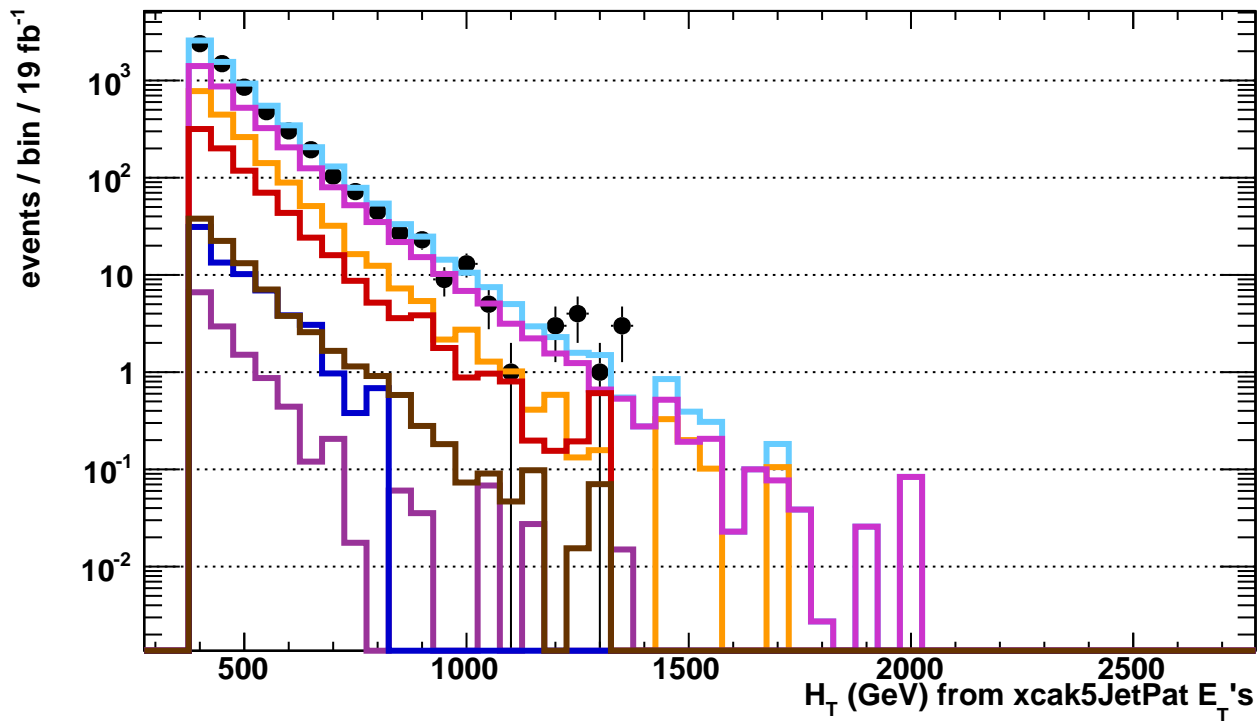
2012 Data**Standard Model****Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**

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

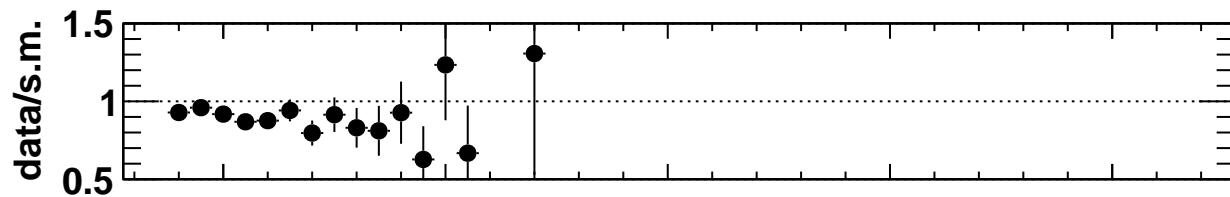
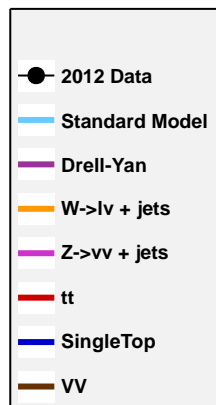


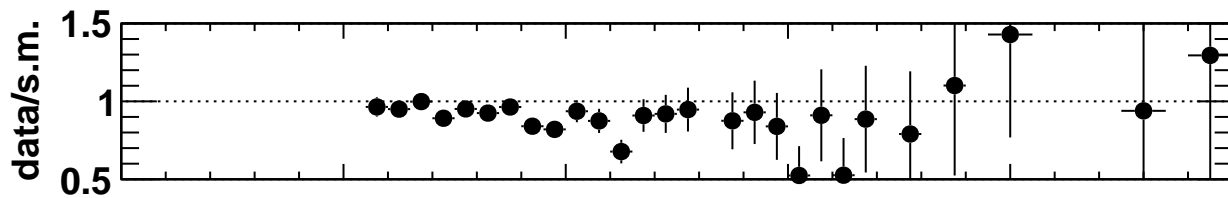
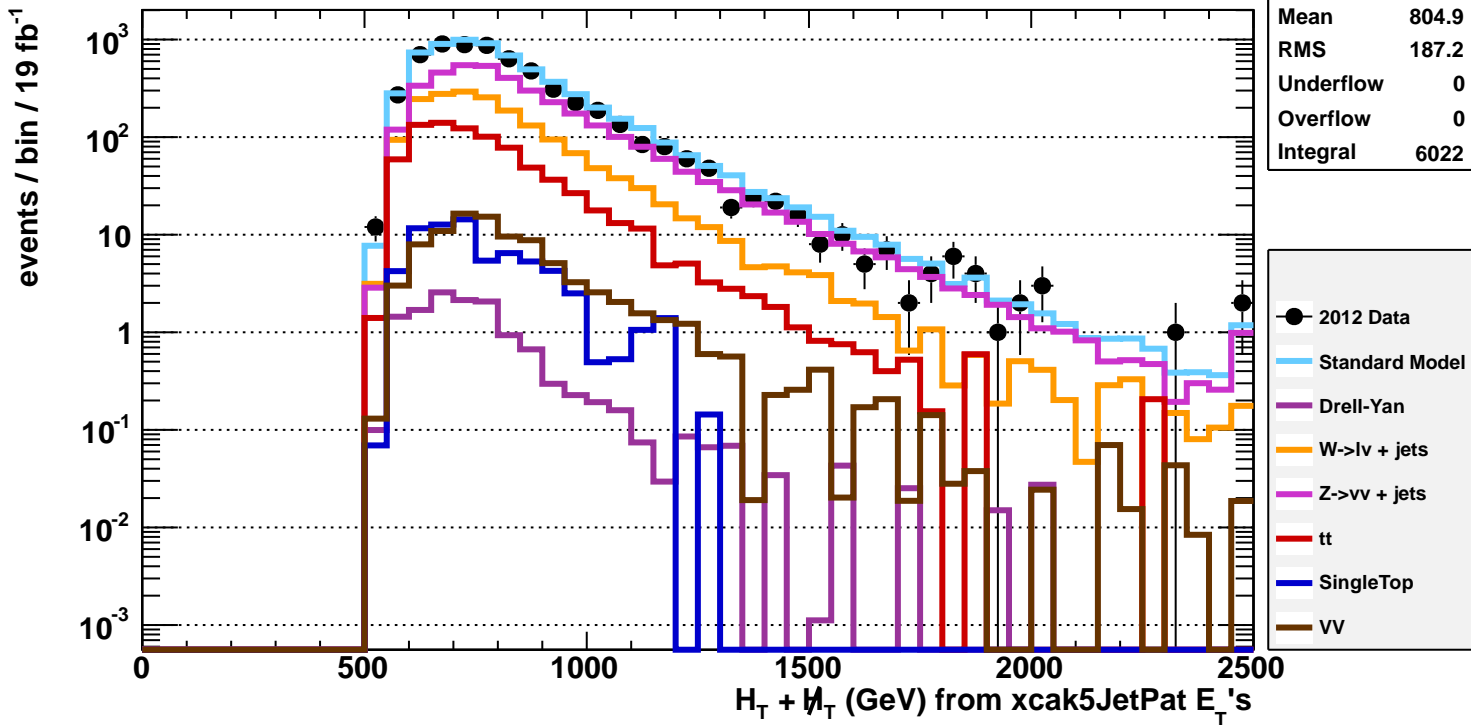
vertexIndicesMultiplicity	
Entries	6022
Mean	13.62
RMS	4.96
Underflow	0
Overflow	0
Integral	6022

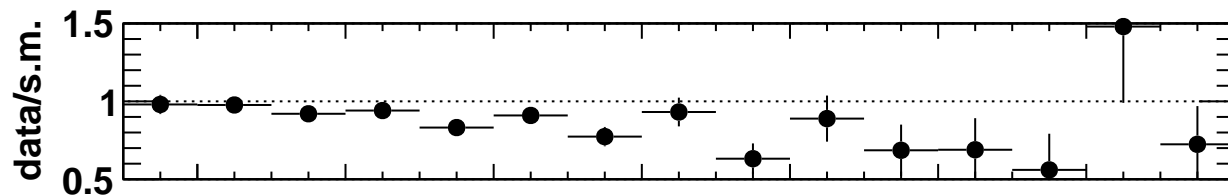
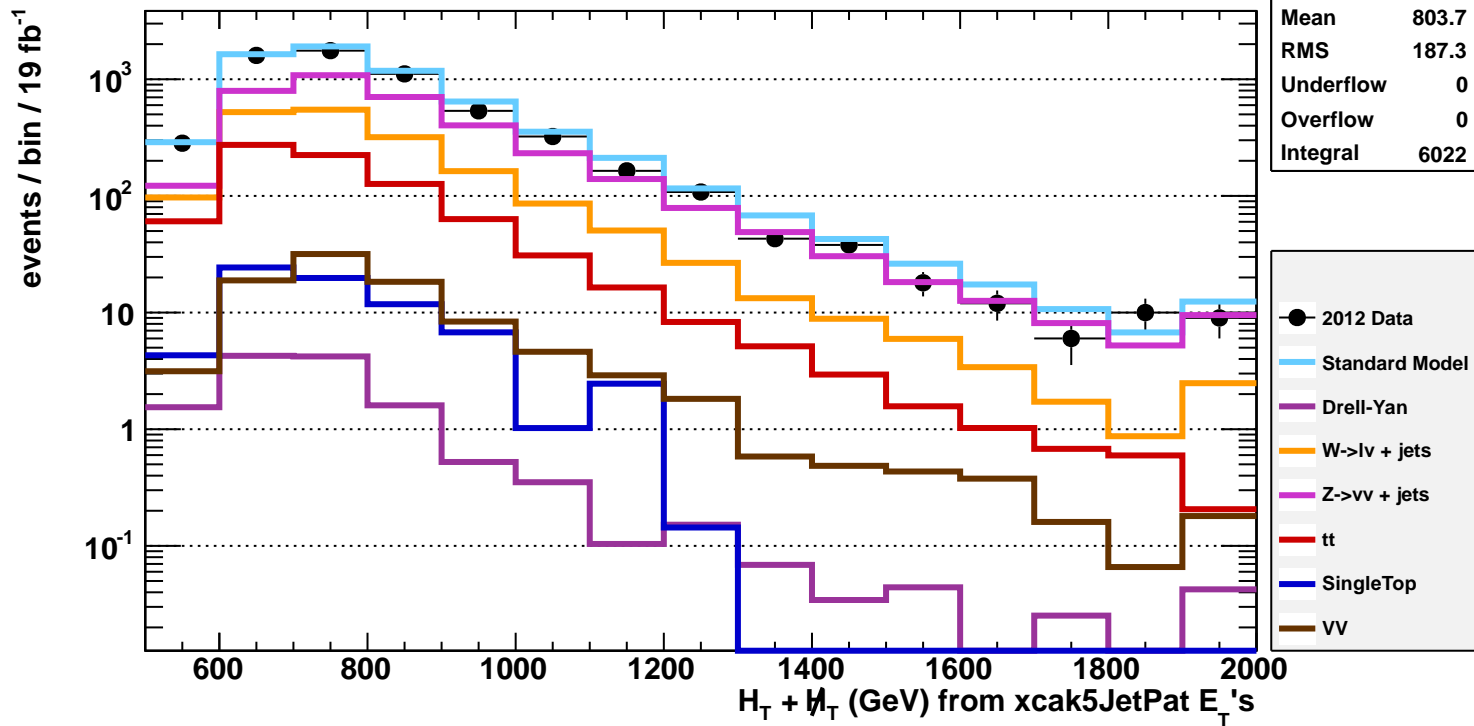


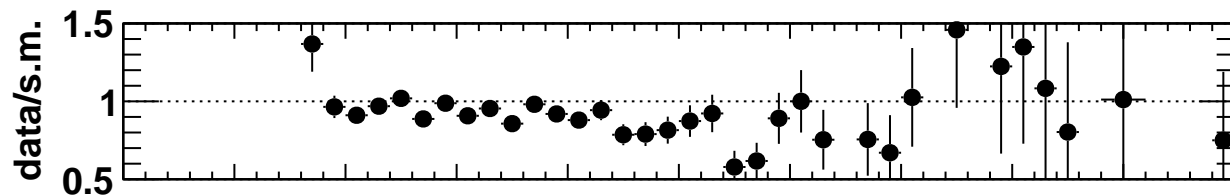
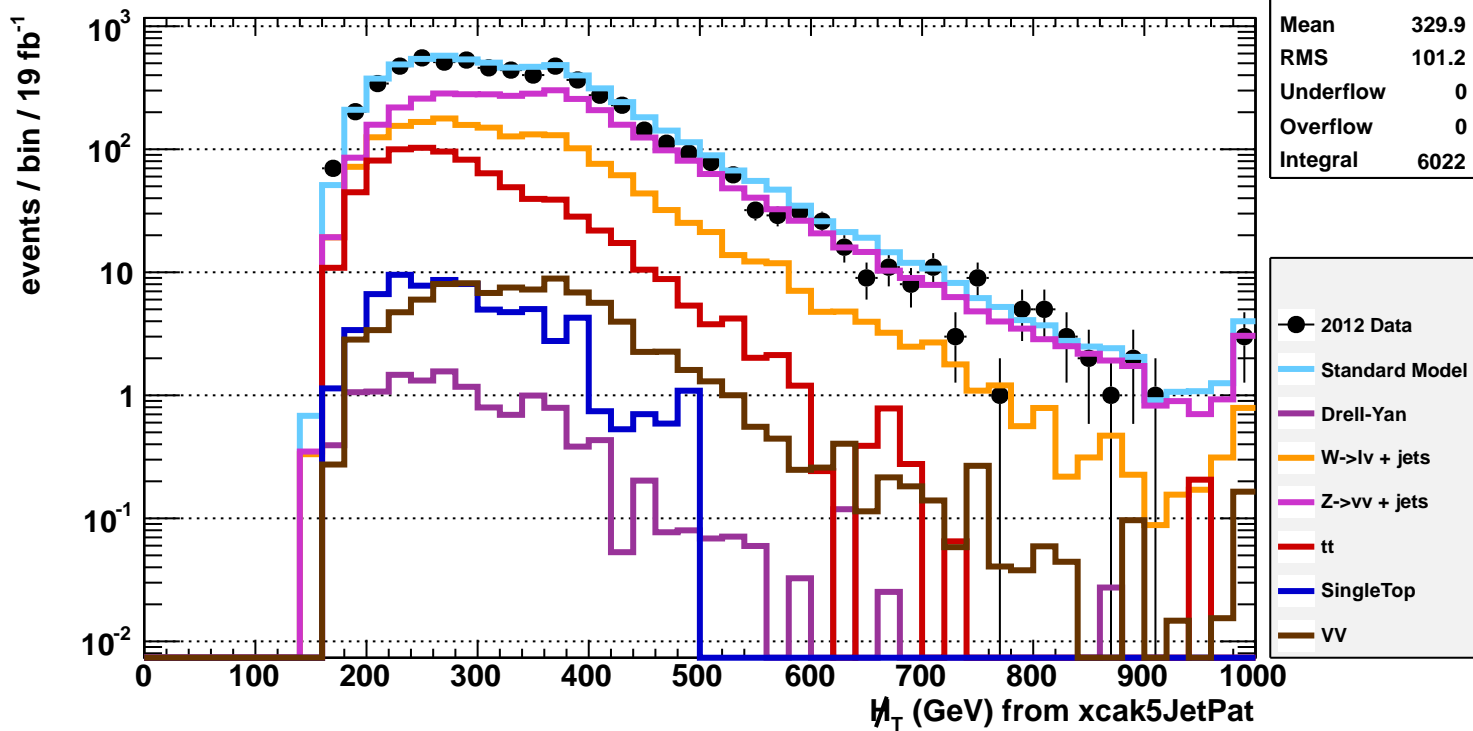


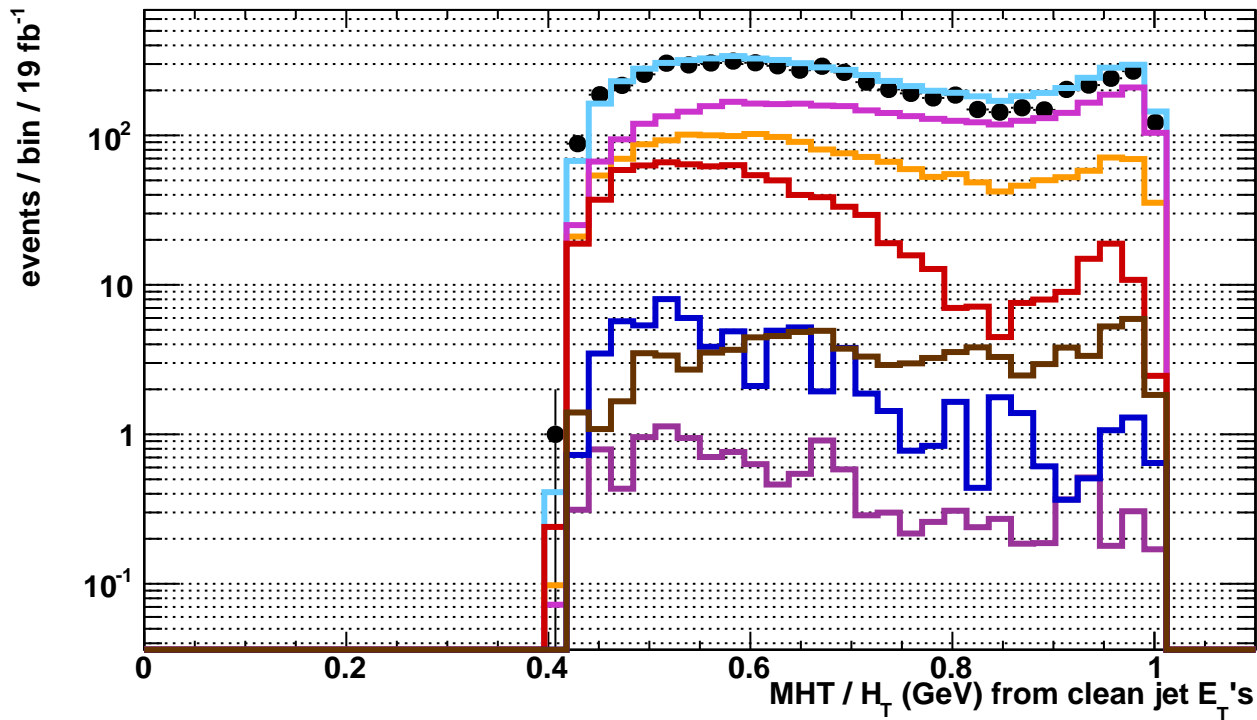
xcak5JetHtPat	
Entries	6022
Mean	475
RMS	105.8
Underflow	0
Overflow	0
Integral	6022



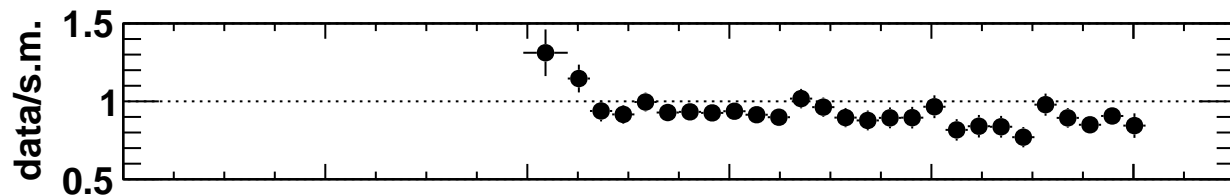
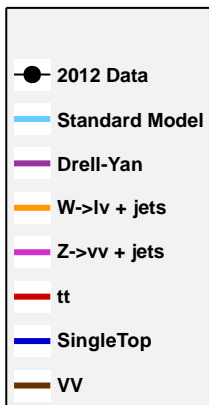


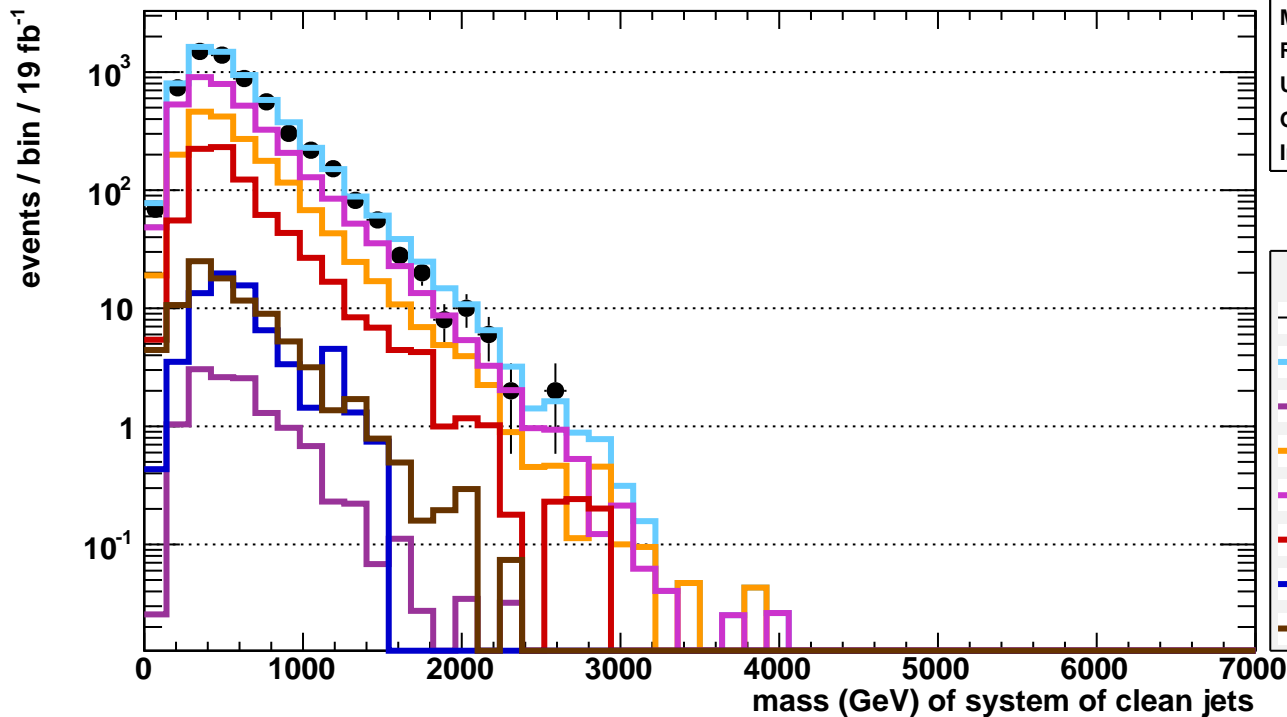




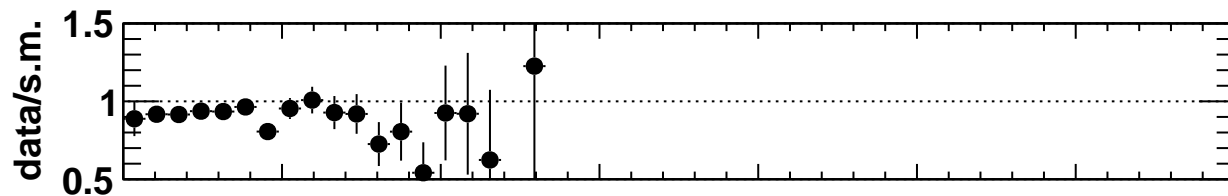
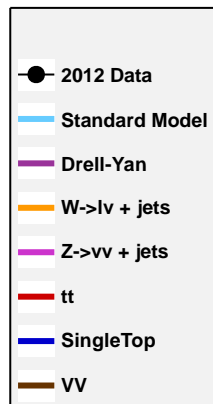


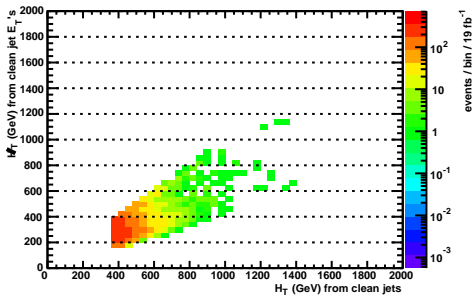
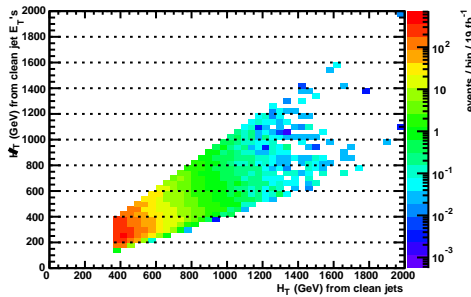
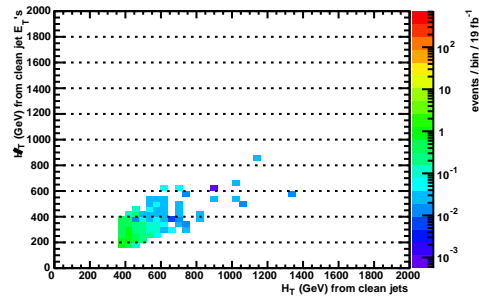
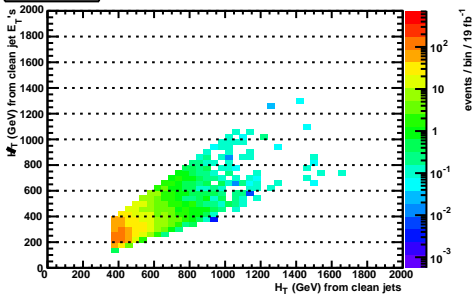
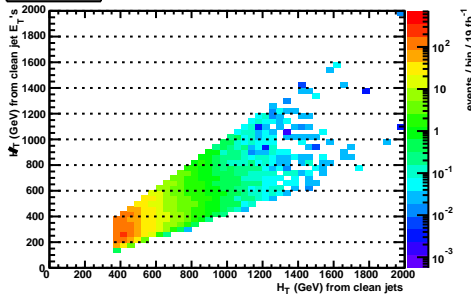
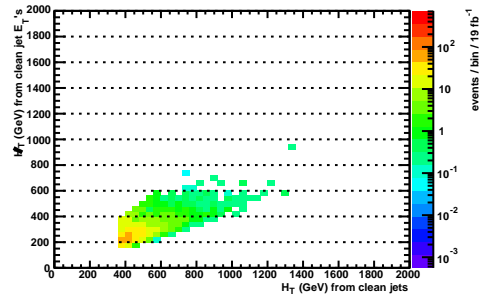
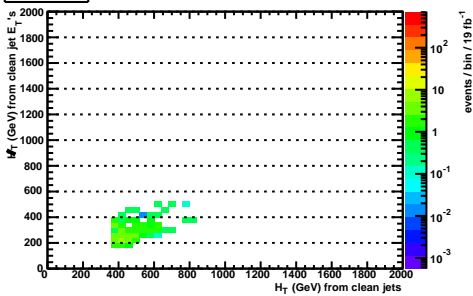
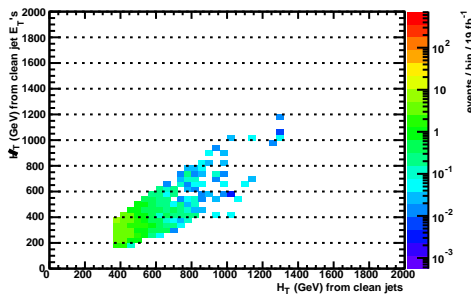
xcak5JetmHtOverHtPat	
Entries	6022
Mean	0.698
RMS	0.1636
Underflow	0
Overflow	0
Integral	6022



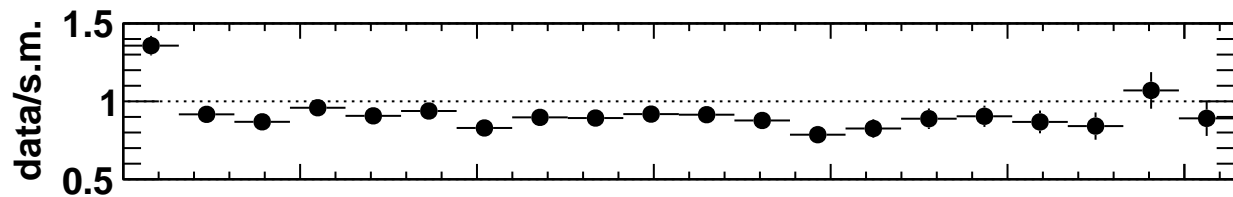
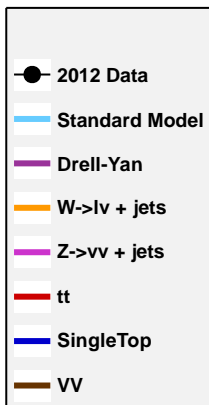
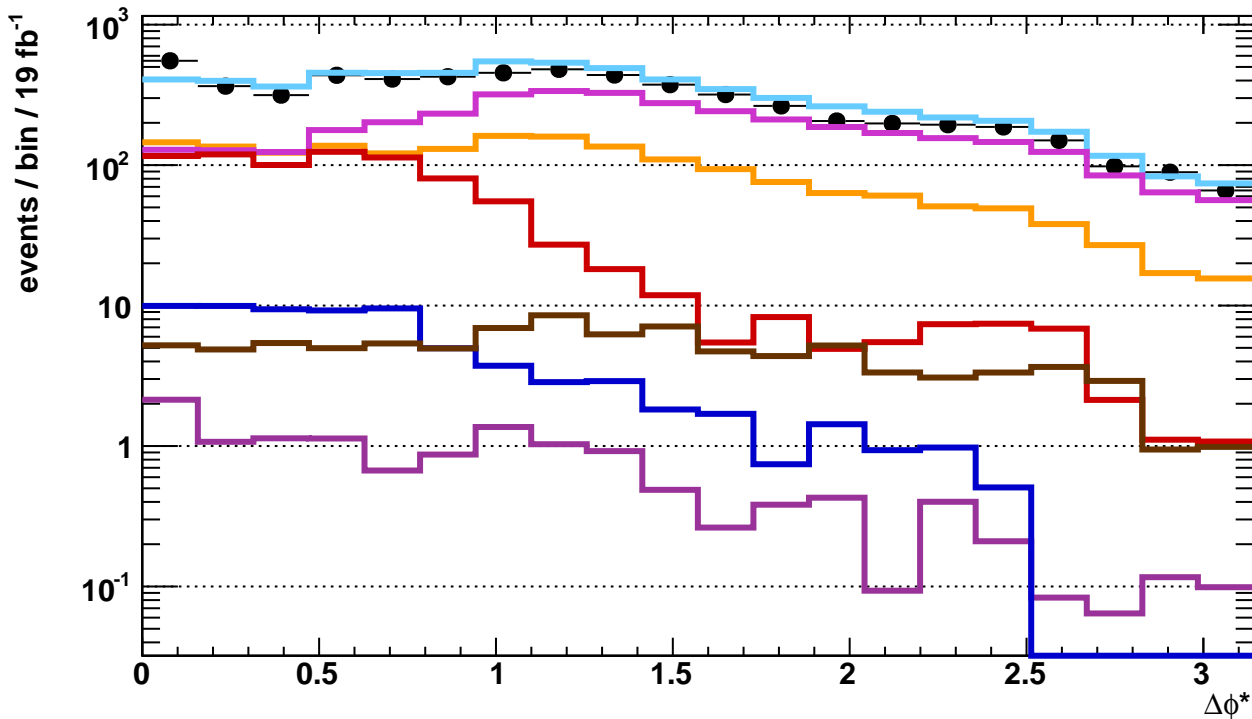


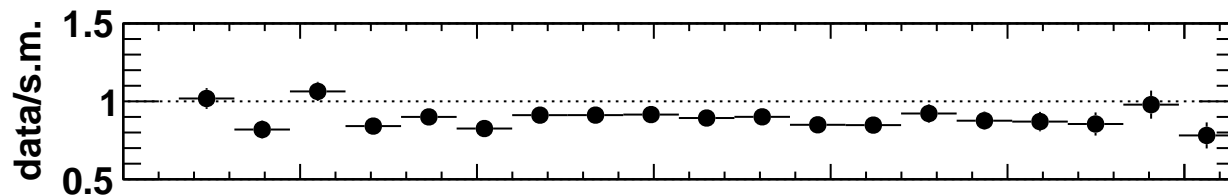
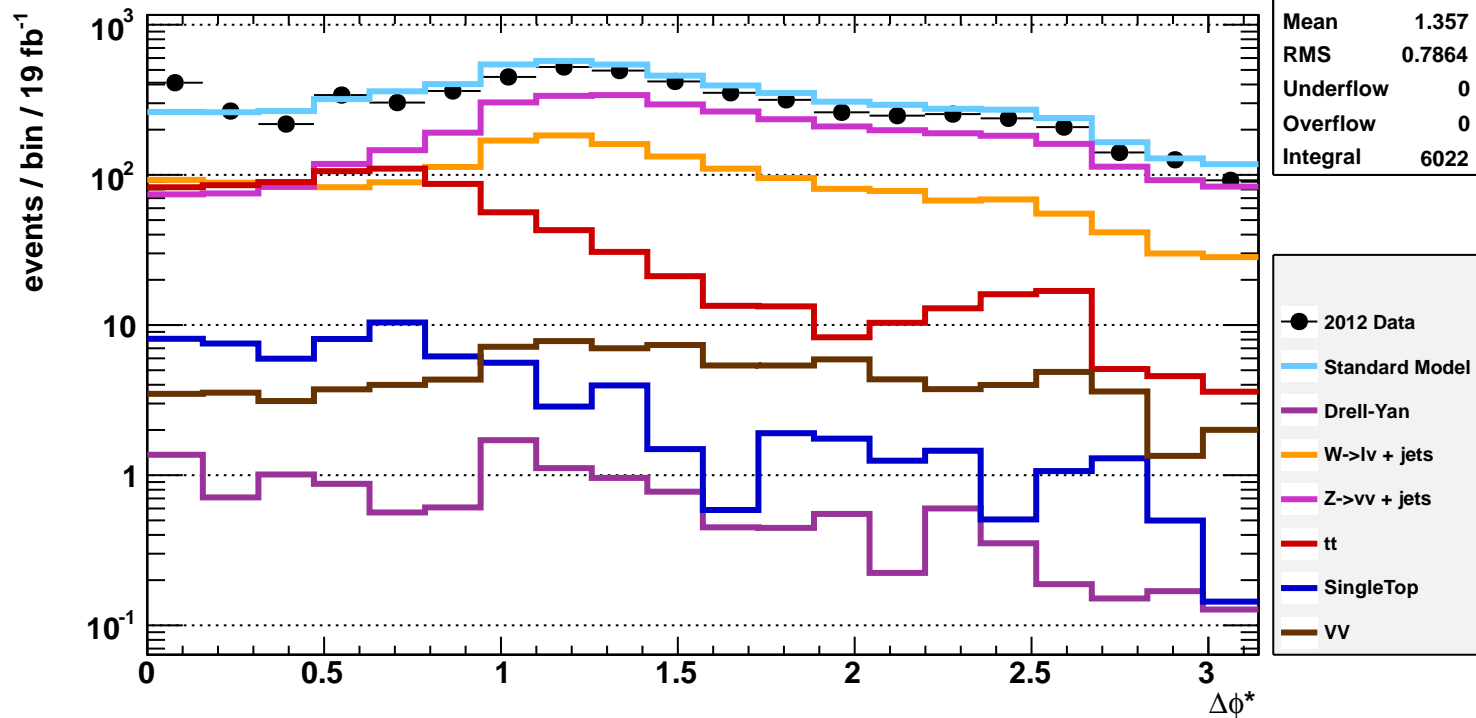
xcak5JetmPat	
Entries	6022
Mean	559.2
RMS	308
Underflow	0
Overflow	0
Integral	6022

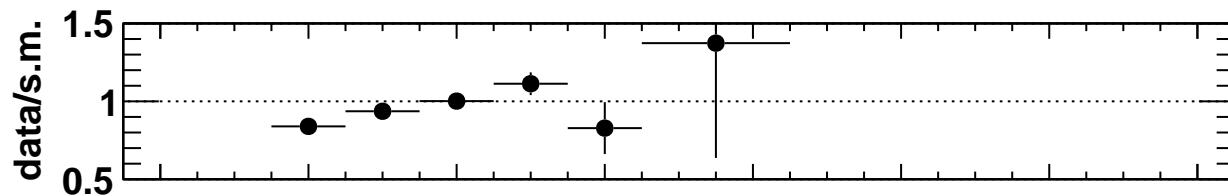
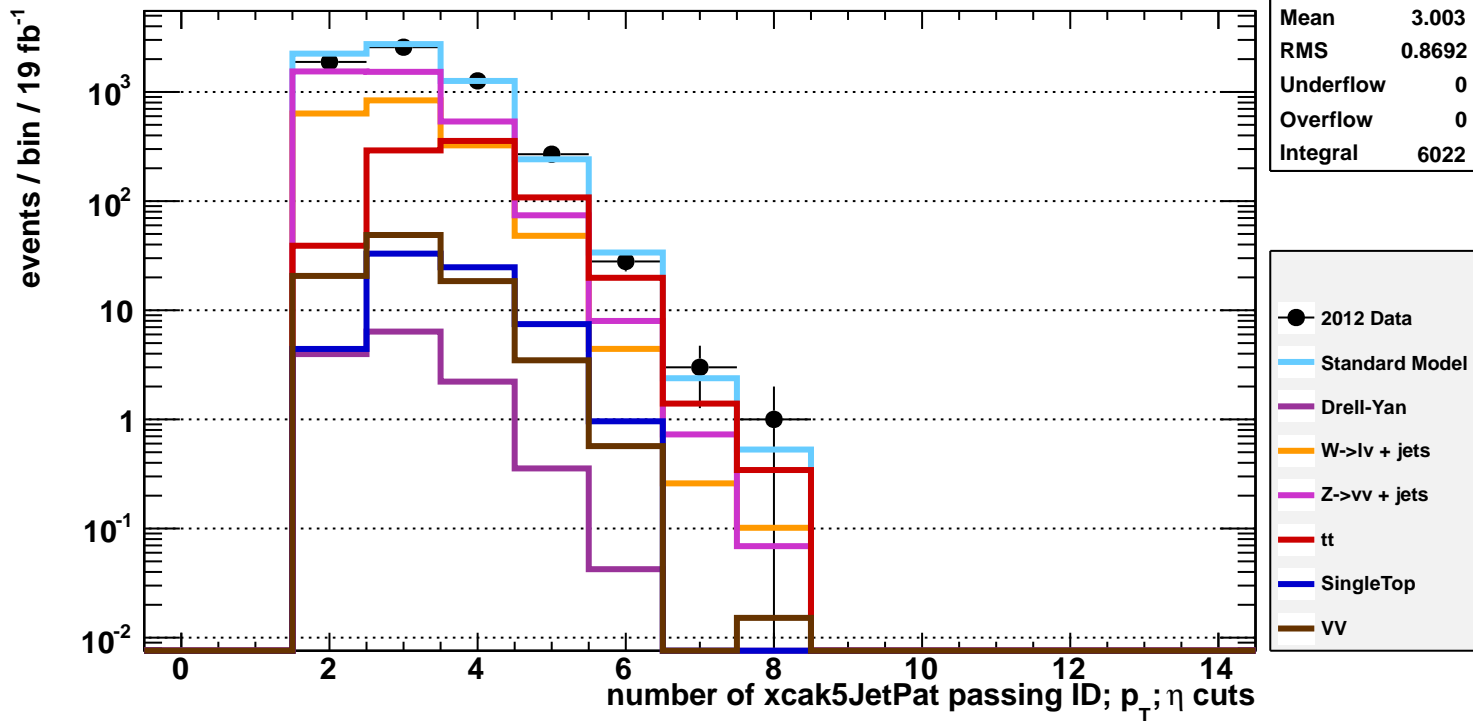


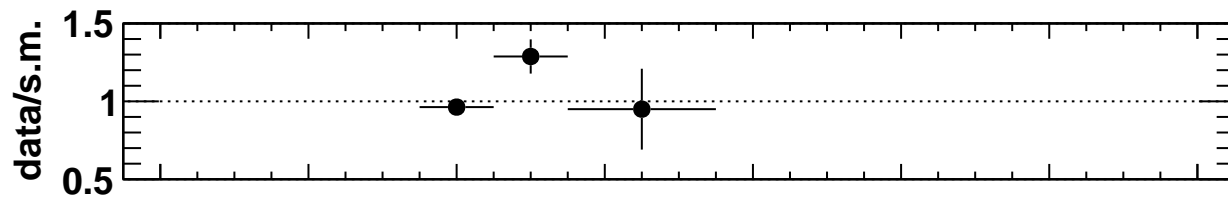
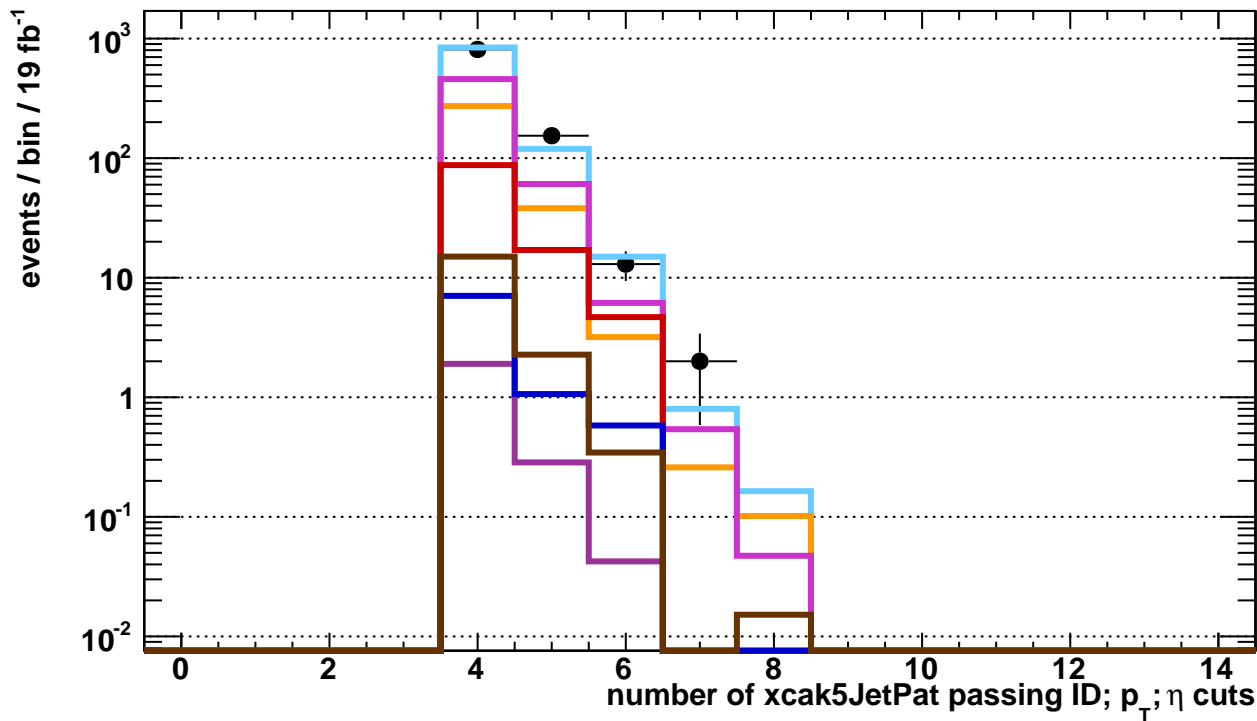
2012 Data**Standard Model****Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**

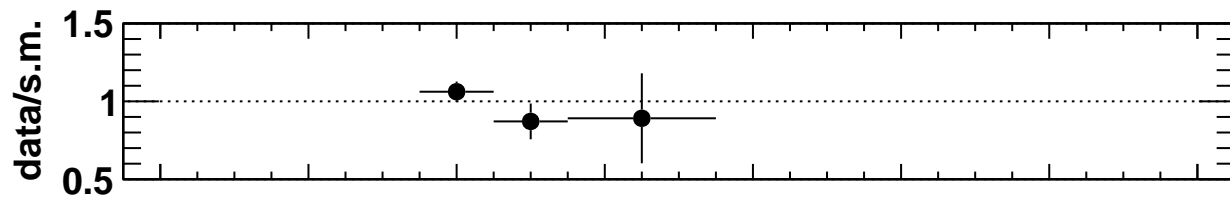
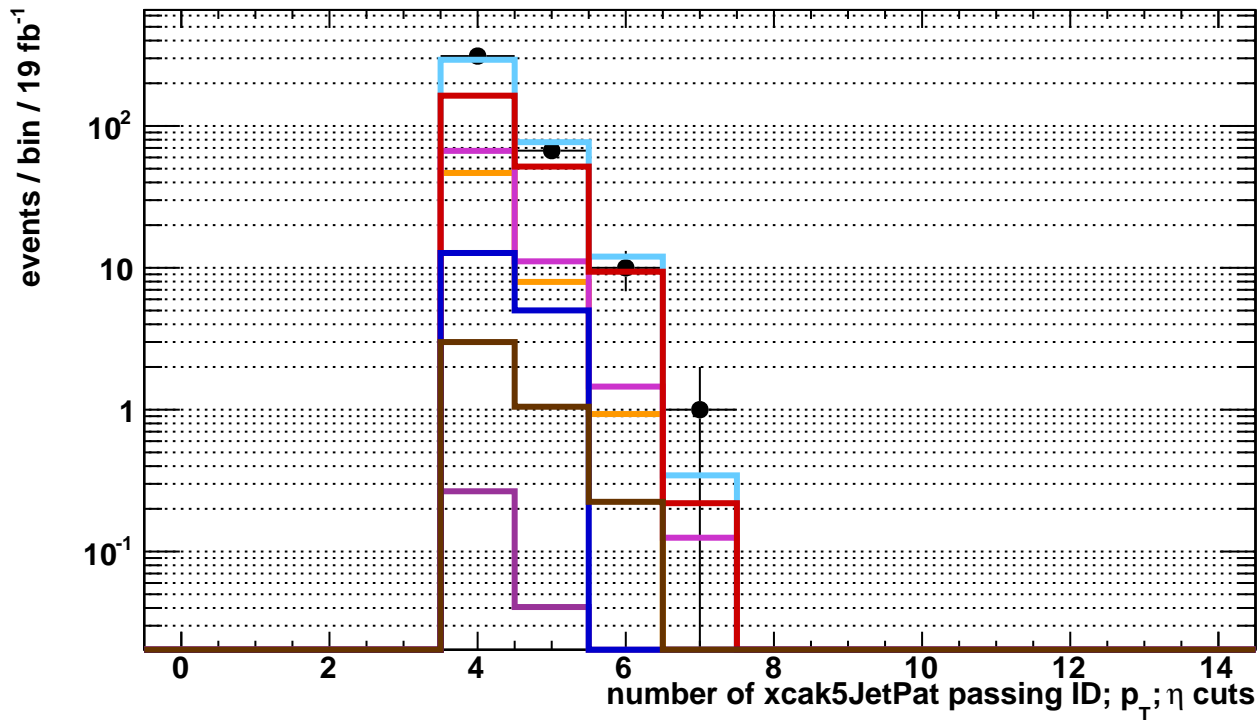
xcak5JetDeltaPhiStarlowPtPat	
Entries	6022
Mean	1.189
RMS	0.7751
Underflow	0
Overflow	0
Integral	6022



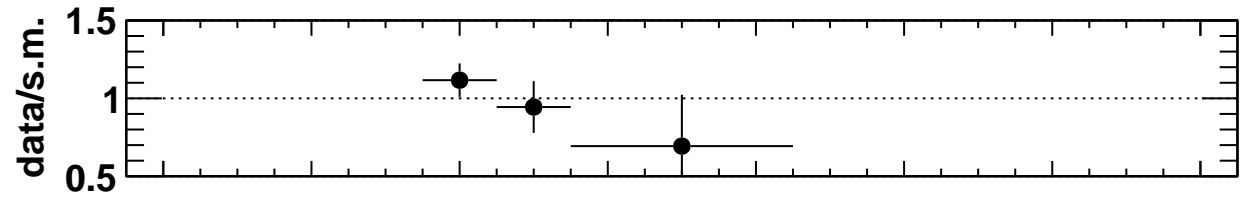
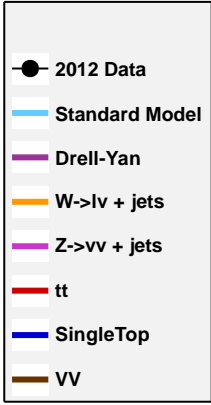
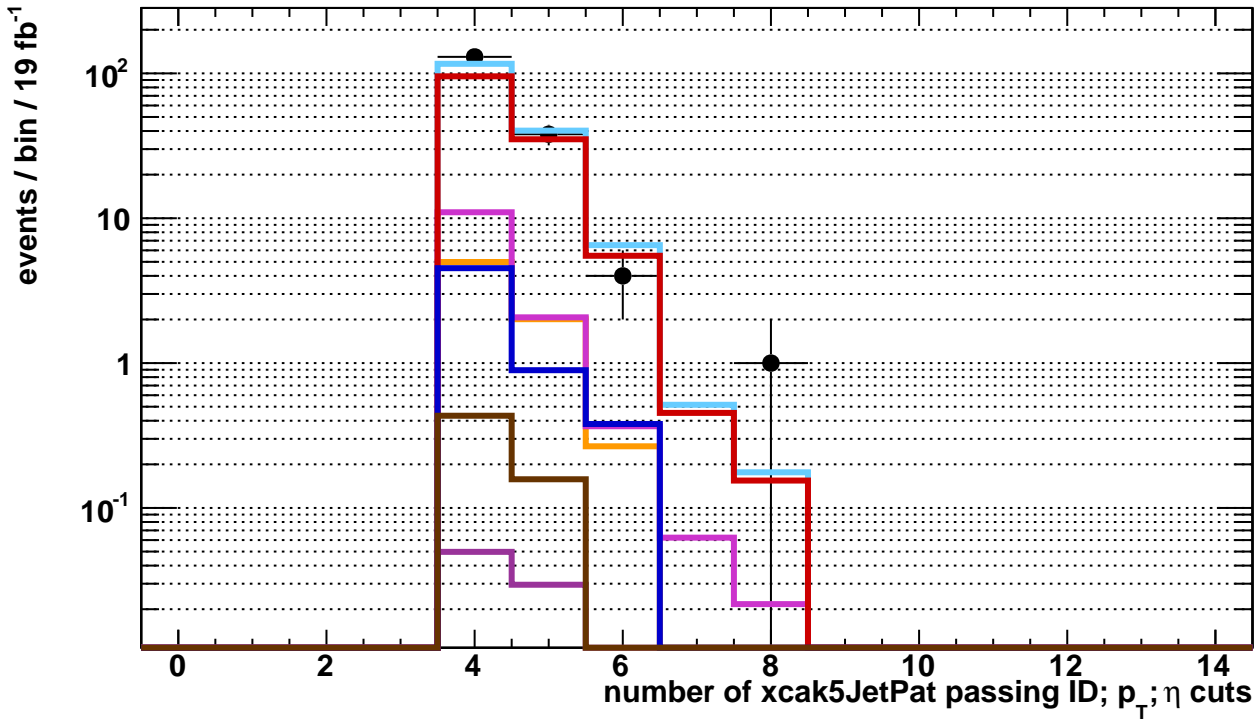




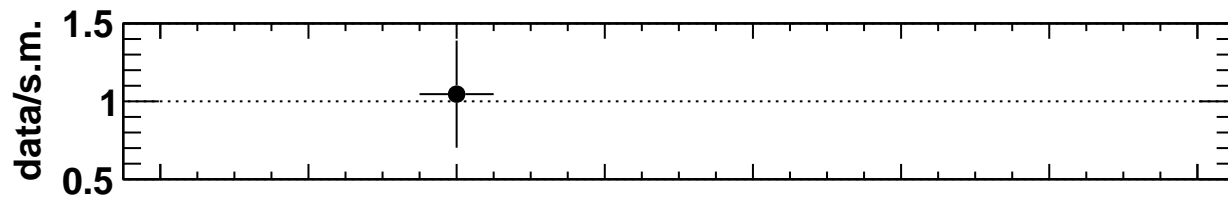
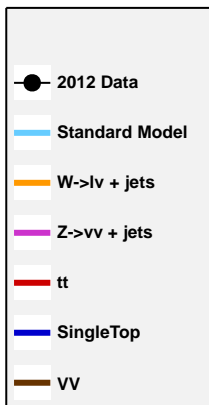
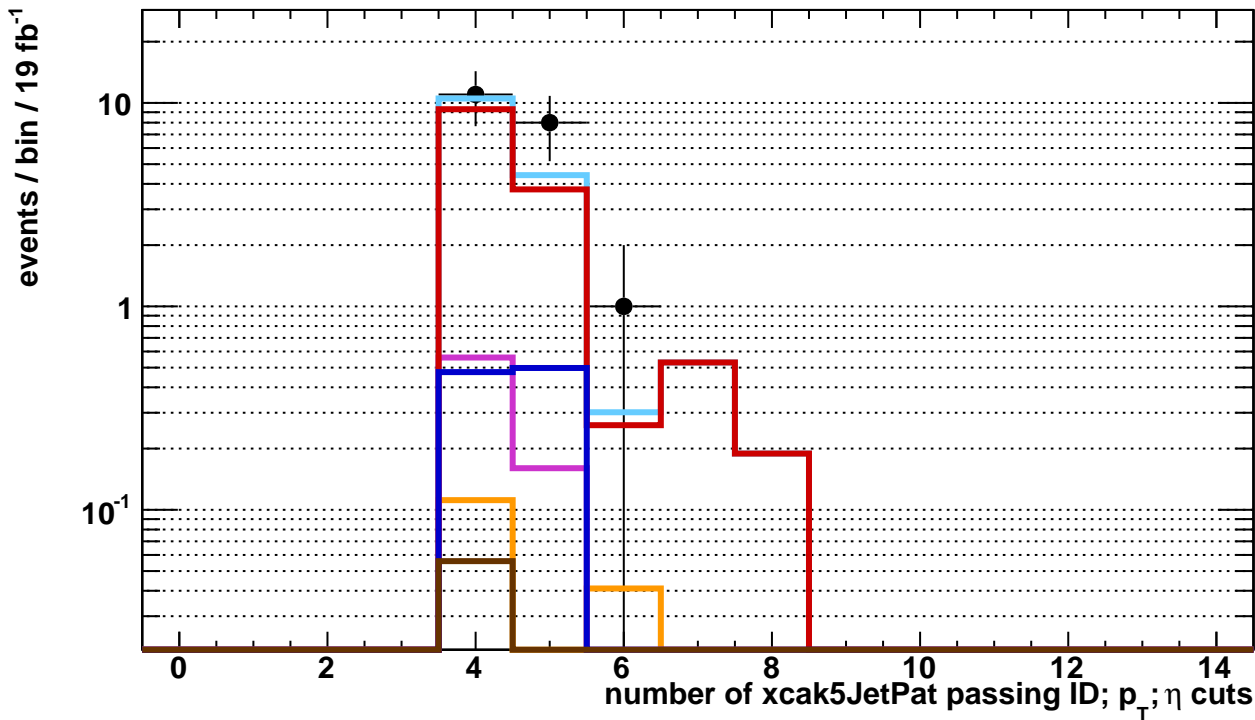


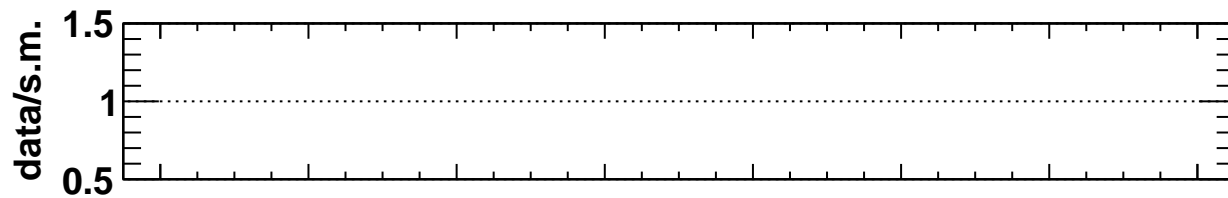
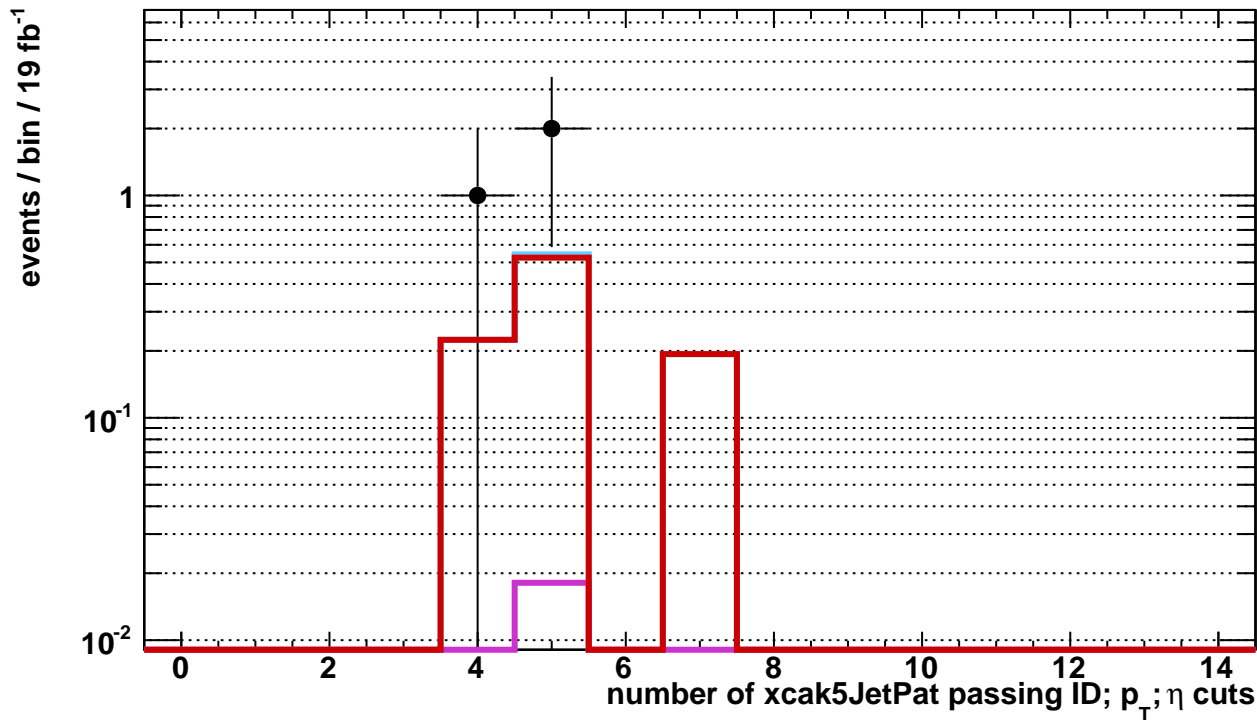


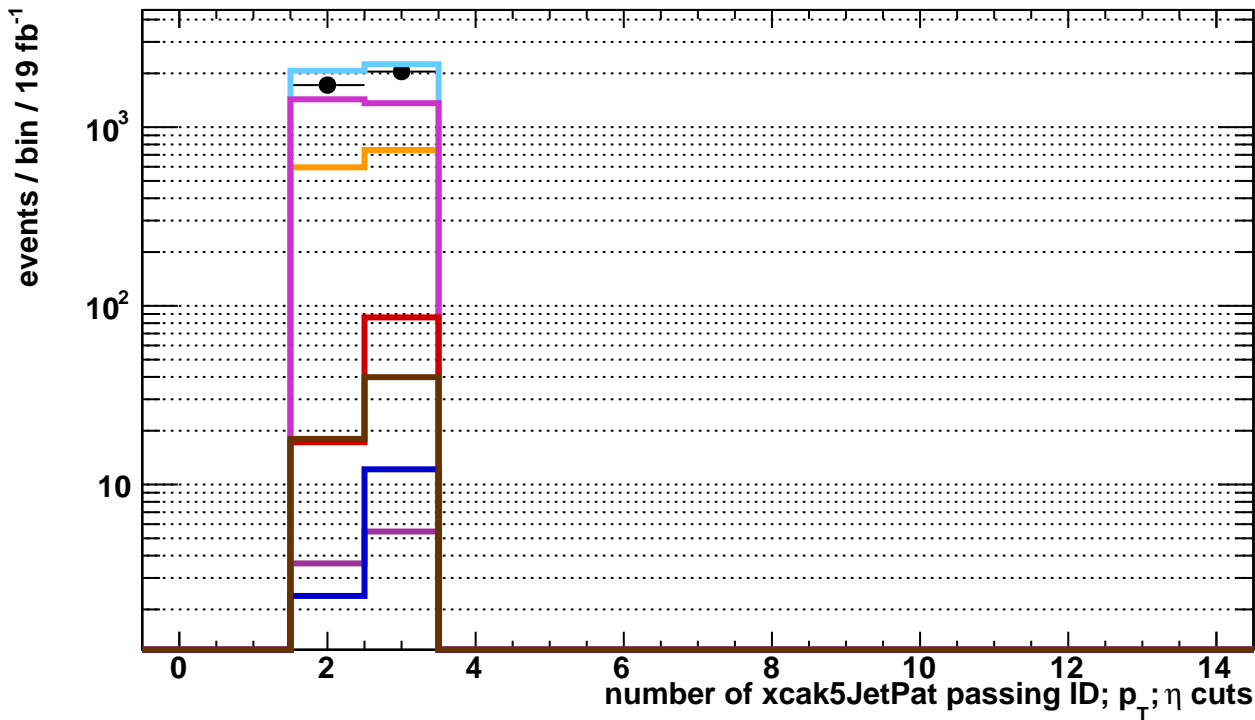
xcak5JetIndicesPat_ge4j_eq2b	
Entries	173
Mean	4.289
RMS	0.5667
Underflow	0
Overflow	0
Integral	173



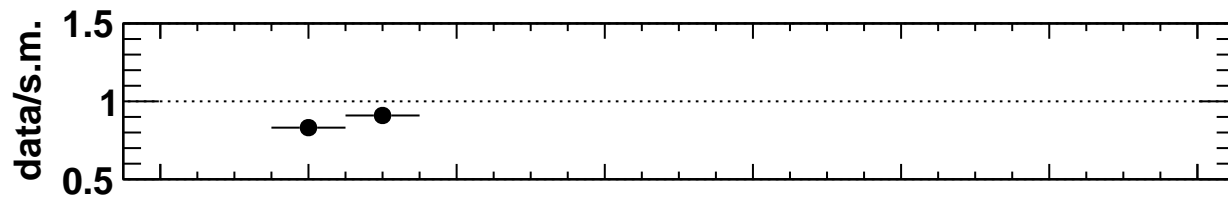
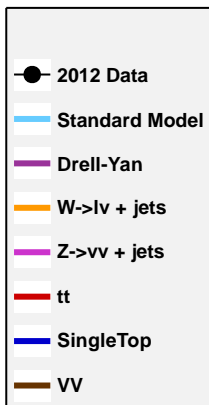
xcak5JetIndicesPat_ge4j_eq3b	
Entries	20
Mean	4.5
RMS	0.5916
Underflow	0
Overflow	0
Integral	20



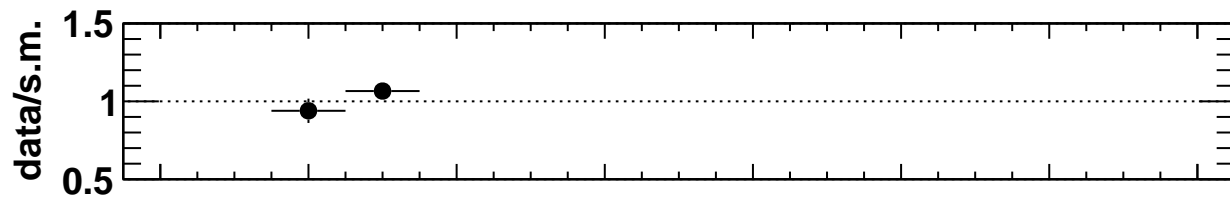
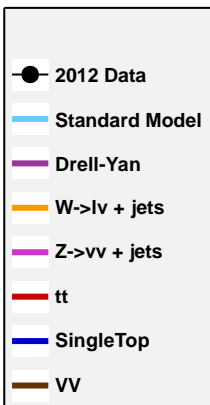
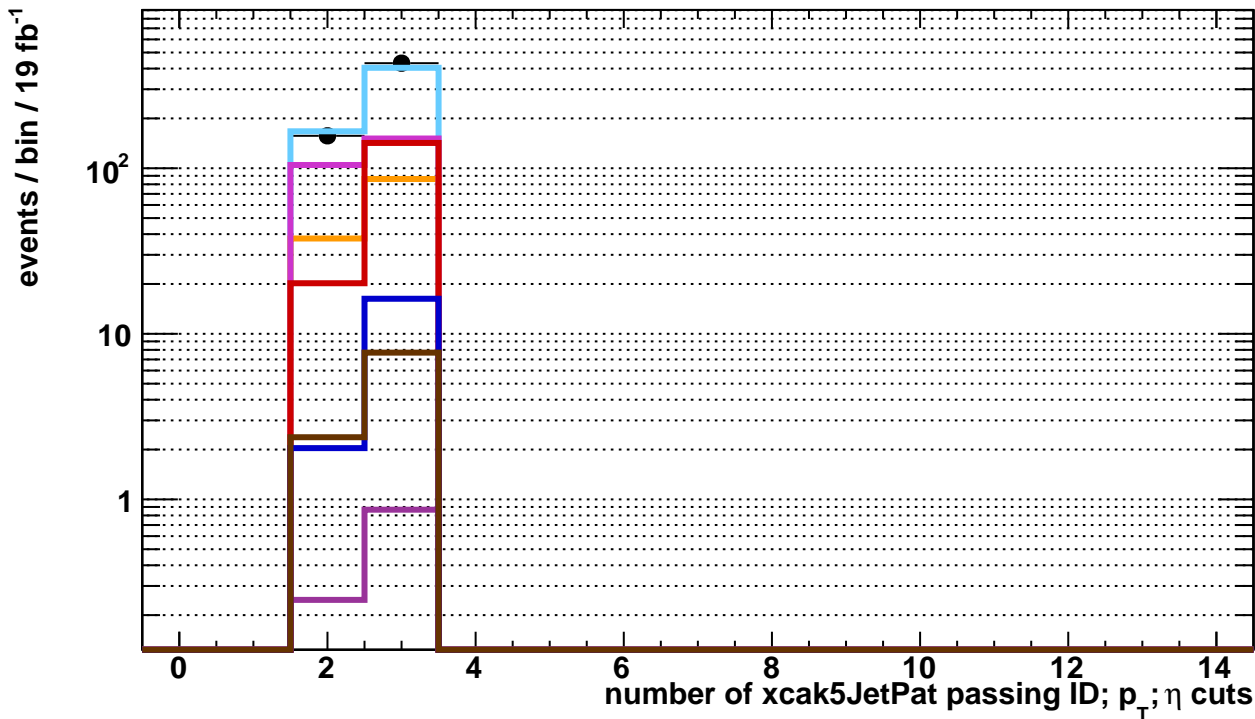


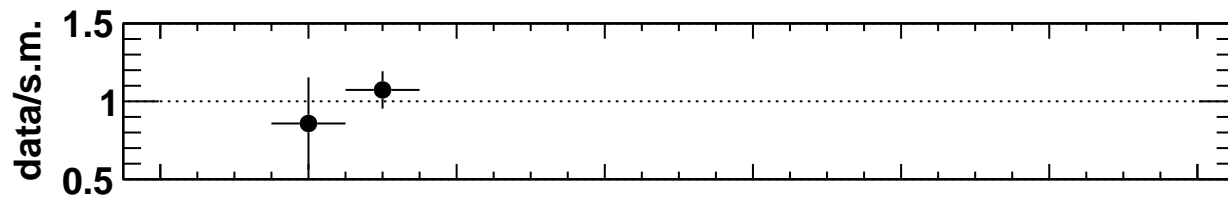
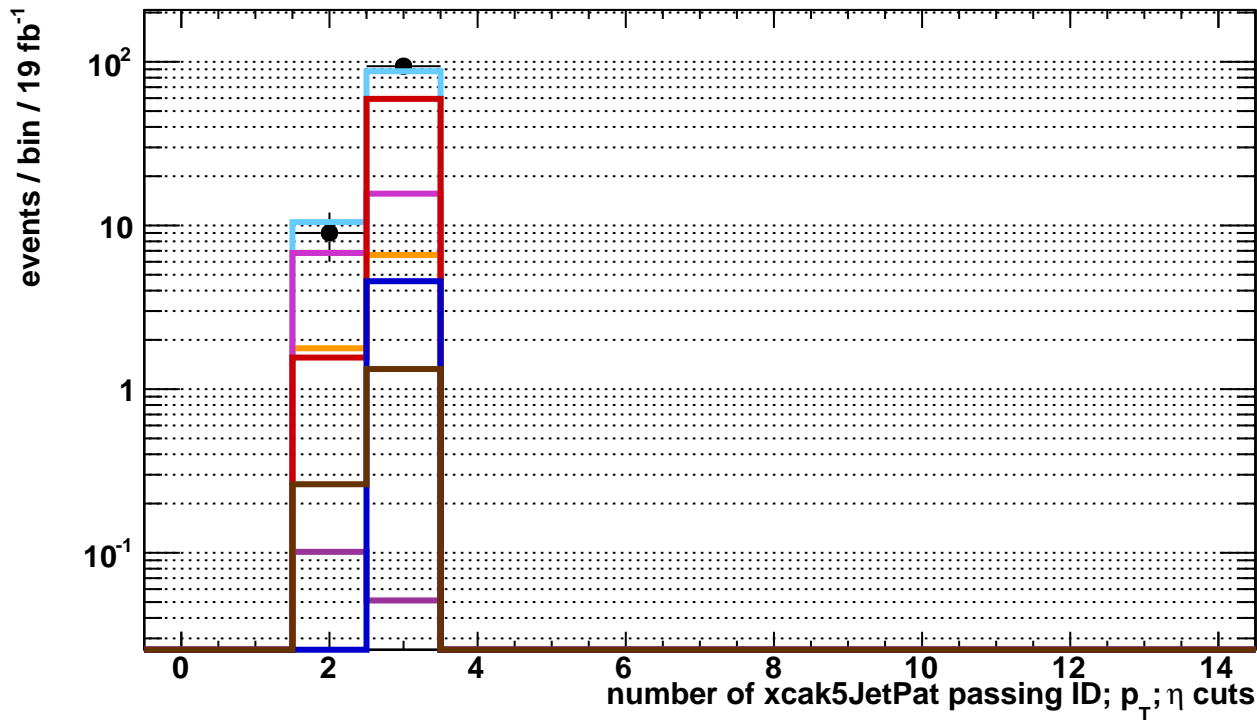


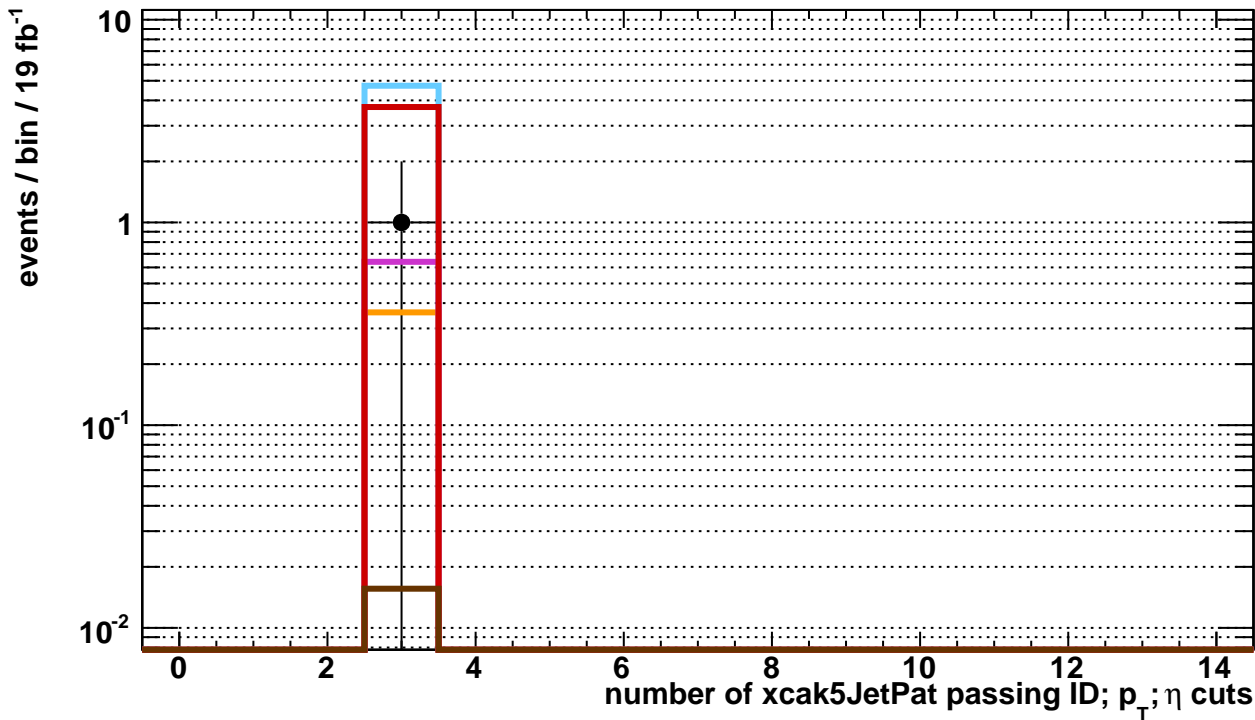
xcak5JetIndicesPat_le3j_eq0b	
Entries	3765
Mean	2.543
RMS	0.4981
Underflow	0
Overflow	0
Integral	3765



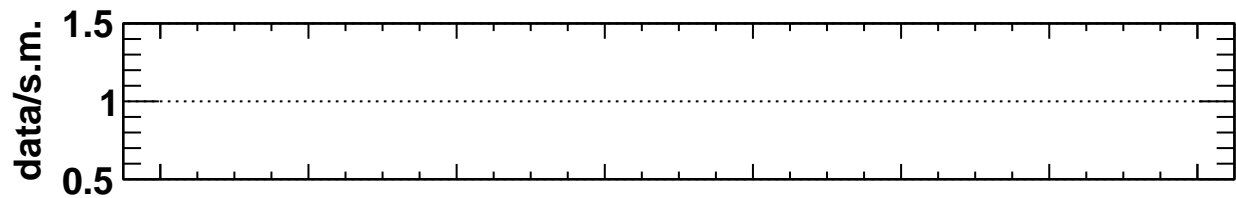
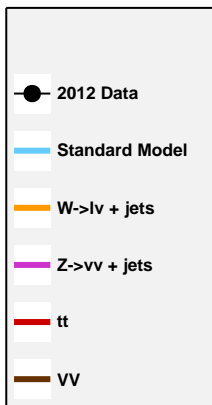
xcak5JetIndicesPat_le3j_eq1b	
Entries	588
Mean	2.733
RMS	0.4424
Underflow	0
Overflow	0
Integral	588

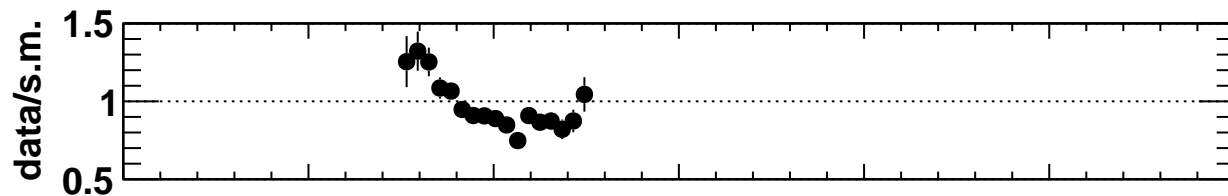
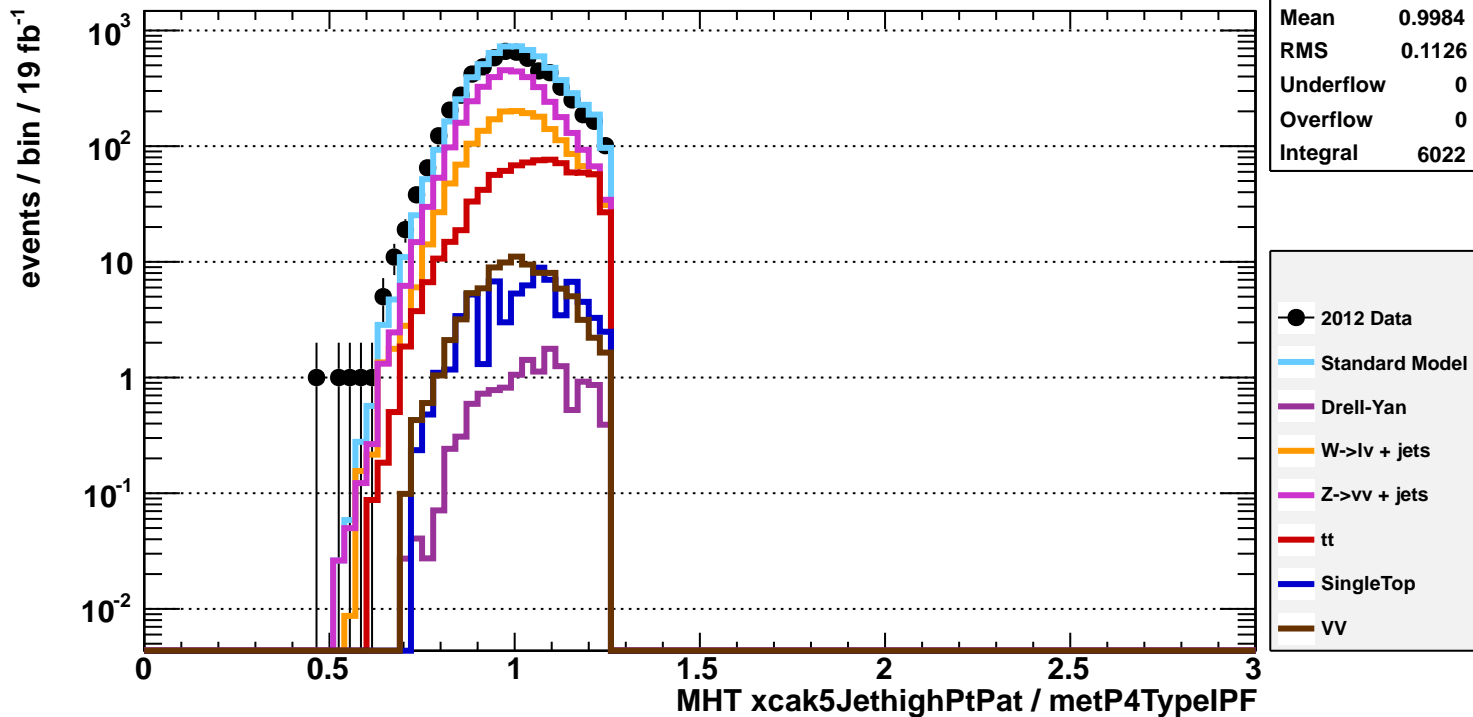


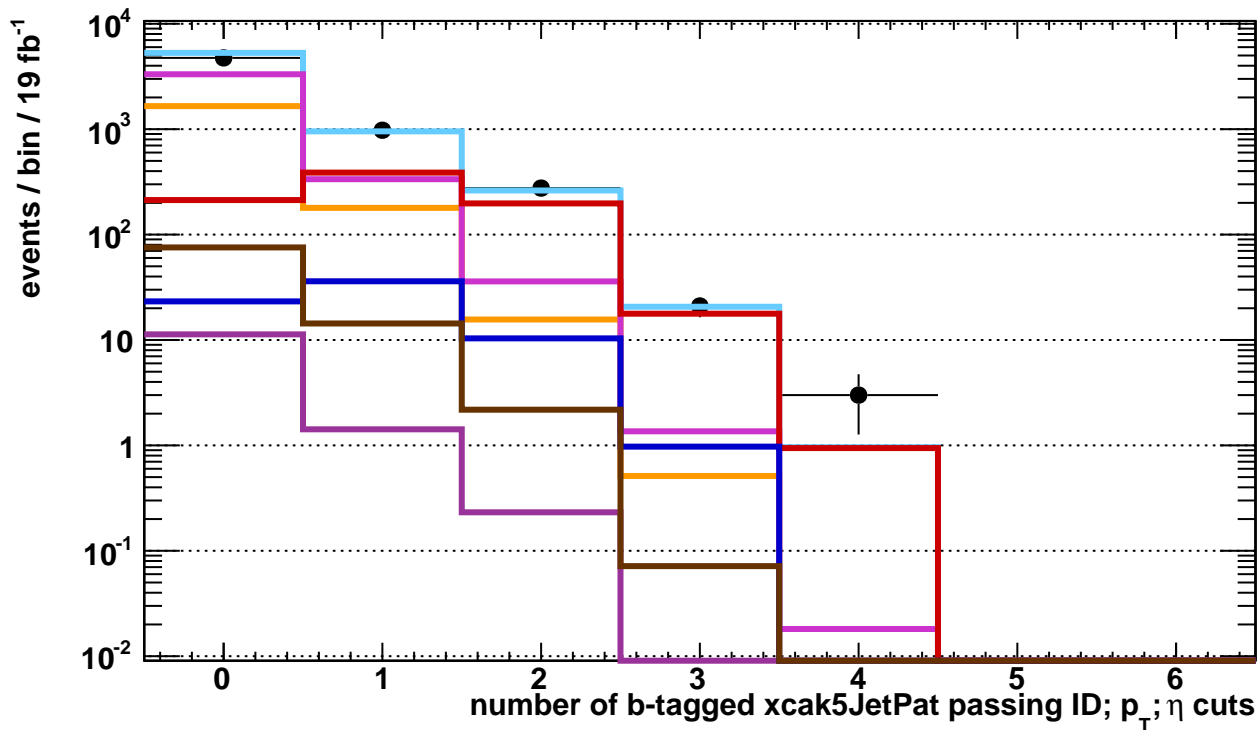




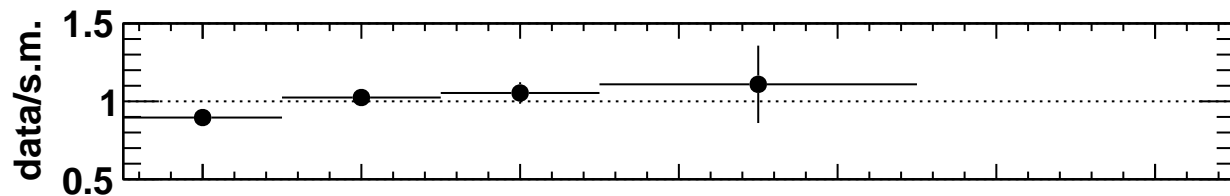
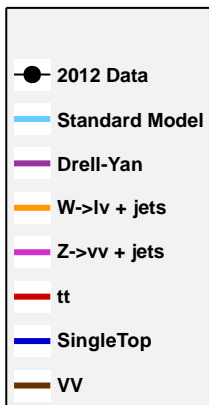
xca5JetIndicesPat_le3_eq3b	
Entries	1
Mean	3
RMS	0
Underflow	0
Overflow	0
Integral	1

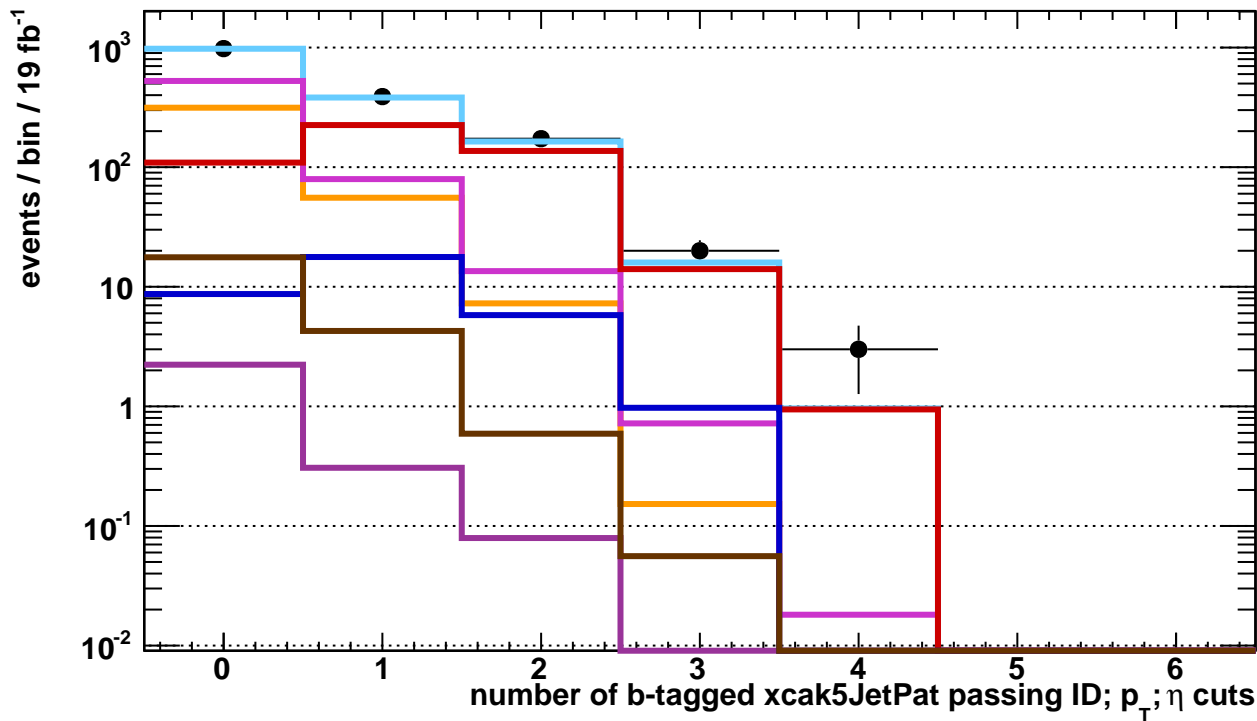




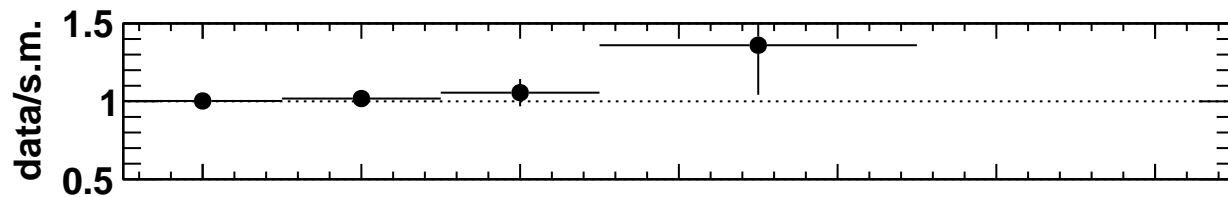
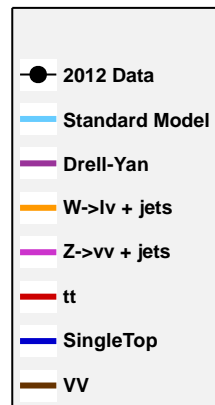


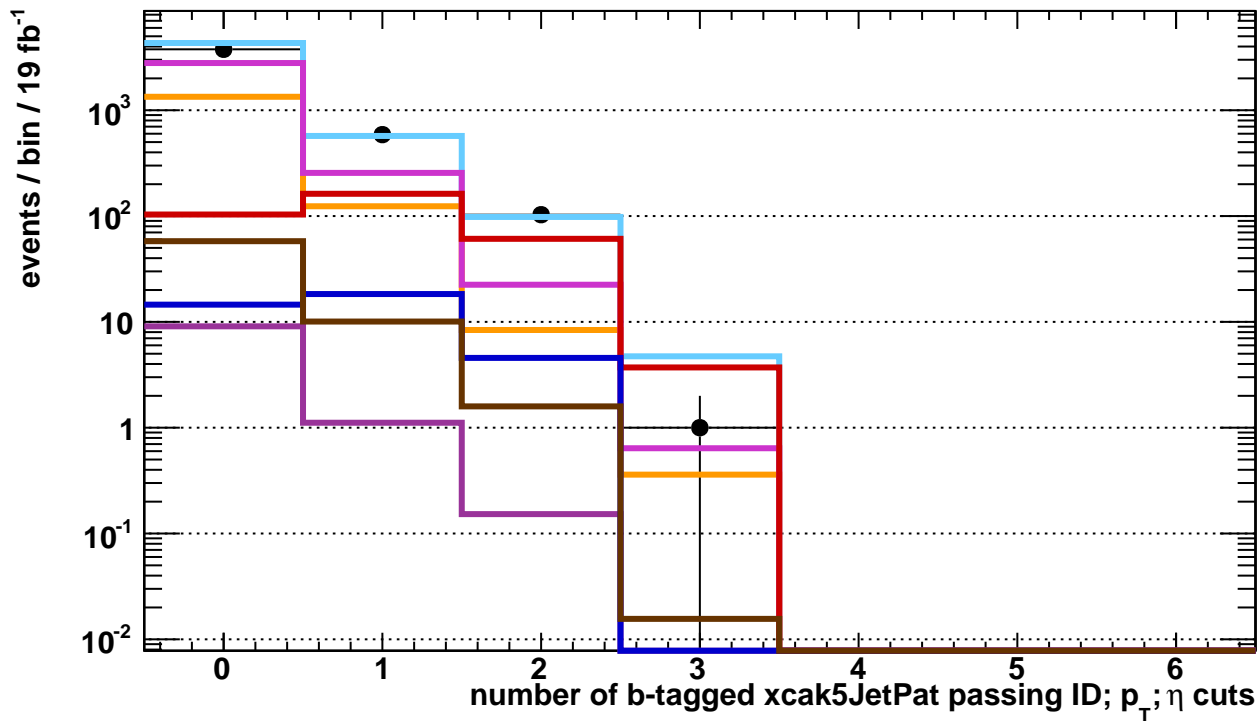
xcak5JetIndicesBtagged2Pat	
Entries	6022
Mean	0.2664
RMS	0.5603
Underflow	0
Overflow	0
Integral	6022



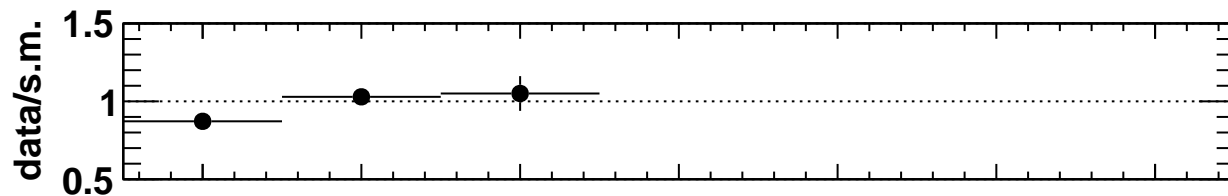
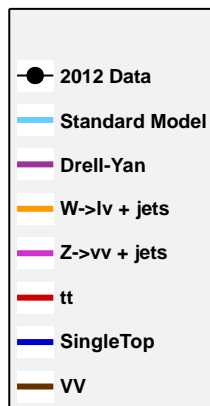


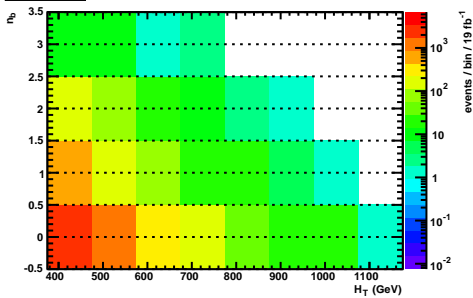
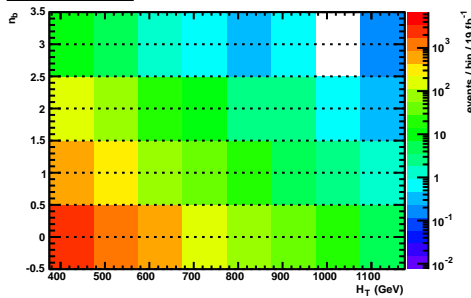
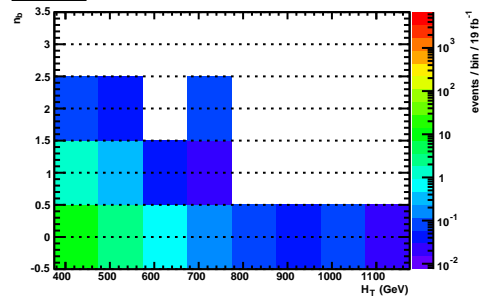
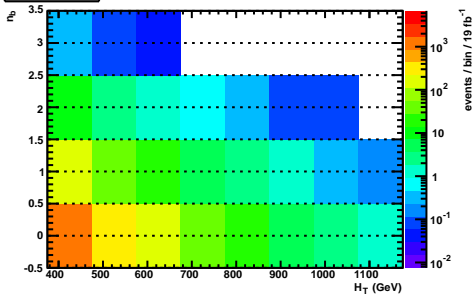
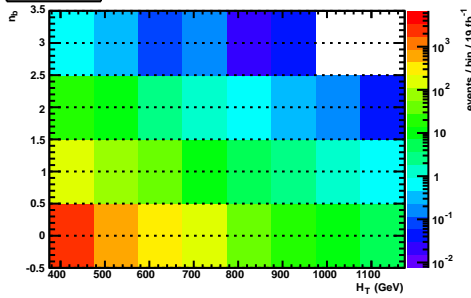
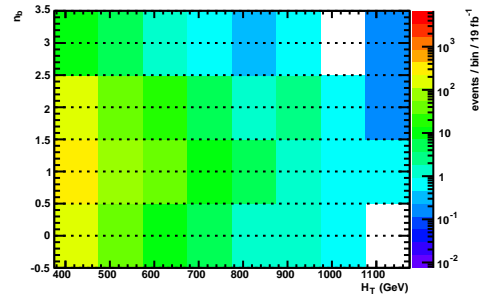
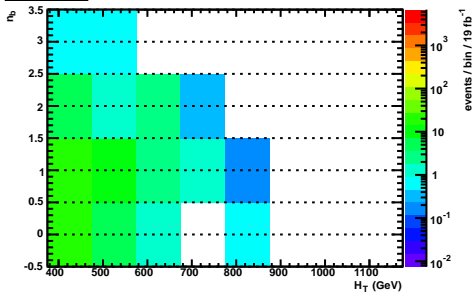
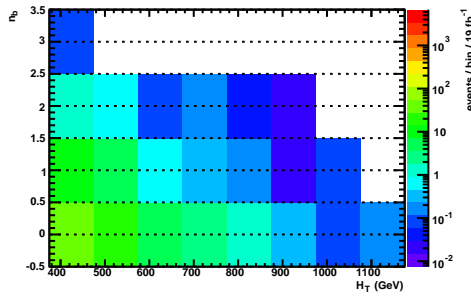
xcak5JetIndicesBtagged2Pat_ge4j	
Entries	1565
Mean	0.5157
RMS	0.7553
Underflow	0
Overflow	0
Integral	1565

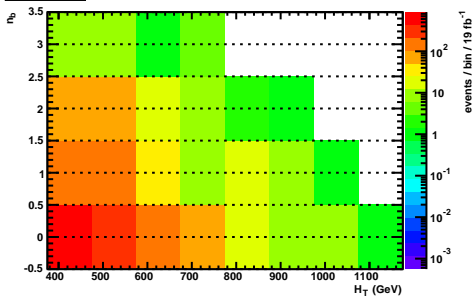
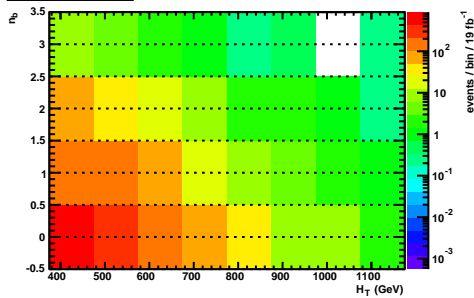
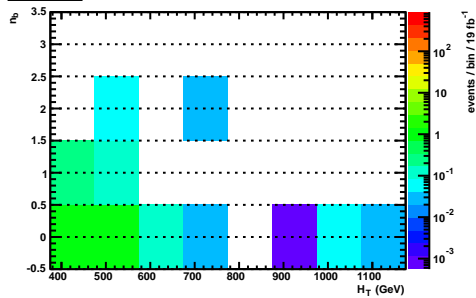
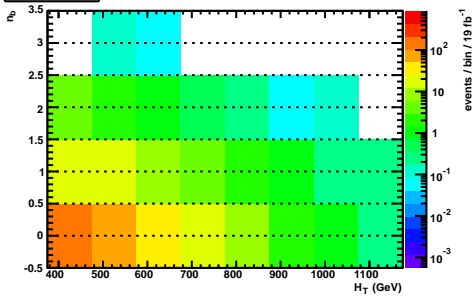
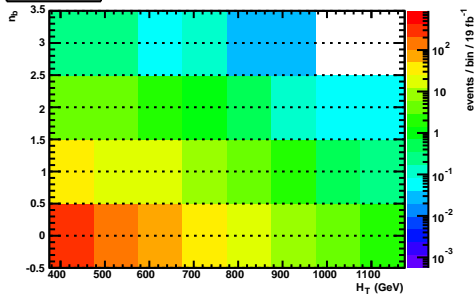
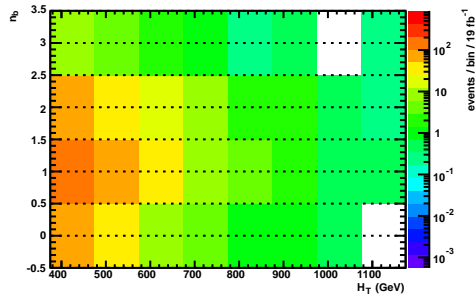
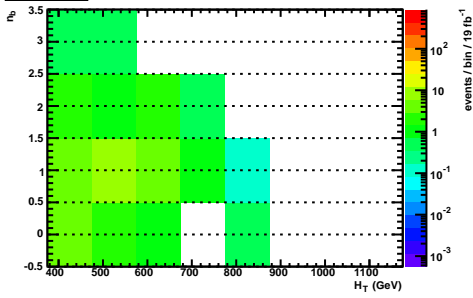
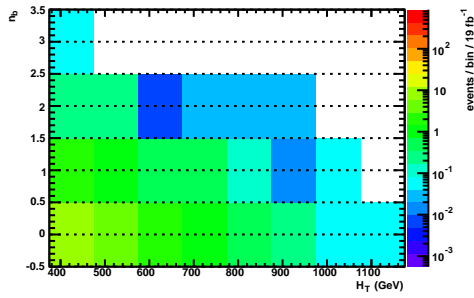


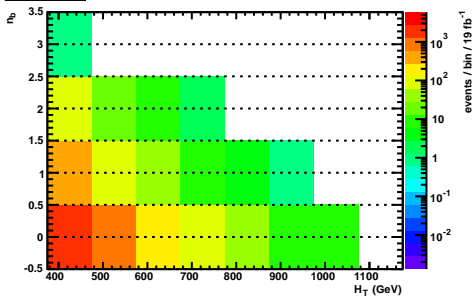
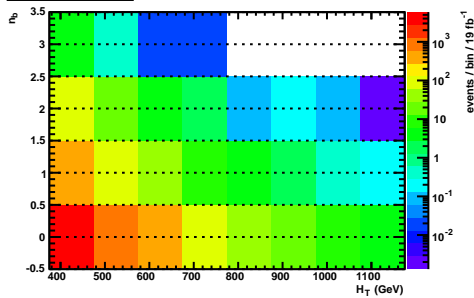
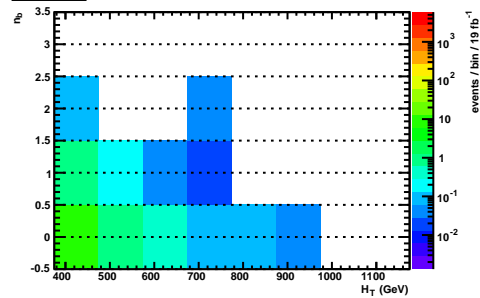
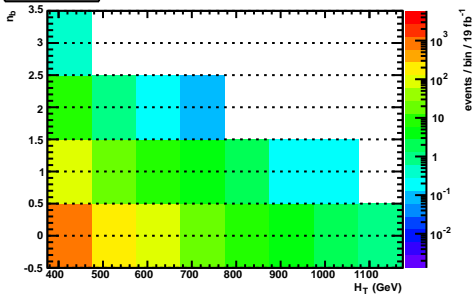
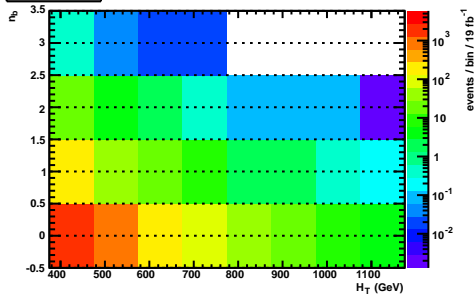
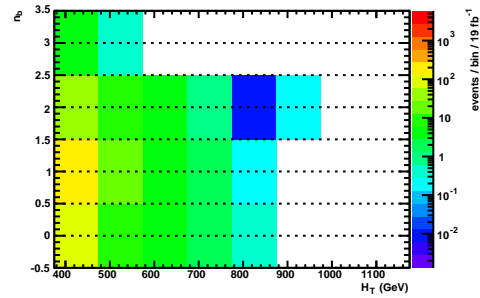
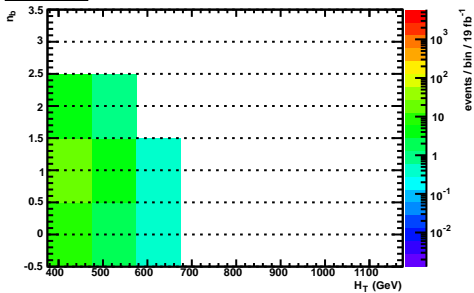
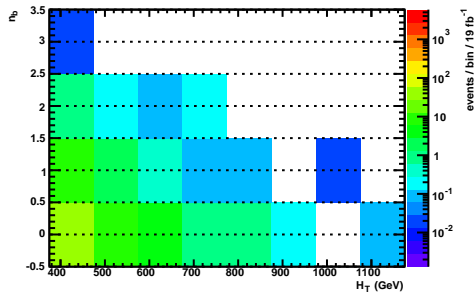


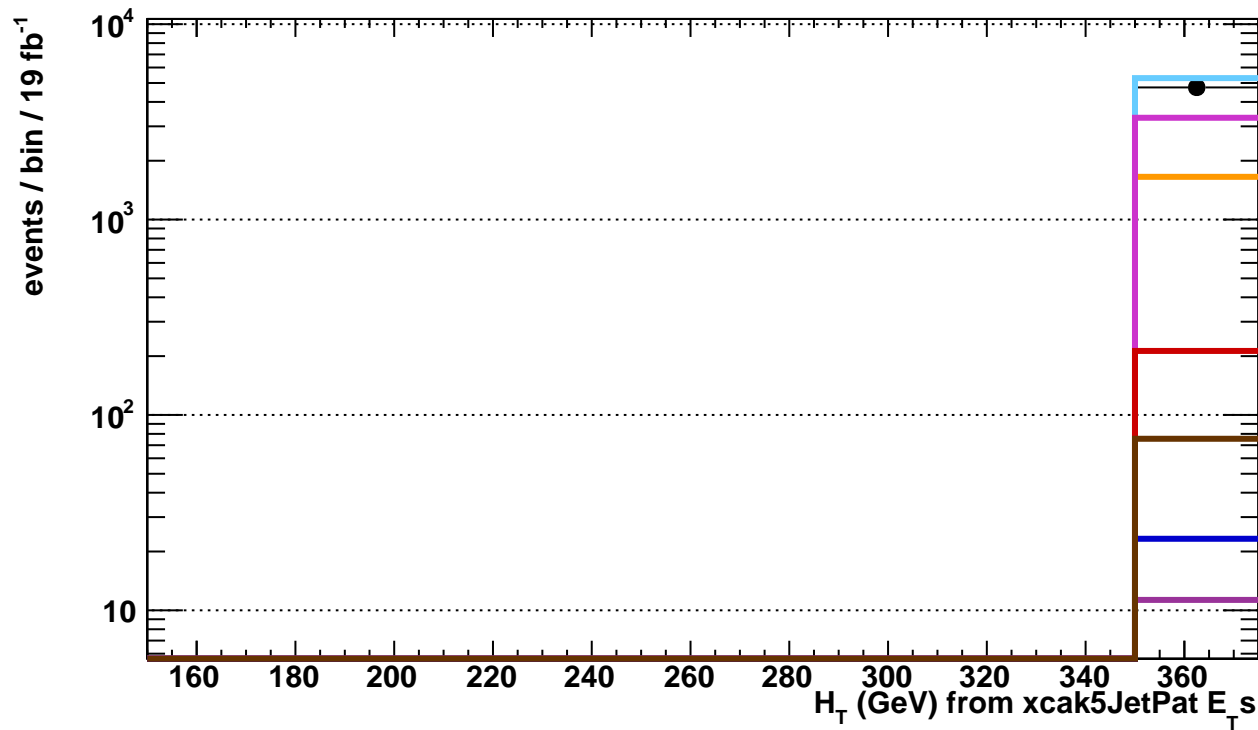
xcak5JetIndicesBtagged2Pat_le3j	
Entries	4457
Mean	0.1788
RMS	0.4409
Underflow	0
Overflow	0
Integral	4457



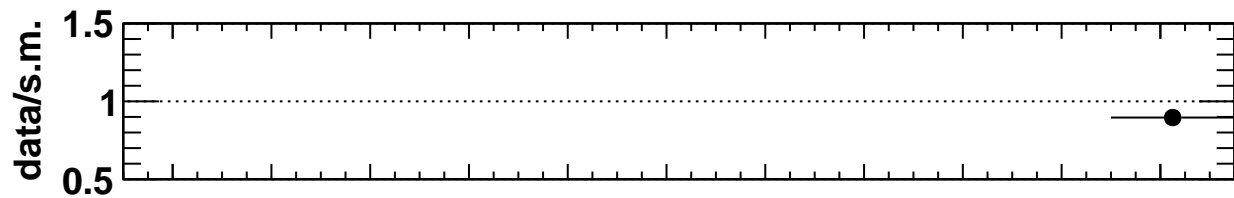
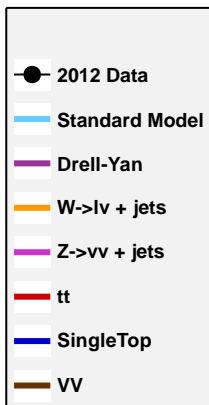
2012 Data**Standard Model****Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****VV**

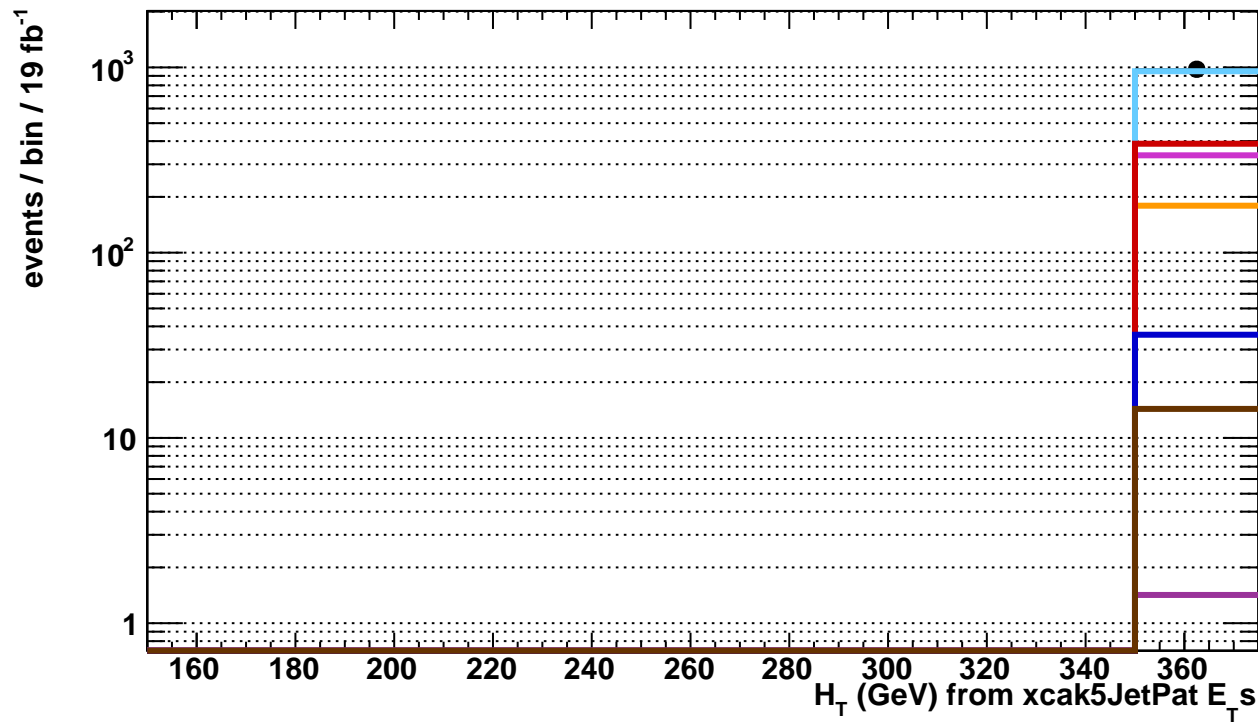
2012 Data**Standard Model****Drell-Yan****W->lv + jets****Z->vv + jets****tt****SingleTop****vv**

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

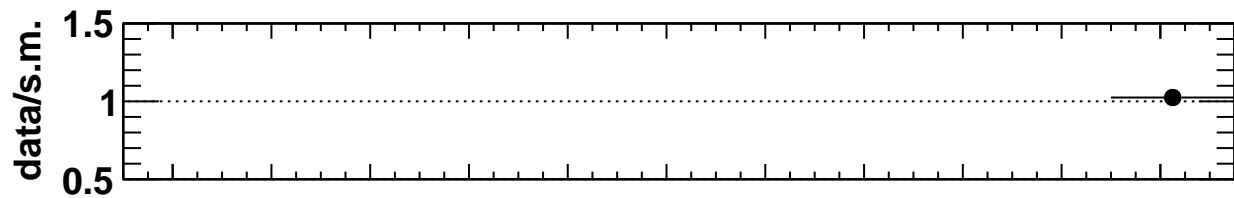


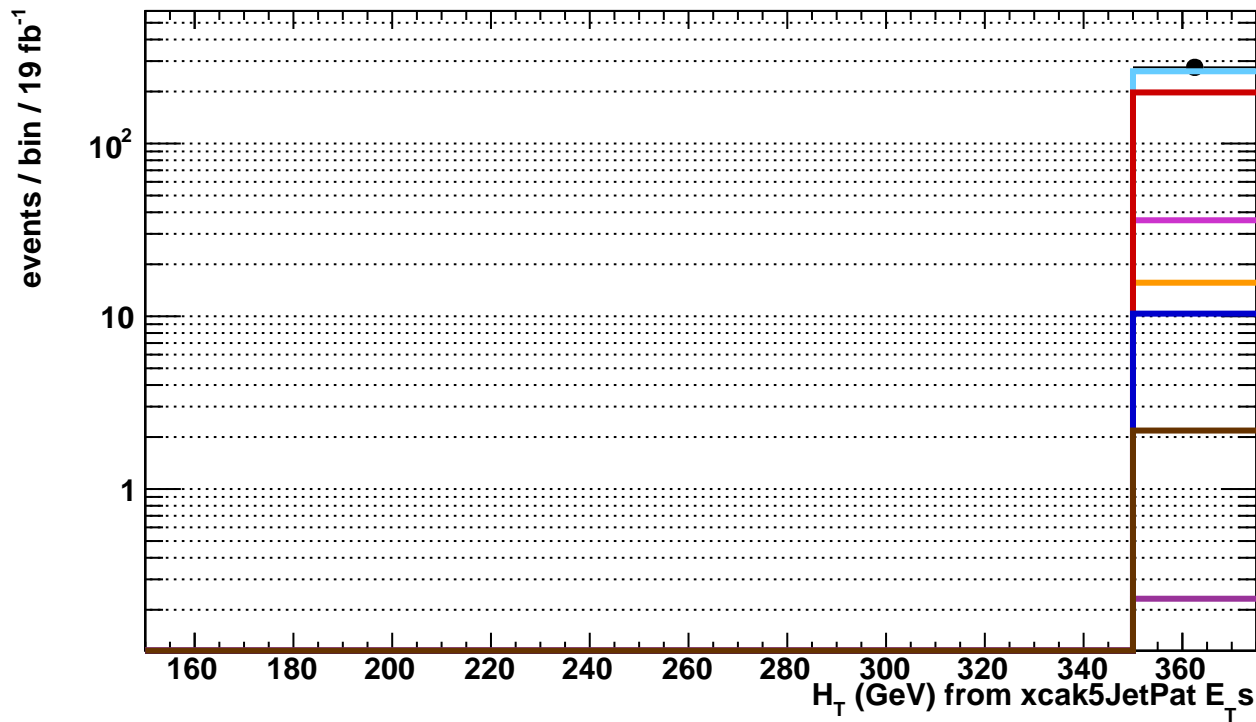
xcak5JetSumEtPat_eq0b	
Entries	4745
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	4745



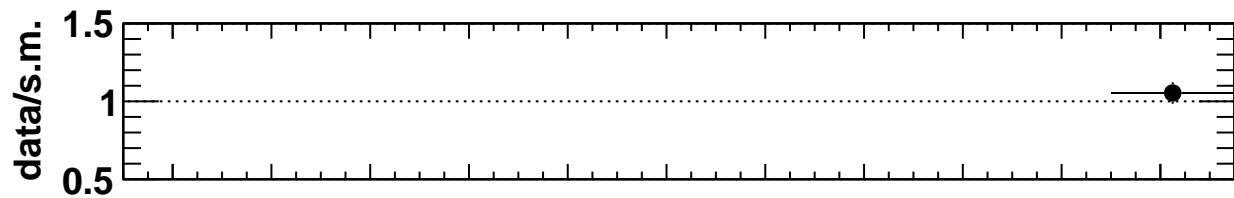
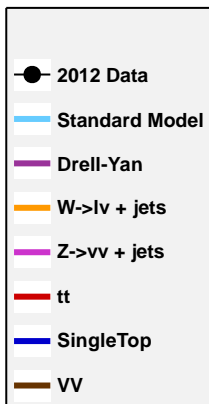


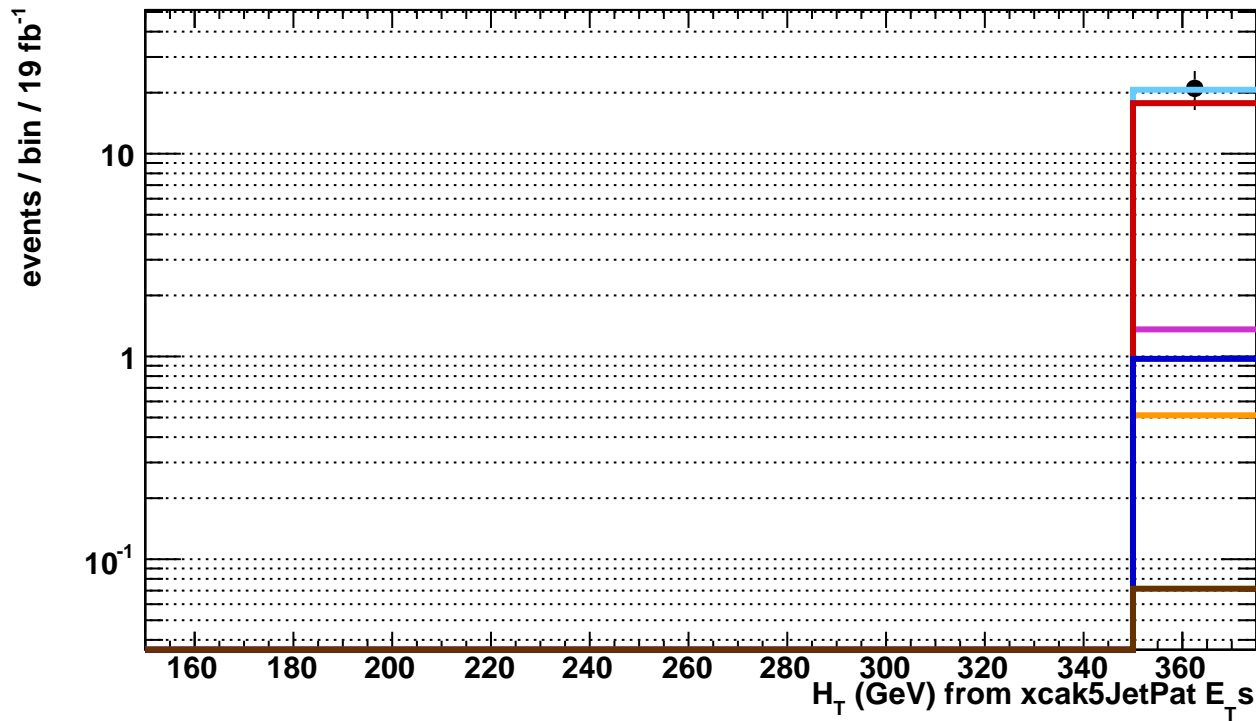
xcak5JetSumEtPat_eq1b	
Entries	977
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	977



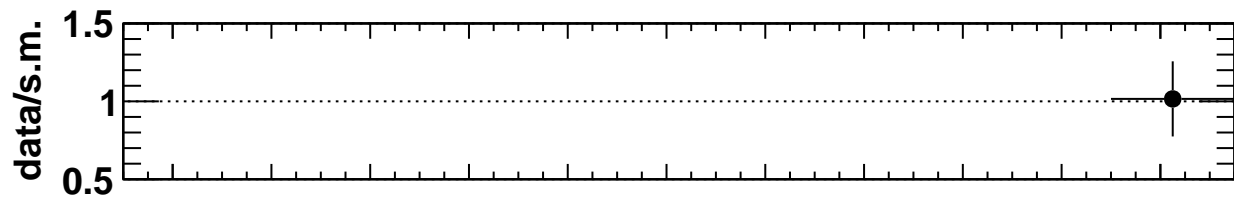
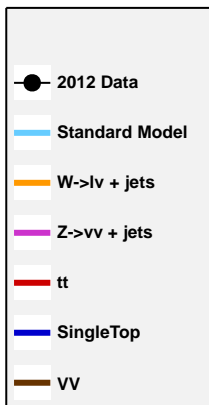


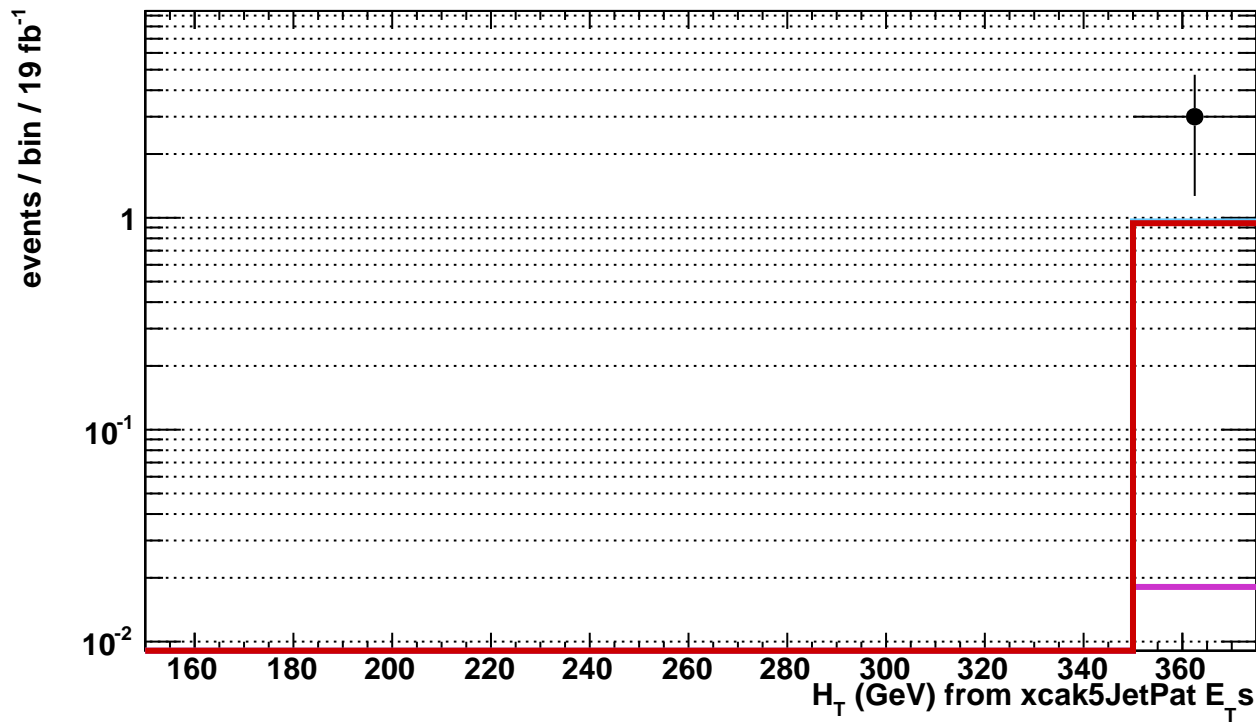
xcak5JetSumEtPat_eq2b	
Entries	276
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	276



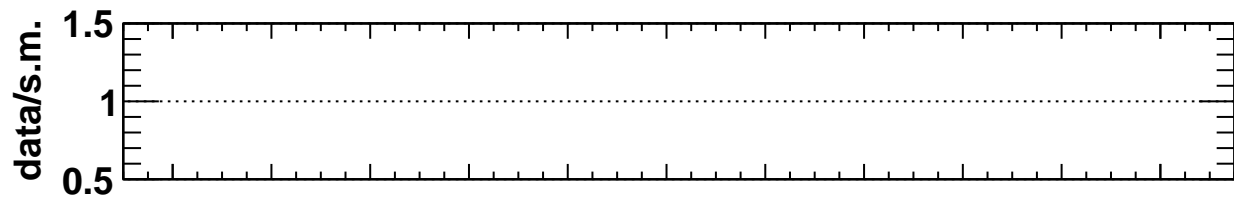
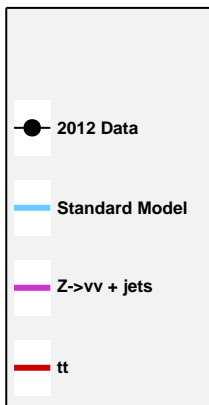


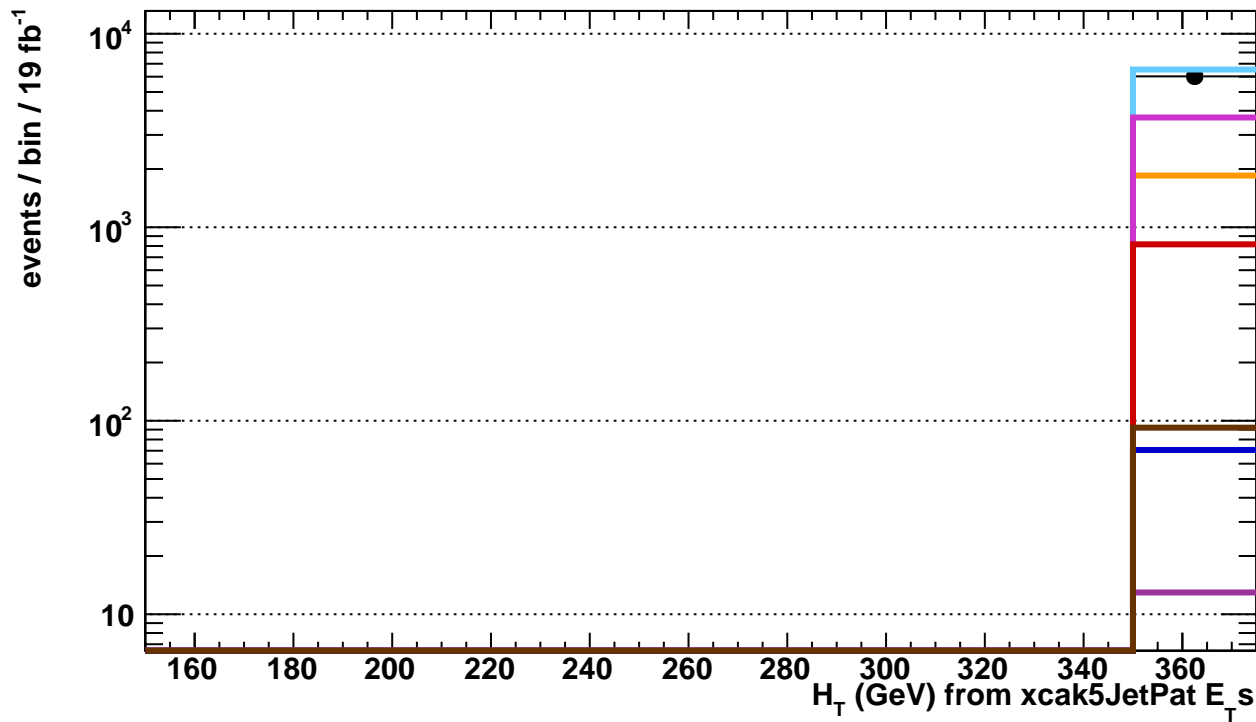
xcak5JetSumEtPat_eq3b	
Entries	21
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	21



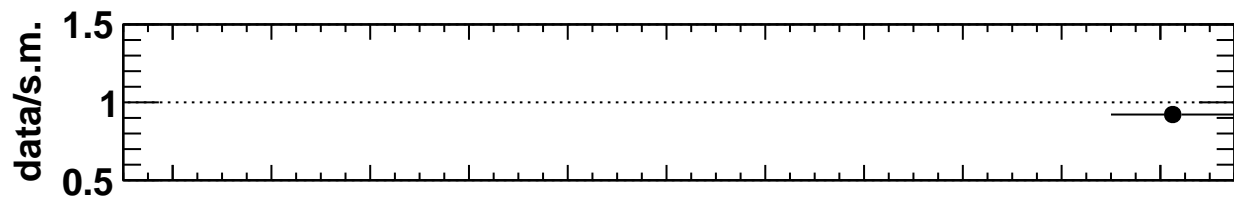
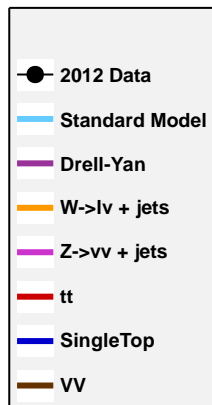


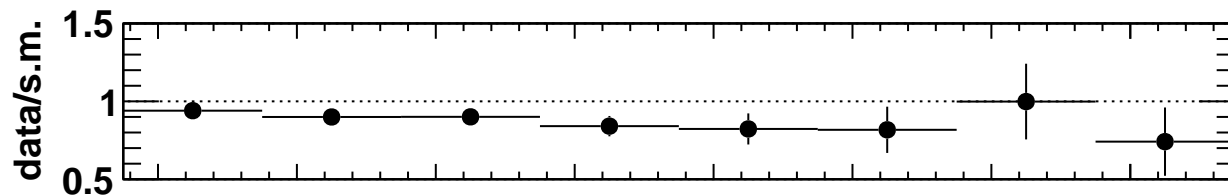
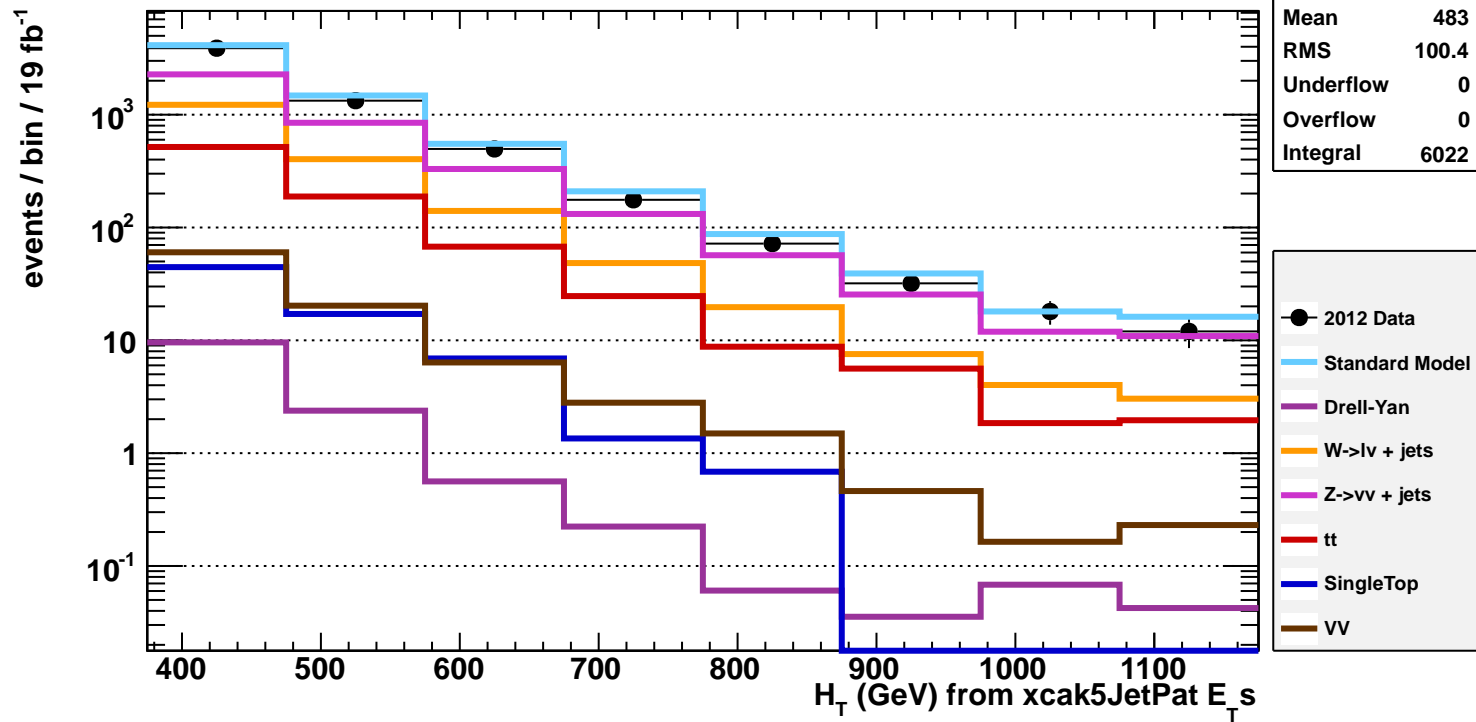
xcak5JetSumEtPat_ge4b	
Entries	3
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	3

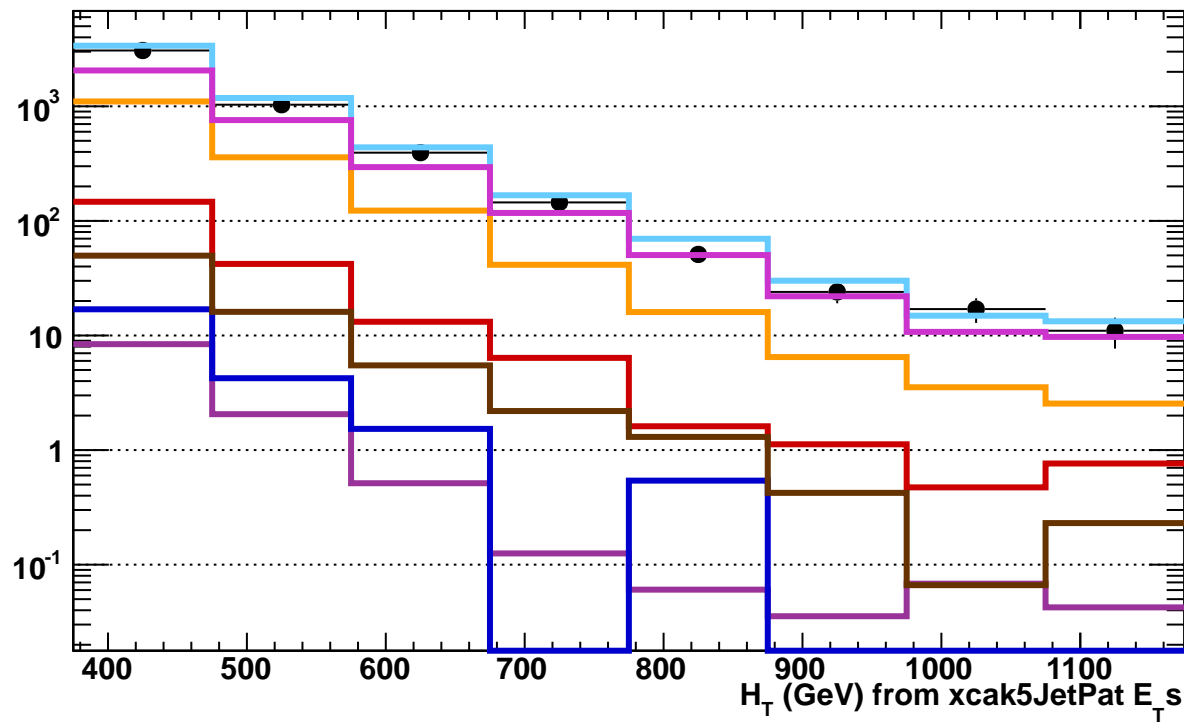




xcak5JetSumEtPat	
Entries	6022
Mean	362.5
RMS	0
Underflow	0
Overflow	0
Integral	6022

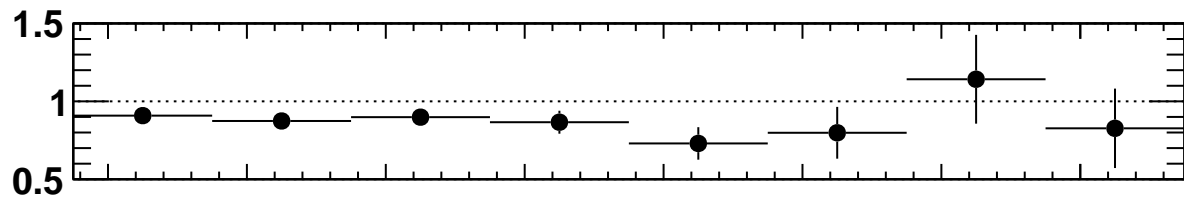


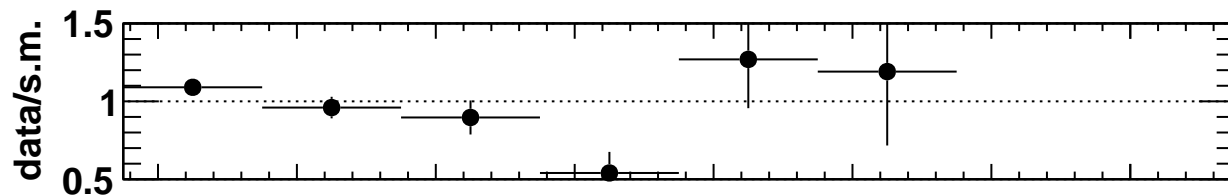
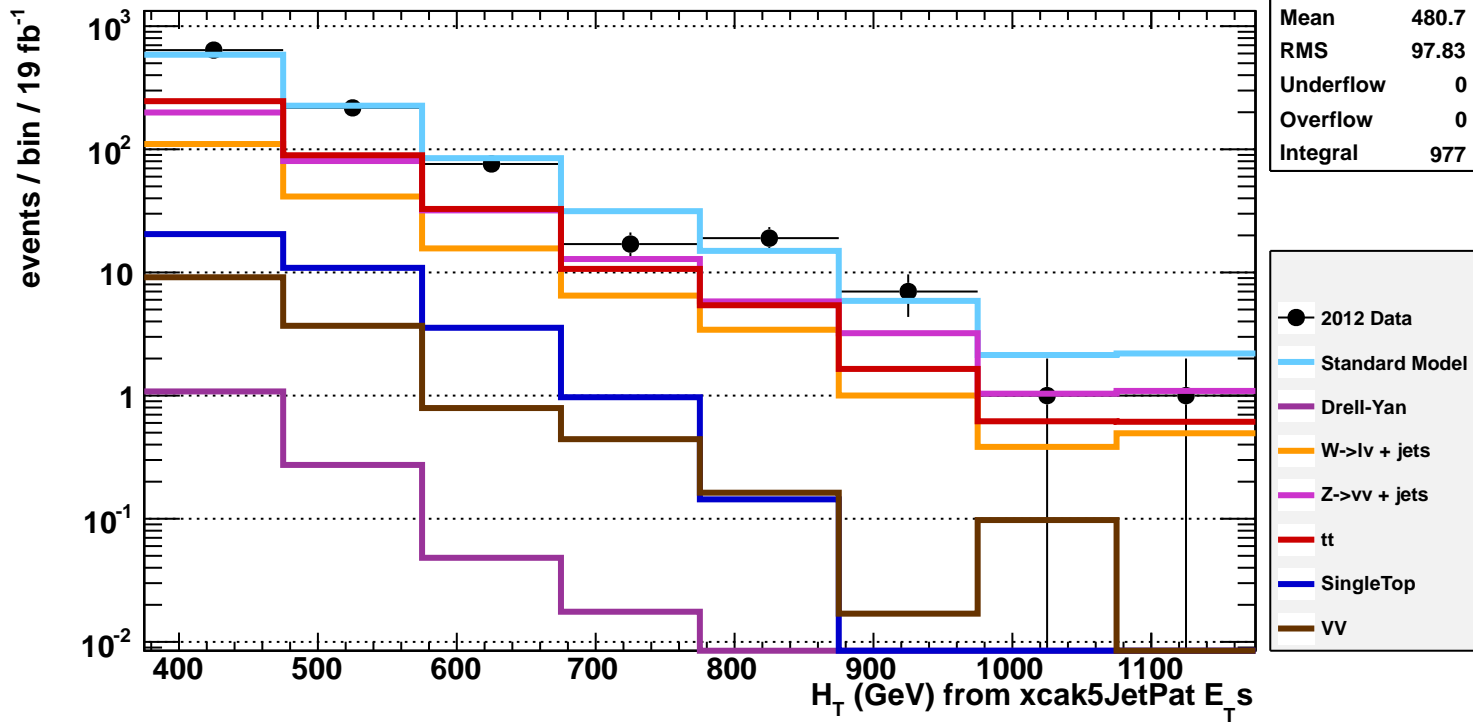


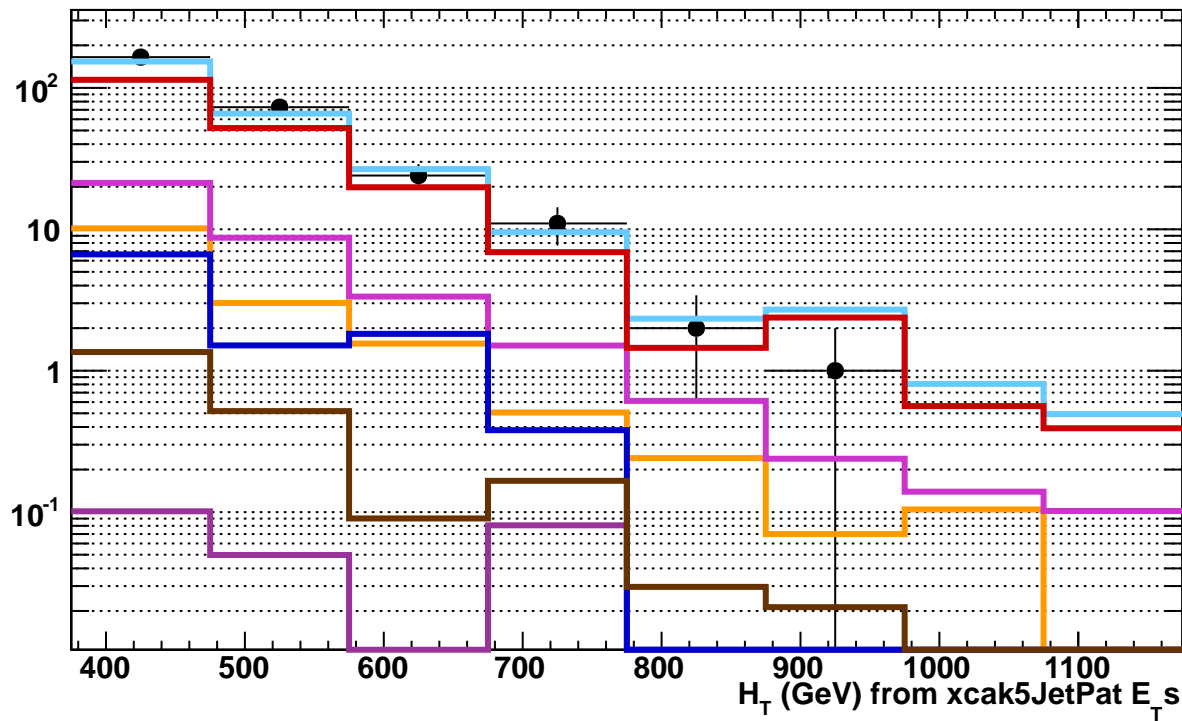
events / bin / 19 fb⁻¹

xcak5JetSumEtPat_eq0b	
Entries	4745
Mean	483.1
RMS	101.4
Underflow	0
Overflow	0
Integral	4745

data/s.m.

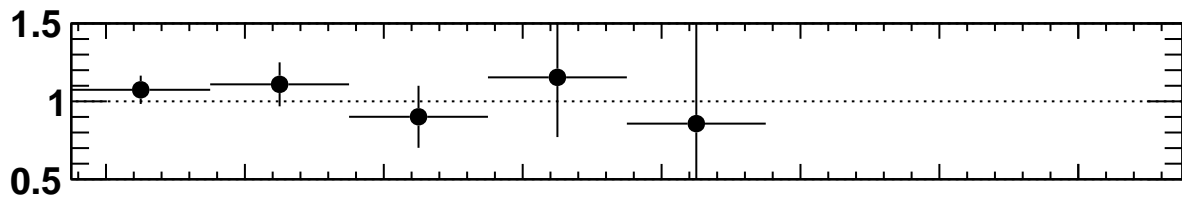


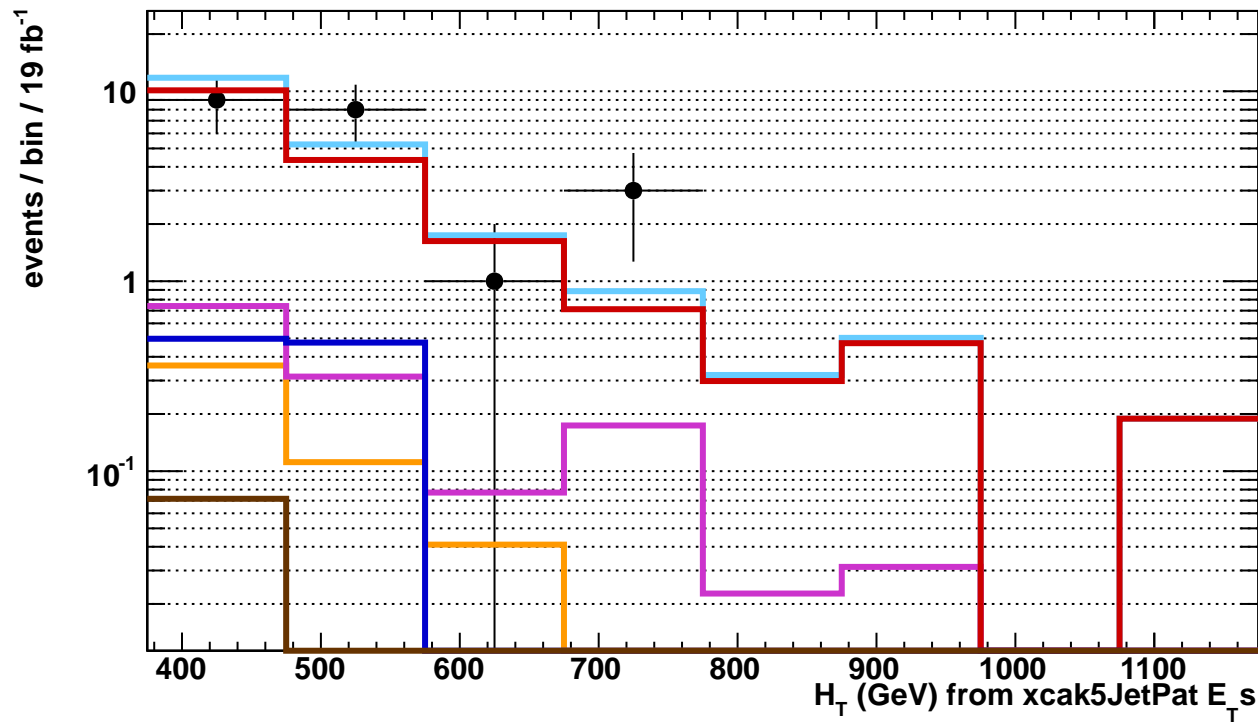


events / bin / 19 fb⁻¹

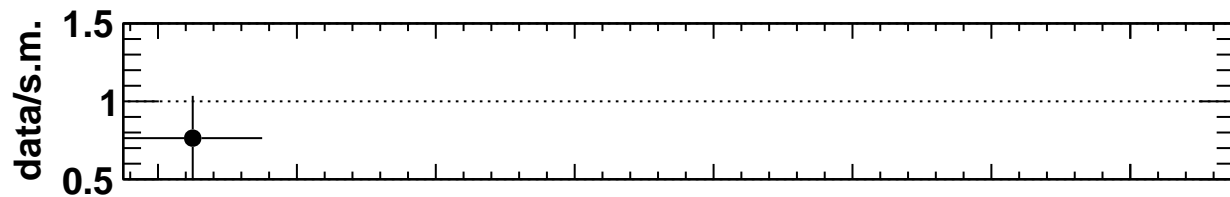
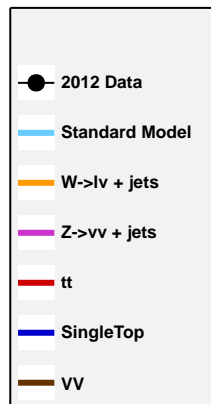
xcak5JetSumEtPat_eq2b	
Entries	276
Mean	476.4
RMS	91.93
Underflow	0
Overflow	0
Integral	276

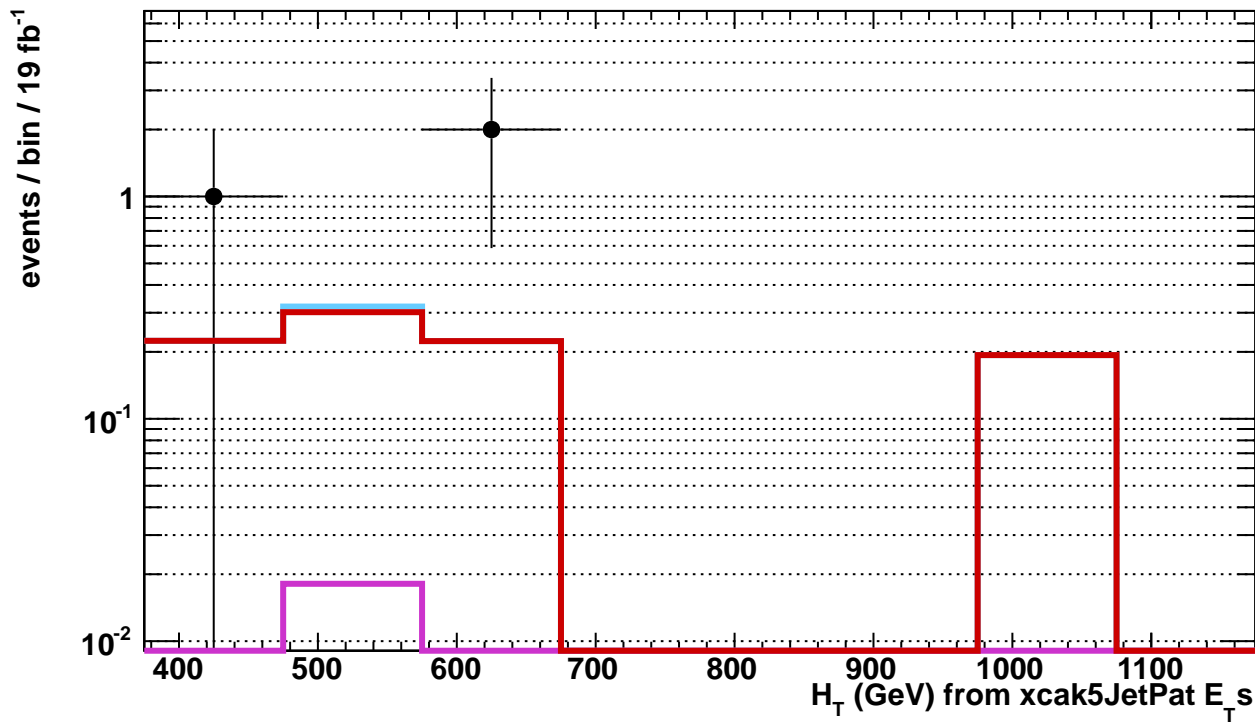
data/s.m.



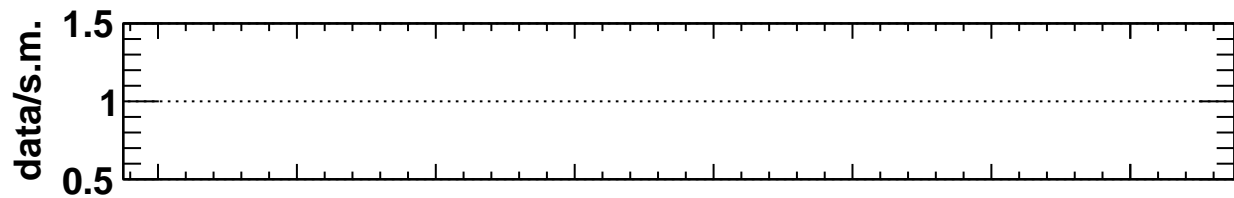
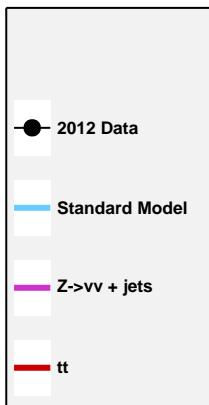


xcak5JetSumEtPat_eq3b	
Entries	21
Mean	515.8
RMS	99.02
Underflow	0
Overflow	0
Integral	21

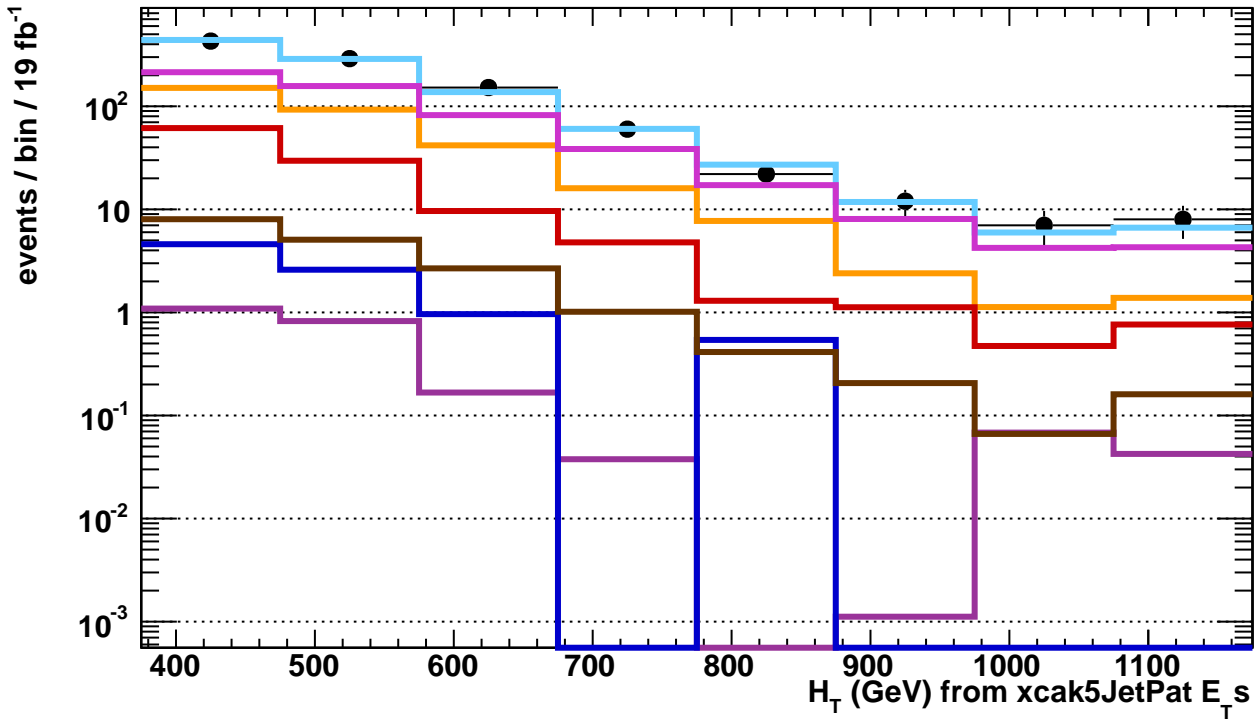




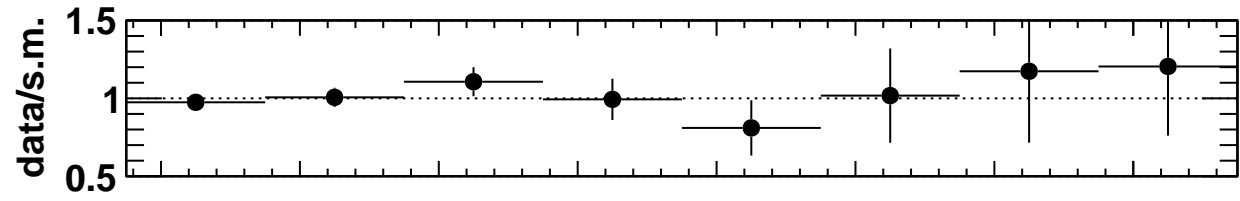
xcak5JetSumEtPat_ge4b	
Entries	3
Mean	522
RMS	83.75
Underflow	0
Overflow	0
Integral	3

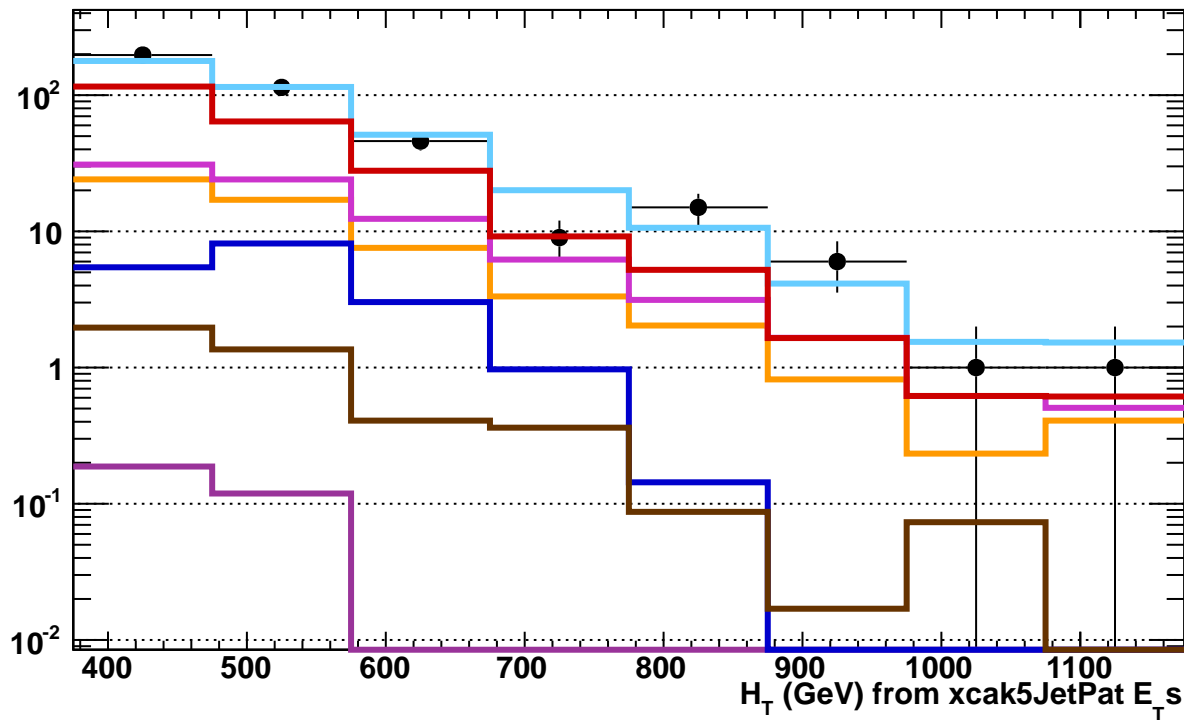


xcak5JetSumEtPat_ge4j_eq0b	
Entries	980
Mean	529.1
RMS	130.6
Underflow	0
Overflow	0
Integral	980

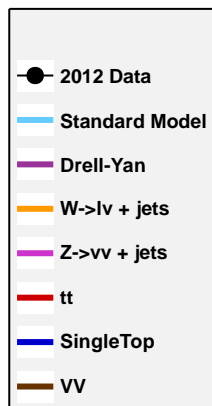


● 2012 Data
Standard Model
Drell-Yan
W->lv + jets
Z->vv + jets
tt
SingleTop
VV

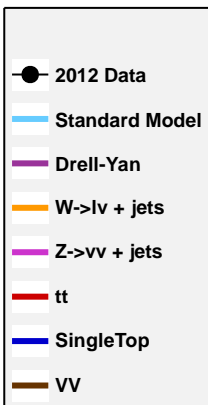
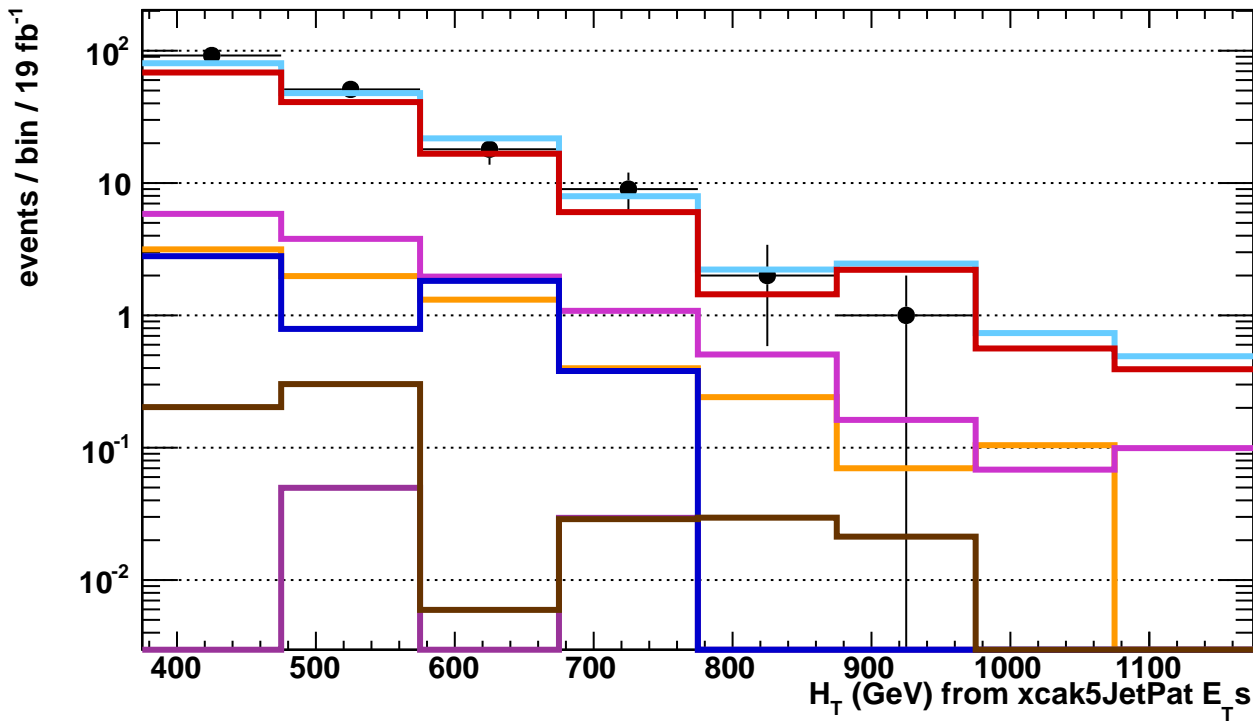


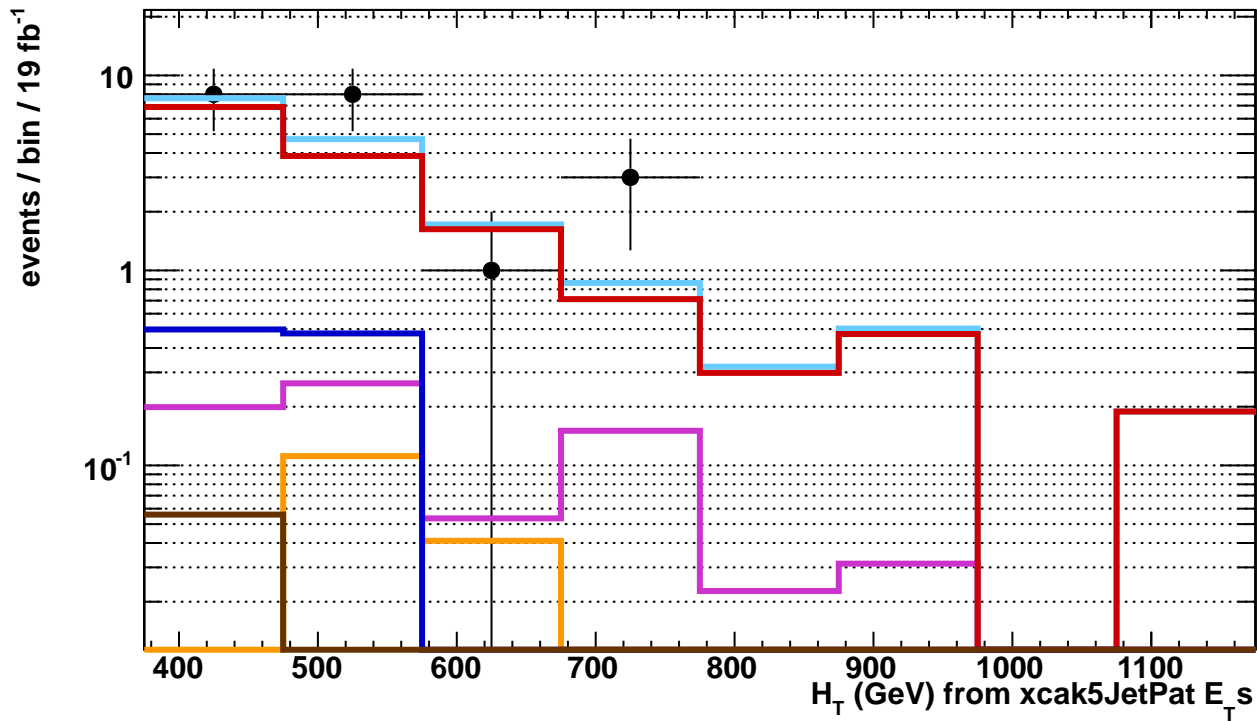
events / bin / 19 fb⁻¹

xcak5JetSumEtPat_ge4j_eq1b	
Entries	389
Mean	511.4
RMS	120.4
Underflow	0
Overflow	0
Integral	389

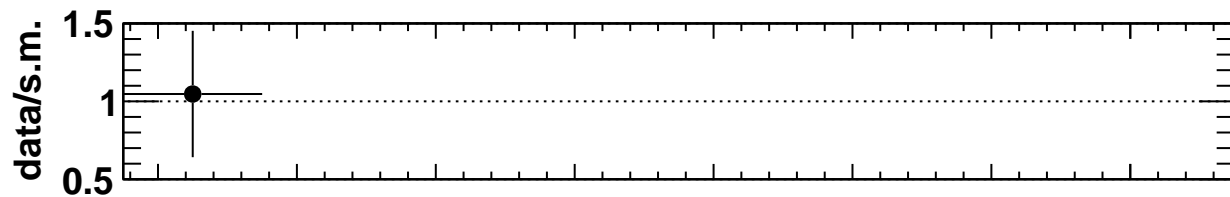
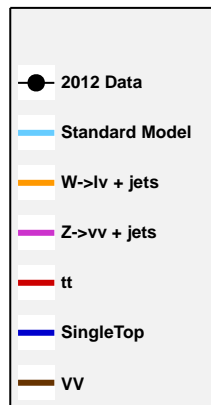


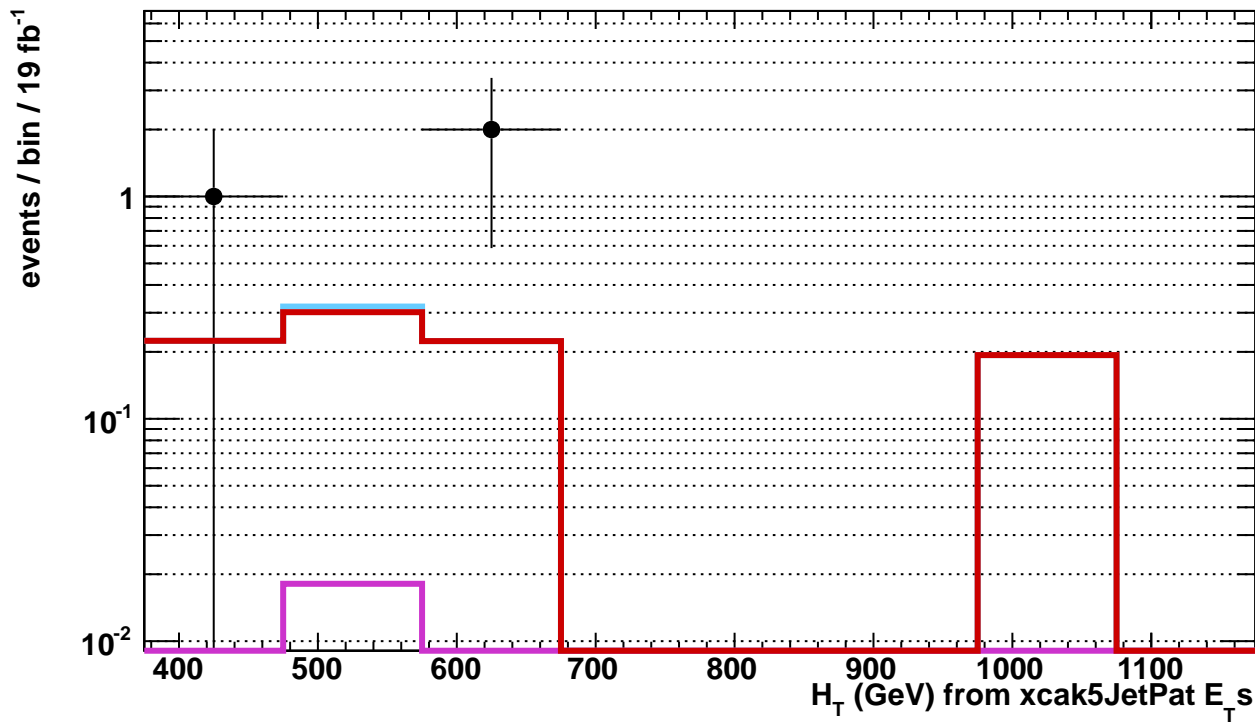
xcak5JetSumEtPat_ge4j_eq2b	
Entries	173
Mean	492.1
RMS	98.84
Underflow	0
Overflow	0
Integral	173



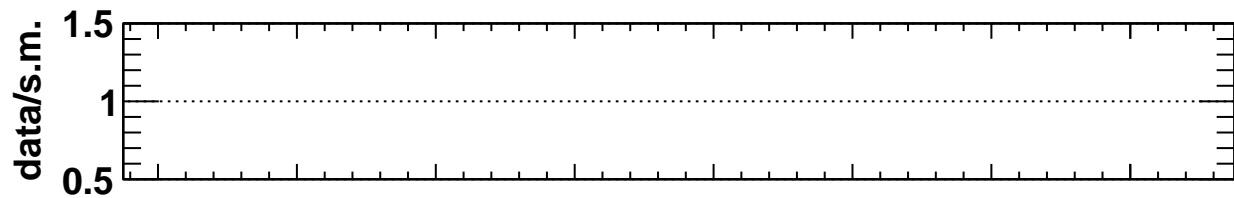
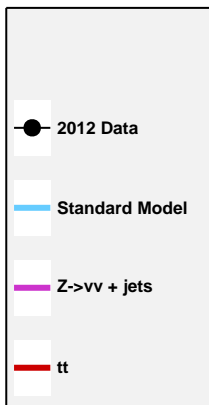


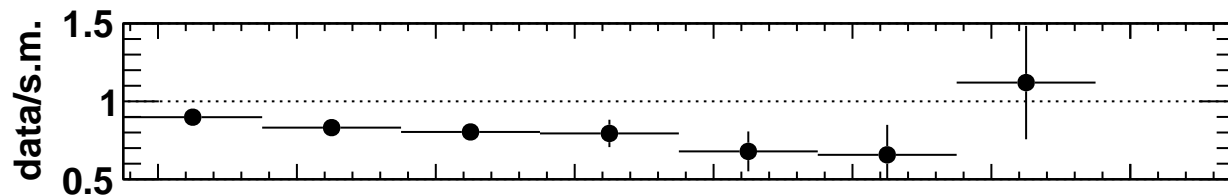
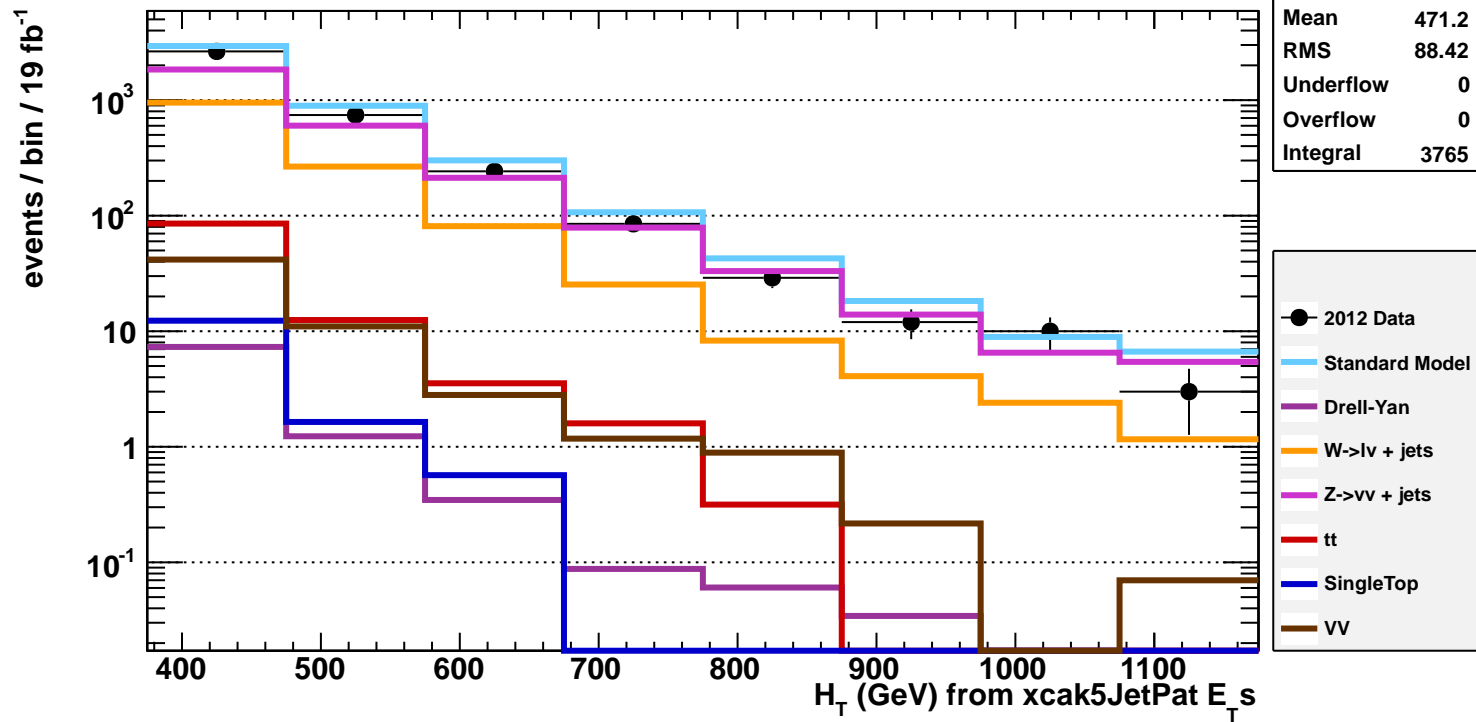
xcak5JetSumEtPat_ge4j_eq3b	
Entries	20
Mean	521.4
RMS	98.22
Underflow	0
Overflow	0
Integral	20

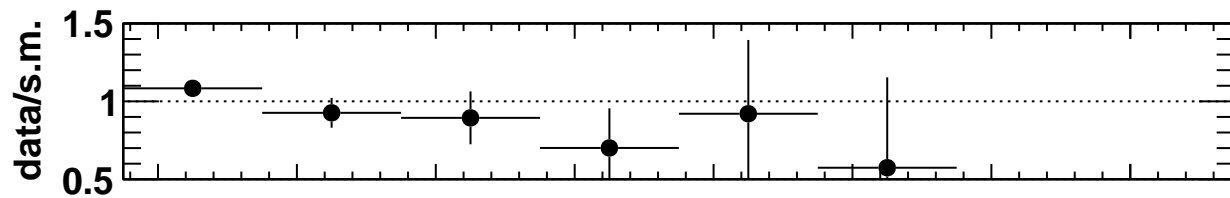
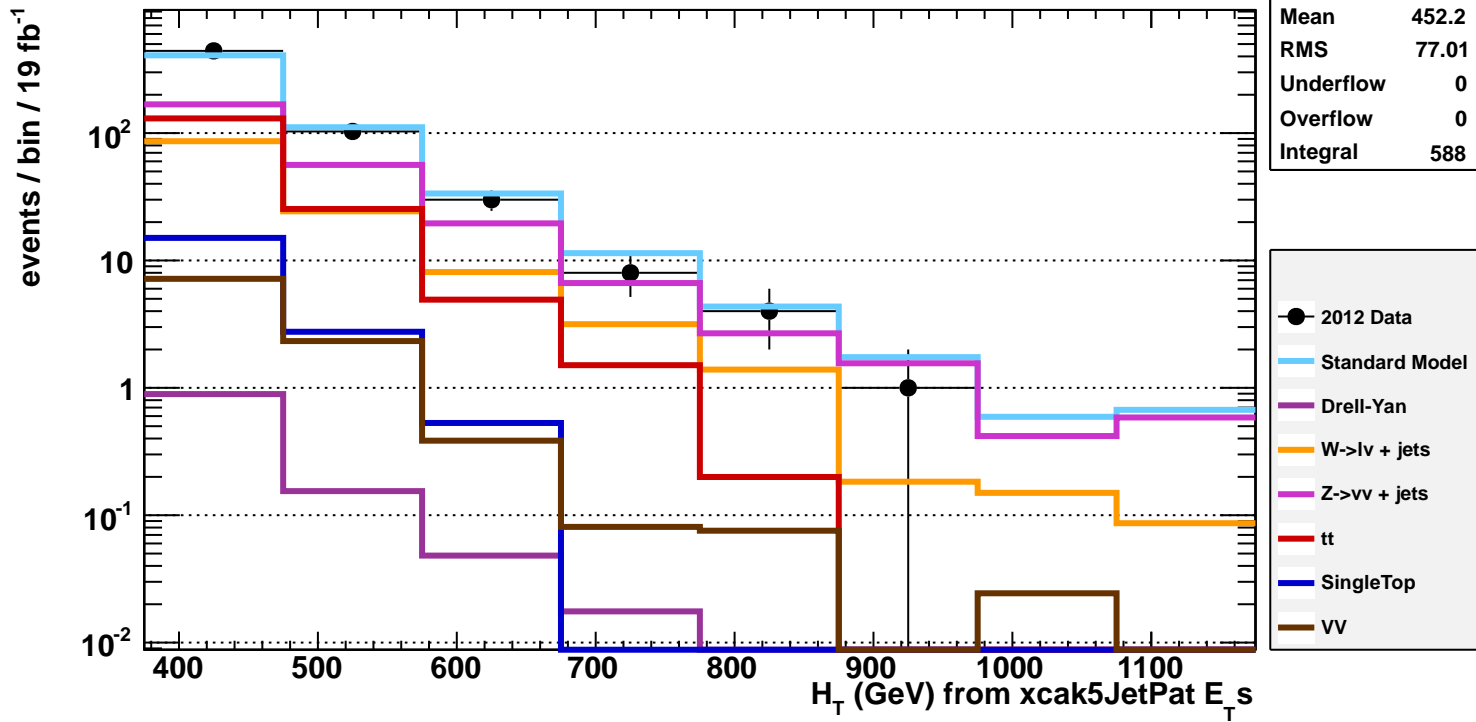


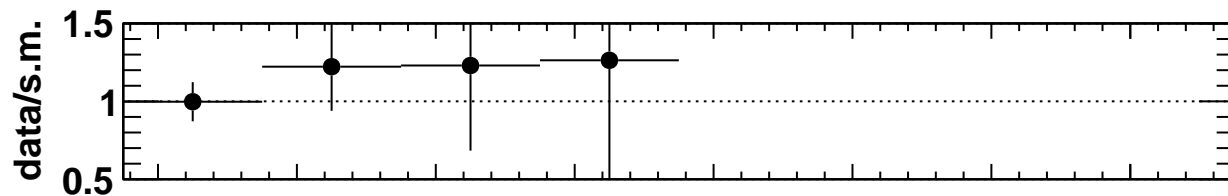
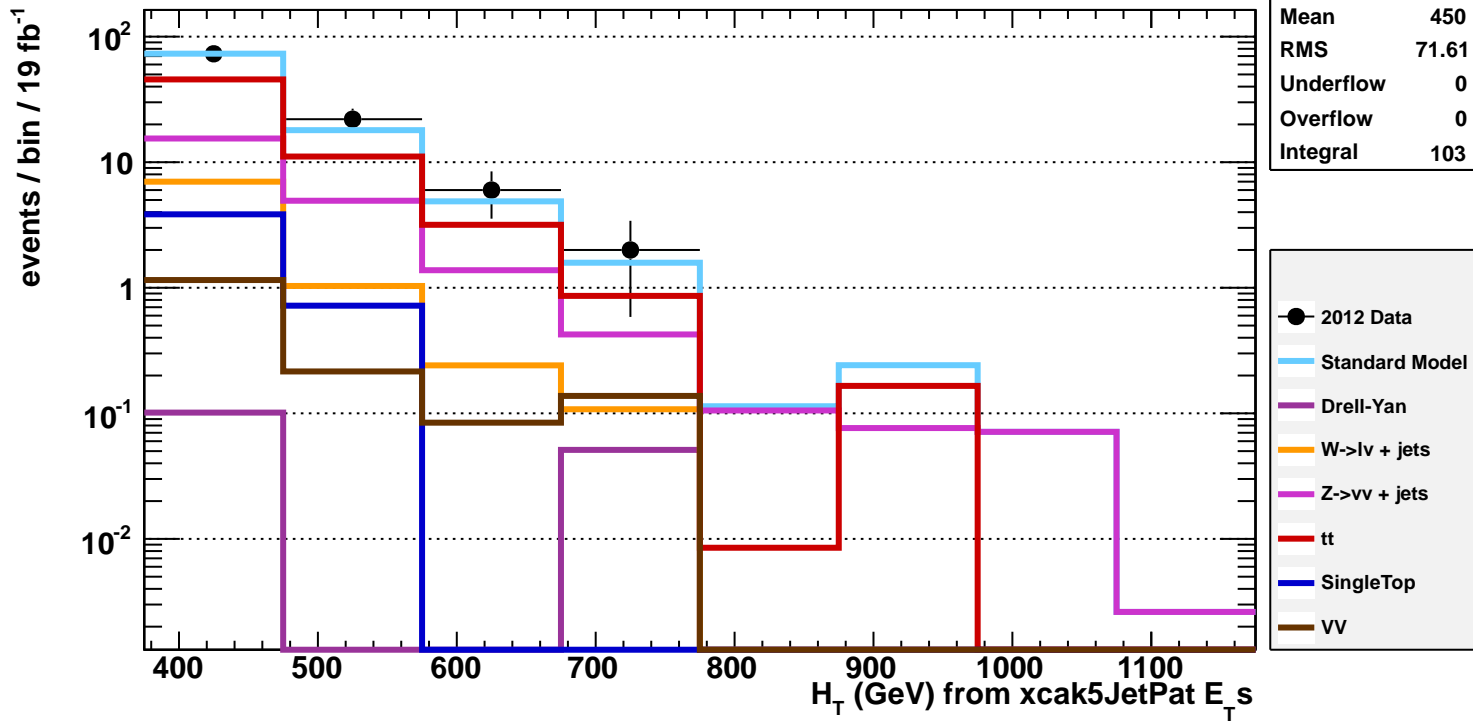


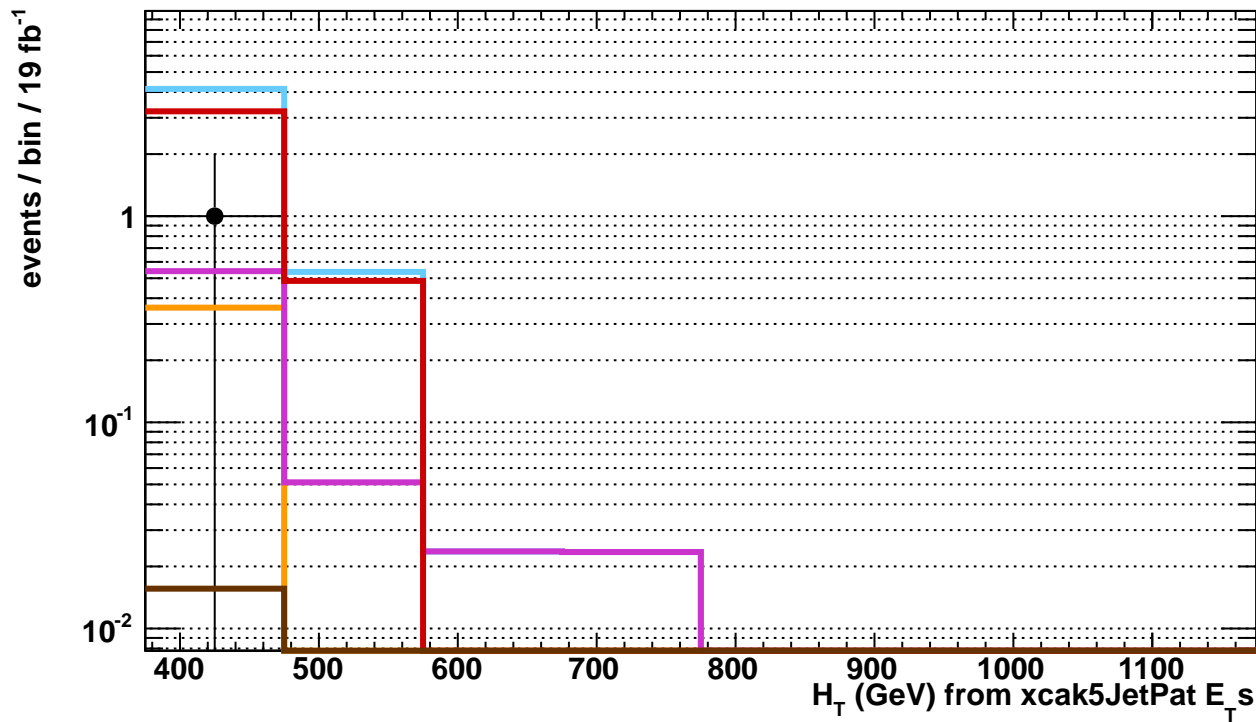
xcak5JetSumEtPat_ge4j_ge4b	
Entries	3
Mean	522
RMS	83.75
Underflow	0
Overflow	0
Integral	3



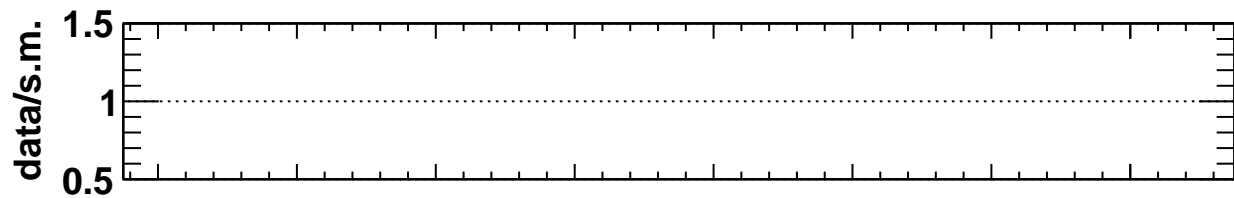
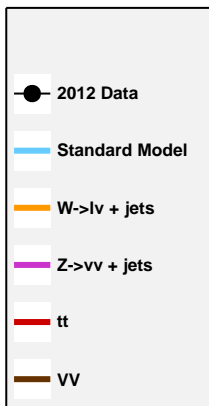








xcak5JetSumEtPat_le3j_eq3b	
Entries	1
Mean	404.7
RMS	0
Underflow	0
Overflow	0
Integral	1



```

Z: multiplicity          0 <= muonIndicesPat <= 0
A: multiplicity          0 <= electronIndicesUnmatchedPat <= 0
B: multiplicity          0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter        xcak5JetPat; dR>0.300 when deltaPhiStar<0.500
D: value                 xcak5JetMhthighPtPatOvermetP4TypeIPF<=1.25

E: value                 CaloRecHitSumPt<=30.00
F: value                 0.55<=xcak5JetAlphaTetPat
G: value                 0.10<=xcak5JetMaxEmEnergyFractionPat
H: value                 1.00<=hcalLaserEvent2012
I: value                 1.00<=ecalLaserCalibEvent2012

```

[jetSumPlots1]

```

K: value                 475.00<=xcak5JetSumEtPat
L: value                 575.00<=xcak5JetSumEtPat
M: value                 675.00<=xcak5JetSumEtPat
N: value                 775.00<=xcak5JetSumEtPat

O: value                 875.00<=xcak5JetSumEtPat
P: value                 975.00<=xcak5JetSumEtPat
Q: value                 1075.00<=xcak5JetSumEtPat

```

	2012 Data	Standard Mod	Drell-Yan W->lv + jets Z->vv + jets				tt	SingleTop	VV	data/s.m.
Z:	6688261	8.395(4)e+5	1.240(4)e+4	1.578(2)e+5	8.976(6)e+4	4.764(3)e+5	7.83(2)e+4	2.494(5)e+4	7.967(5)	
A:	6680982	8.377(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.753(3)e+5	7.81(2)e+4	2.490(5)e+4	7.976(5)	
B:	6680567	8.376(4)e+5	1.236(4)e+4	1.574(2)e+5	8.964(6)e+4	4.752(3)e+5	7.81(2)e+4	2.489(5)e+4	7.975(5)	
C:	1463167	2.631(2)e+5	3.82(2)e+3	6.42(1)e+4	4.598(4)e+4	1.213(2)e+5	2.111(9)e+4	6.68(3)e+3	5.561(7)	
D:	359924	1.370(1)e+5	2.01(2)e+3	4.482(9)e+4	3.679(4)e+4	4.265(9)e+4	7.96(6)e+3	2.80(2)e+3	2.627(5)	
E:	354346	1.361(1)e+5	2.00(2)e+3	4.452(9)e+4	3.653(4)e+4	4.235(9)e+4	7.92(6)e+3	2.78(2)e+3	2.604(5)	
F:	6047	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)	0.93(1)	
G:	6037	6.53(2)e+3	13.0(8)	1.85(2)e+3	3.69(1)e+3	8.2(1)e+2	71(6)	92(3)	0.92(1)	
H:	6037	-	-	-	-	-	-	-	-	
I:	6022	-	-	-	-	-	-	-	-	
[jetSumPlots1]										
K:	2138	2.40(1)e+3	3.4(3)	626(9)	1415(6)	299(8)	26(4)	32(2)	0.89(2)	
L:	807	922(8)	1.0(2)	223(5)	567(4)	111(5)	9(2)	11.5(9)	0.88(3)	
M:	310	370(5)	0.4(1)	83(3)	237(3)	43(3)	2.0(10)	5.2(6)	0.84(5)	
N:	134	161(3)	0.21(7)	34(2)	105(2)	18(2)	0.7(6)	2.4(4)	0.83(7)	
O:	62	73(2)	0.15(6)	15(1)	48(1)	9(1)	0(0)	0.9(2)	0.8(1)	
P:	30	34(1)	0.11(5)	7.1(8)	22.8(8)	3.8(9)	-	0.4(1)	0.9(2)	
Q:	12	16(1)	4(3)e-2	3.0(5)	10.9(5)	2.0(7)	-	0.2(1)	0.7(2)	