

sample

nE

HT.Run2012A-22Jan2013.jsonWeight

HTMHTParked.Run2012B-22Jan2013.jsonWeight

3

HTMHTParked.Run2012C-22Jan2013.jsonWeight

6

HTMHTParked.Run2012D-22Jan2013.jsonWeight

6

wj_lv_mg_ht_400ToInf_LO.puWeight.bTagWeight.xsWeight

wj_lv_mg_ht_250To300_LO.puWeight.bTagWeight.xsWeight

wj_lv_mg_ht_300To400_LO.puWeight.bTagWeight.xsWeight

wj_lv_mg_ht_200To250_LO.puWeight.bTagWeight.xsWeight

wj_lv_mg_ht_10To150_LO.puWeight.bTagWeight

1

wj_lv_mg_ht_150To200_LO.puWeight.bTagWeight.xsWeight

2

zinv_mg_ht_400_inf.puWeight.bTagWeight

zinv_mg_ht_200_400.puWeight.bTagWeight

zinv_mg_ht_100_200.puWeight.bTagWeight

zinv_mg_ht_50_100.puWeight.bTagWeight

2

file created at Tue Nov 4 23:16:28 2014

Calculables

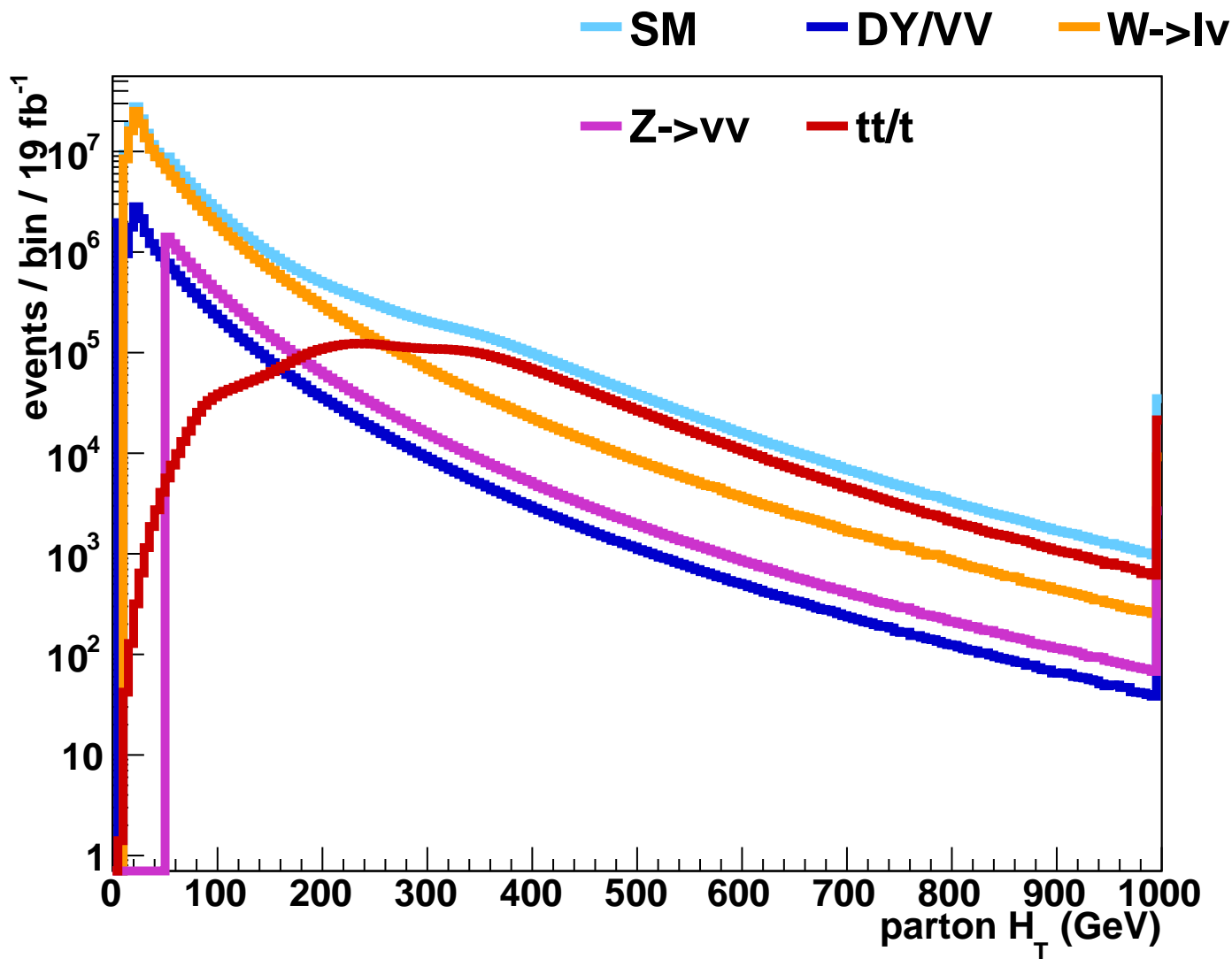
ecalLaserCalibEvent2012	pass Ecal laser calibration 2012 event filter
electronIndicesNonIsoPF	pass ptMin & id; fail iso
electronIndicesOtherPF	pass ptMin; fail id
electronIndicesPF	pt>10.0; (2012 Veto)
electronIndicesUnmatchedPF	electronIndicesOtherPF; no dR<0.5 match in ak5Je
genIndicesStatus3t	pdgId in [-6, 6]; status in [3]
hcalLaserEvent2012	pass HCAL laser 2012 event filter
jsonWeight	run:ls in cert/Cert_190456-208686_8TeV_22Jan2013
muonIdPog2012LoosePF	https://twiki.cern.ch/twiki/bin/view/CMSPublic/S
muonIdPog2012TightPF	https://twiki.cern.ch/twiki/bin/view/CMSPublic/S
muonIndicesNonIsoPF	pass ptMin & id; fail iso
muonIndicesOtherPF	pass ptMin; fail id
muonIndicesPF	IdPog2012Tight; pt>10.0 GeV; PfIsolationR04Delta
photonIndicesOtherPat	pass ptMin; fail id/iso
photonIndicesPat	pT>=25.0 GeV; photonSimpleCutBased2012TightPat
photonIndicesUnmatchedPat	photonIndicesOtherPat; no dR<0.5 match in ak5Jet
vertexID	!fake; nd>=5.0; z <=24.0 cm; d0<=2.0 cm
vertexIndices	; pass ID
vertexIndicesOther	pass sumPtMin; fail ID
weight	1.bTagWeight.puWeight
weight	1.bTagWeight.puWeight.topPtWeight
weight	1.bTagWeight.puWeight.xsWeight
weight	1.jsonWeight
xcak5JetCorrectedP4Pat	muonPFDR<0.50; electronPFDR<0.50; photonPatDR<0.
xcak5JetIndicesOtherPat	pass ptMin; fail jetID or etaMax
xcak5JetIndicesPat	pT>=50.0 GeV; eta <3.0; JetIDtight
xcak5JetPFCorrectedP4Pat	muonPFDR<0.50; electronPFDR<0.50; photonPatDR<0.
xcak5JetPFDeadEcalDRlowPtPat	xcak5JetPFPat; nXtal>=10; cracks checked
xcak5JetPFIndicesBtagged2Pat	(>0.679)
xcak5JetPFIndicesOtherPat	pass ptMin; fail jetID or etaMax
xcak5JetPFIndicesPat	pT>=50.0 GeV; eta <3.0; JetIDloose
xcak5JetPFIndiceshighPtPat	pT>=50.0 GeV; eta <3.0; JetIDloose
xcak5JetPFIndiceslowPtPat	pT>=30.0 GeV; eta <3.0; JetIDloose

Calculables (imperfect) absent calc leaf sltr

NONE

|a: master master

	Data	SM	DY/VV	W->lv	Z->vv
a:	161925770	2.0927(5)e+8	2.1412(7)e+7	1.6796(5)e+8	1.2574(2)e+7



```

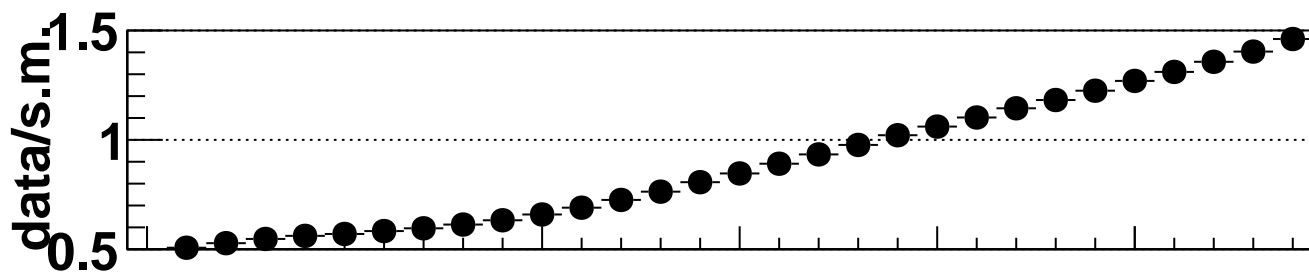
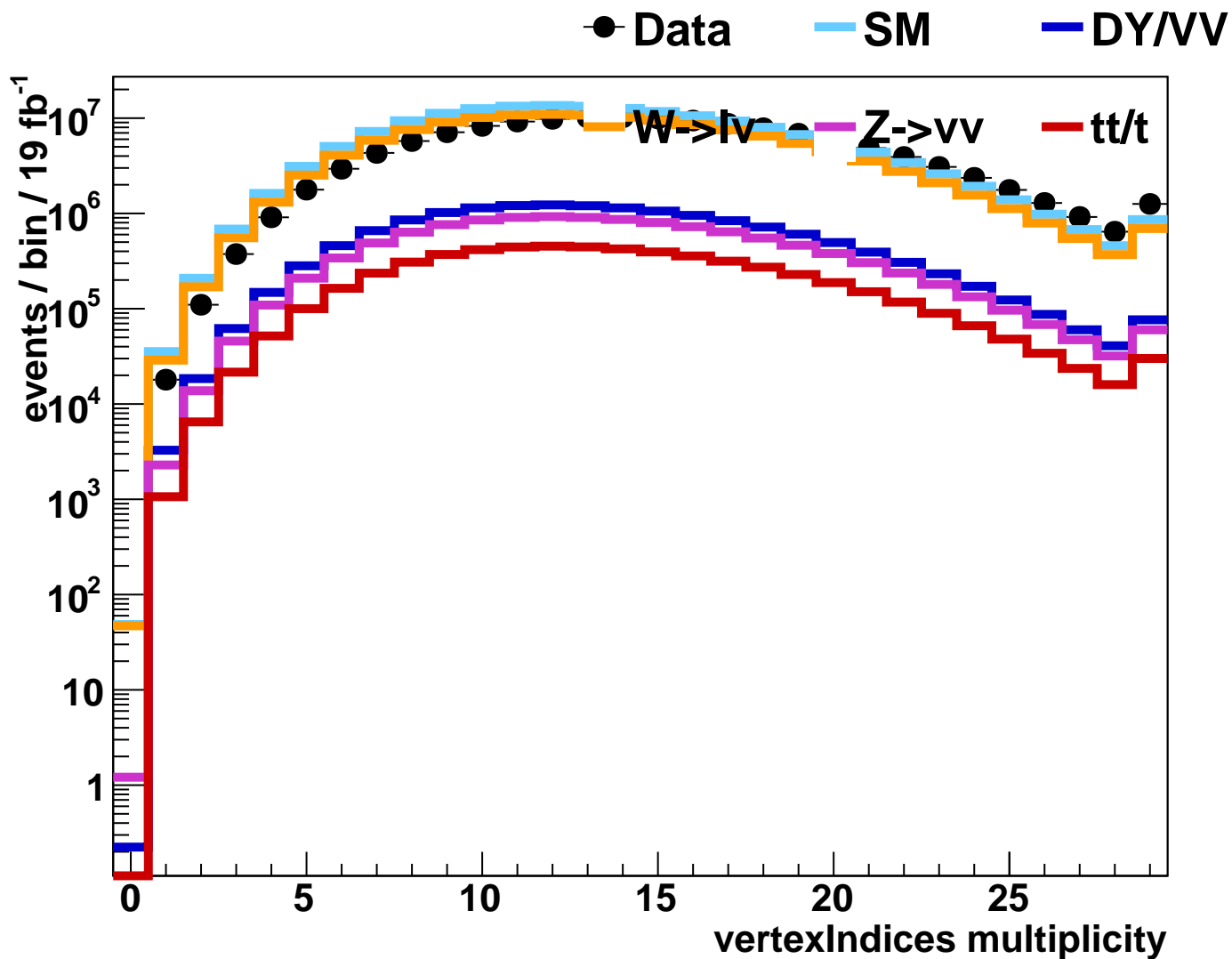
a: master          master
b: monster         <=10 tracks or >0.25 good fraction
c: hbheNoise       hbheNoise
d: value           beamHaloCSCTightHaloId<=0.00
e: value           1.00<=trackingFailureFilterFlag

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

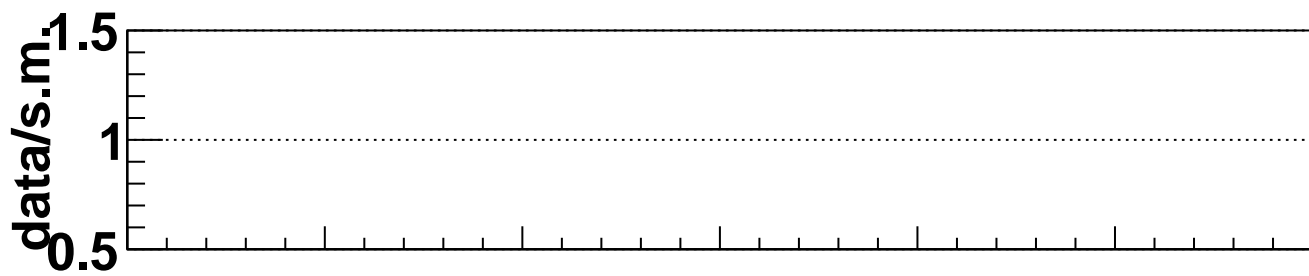
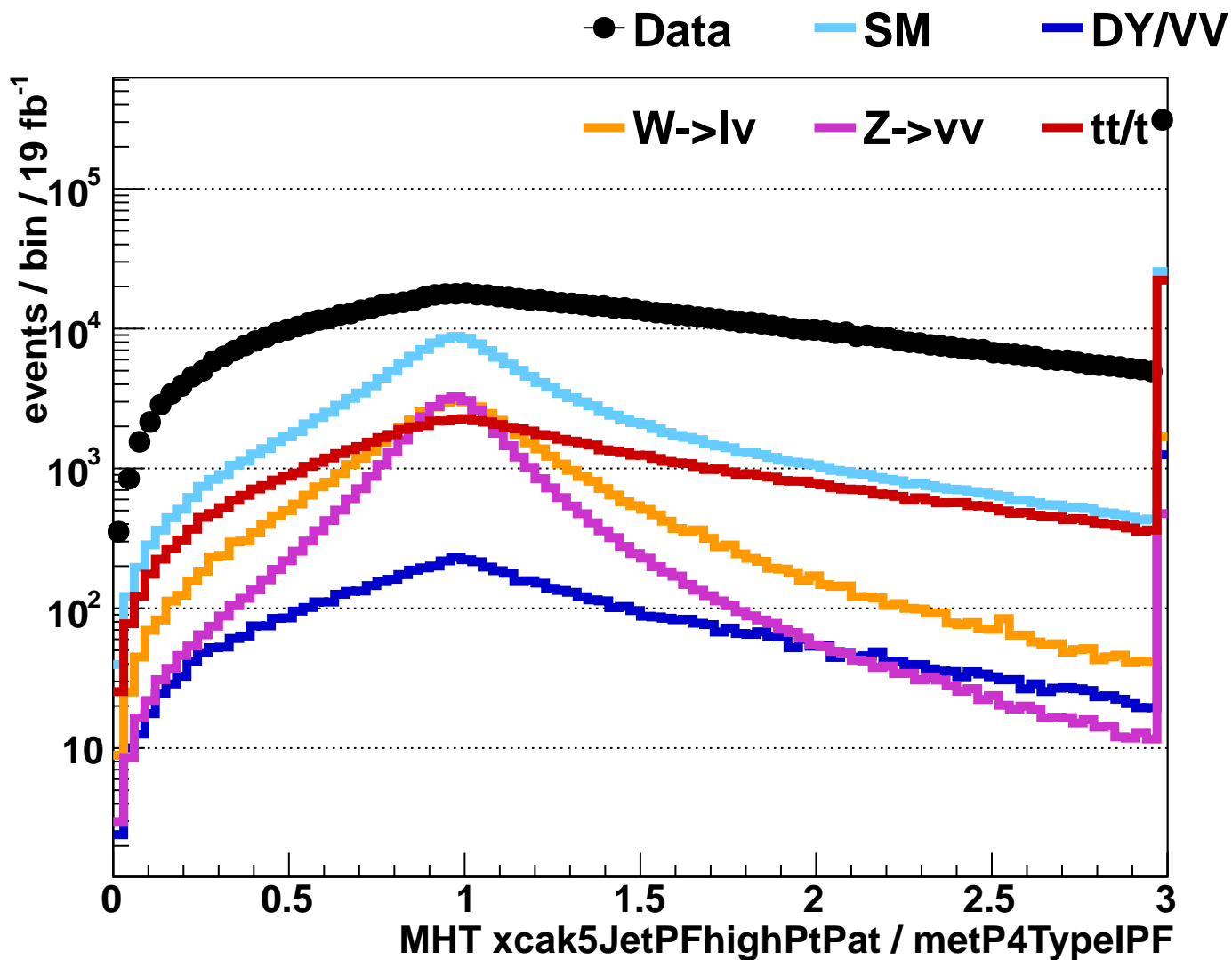
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	Data	SM	DY/VV	W->lν	Z->νν
a:	161925770	2.0927(5)e+8	2.1412(7)e+7	1.6796(5)e+8	1.2574(2)e+7
b:	161924972	2.0927(5)e+8	2.1412(7)e+7	1.6796(5)e+8	1.2574(2)e+7
c:	160439157	-	-	-	-
d:	159670356	2.0924(5)e+8	2.1409(7)e+7	1.6794(5)e+8	1.2573(2)e+7
e:	159667829	2.0924(5)e+8	2.1409(7)e+7	1.6793(5)e+8	1.2573(2)e+7
f:	159667108	-	-	-	-
g:	159142618	2.0922(5)e+8	2.1406(7)e+7	1.6792(5)e+8	1.2572(2)e+7
h:	159142615	2.0922(5)e+8	2.1406(7)e+7	1.6792(5)e+8	1.2572(2)e+7
i:	159111052	2.0917(5)e+8	2.1391(7)e+7	1.6789(5)e+8	1.2572(2)e+7
j:	159107069	2.0914(5)e+8	2.1386(7)e+7	1.6787(5)e+8	1.2572(2)e+7
k:	139728253	1.7269(4)e+8	1.5599(6)e+7	1.3952(4)e+8	1.1794(2)e+7



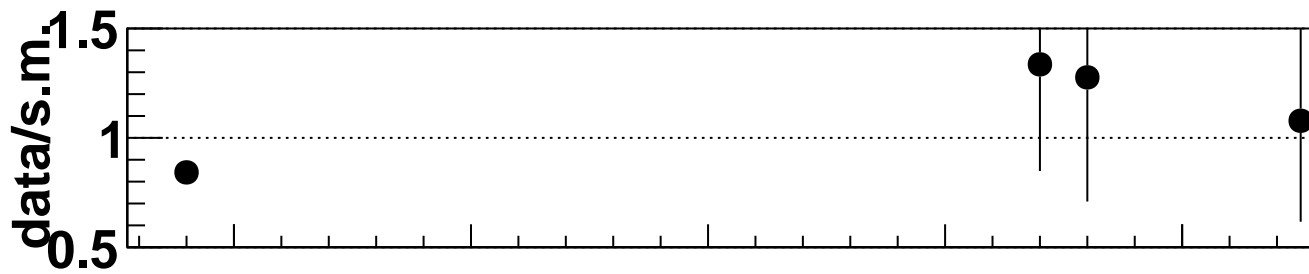
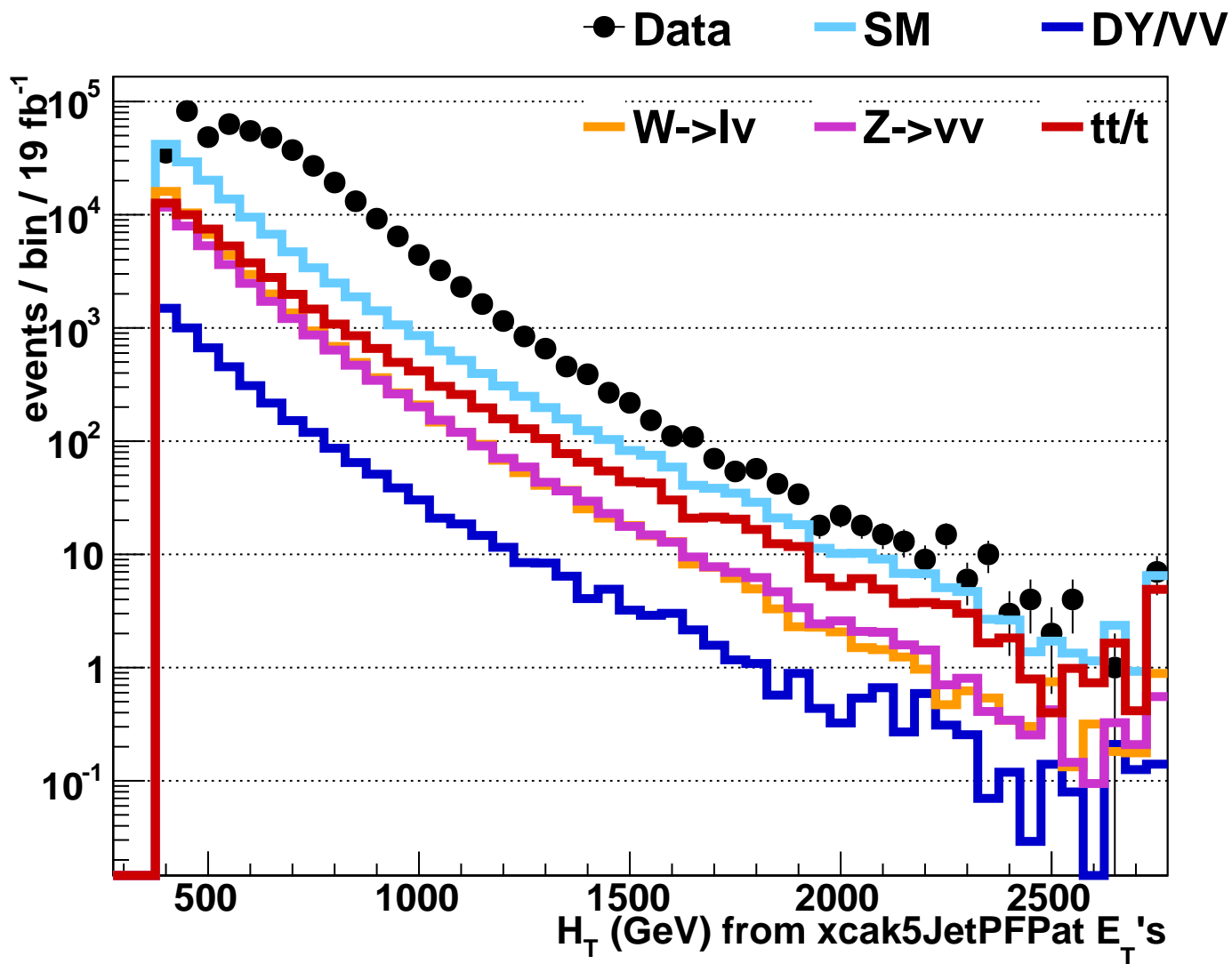
l:	multiplicity	1 <= vertexIndices
m:	l1Filter	L1Tech_BPTX_plus_AND_minus.v0
n:	physicsDeclaredFilter	physicsDeclaredFilter
o:	HTxTriggerMap	HTxTriggerMap
p:	jetEtaSelector	xcak5JetPFPat; eta[index[0]] <=2.5
q:	jetPtSelector	xcak5JetPFPat; pT[index[0]]>=100.0 GeV
r:	jetPtSelector	xcak5JetPFPat; pT[index[1]]>=100.0 GeV
s:	value	375.00<=xcak5JetPFSumEtPat
t:	uniquelyMatchedNonisoMuons	xcak5JetPFPat
u:	multiplicity	0 <= xcak5JetPFIndicesWithOddMuonPat <= 0
v:	multiplicity	2 <= xcak5JetPFIndicesPat
w:	multiplicity	0 <= xcak5JetPFIndicesOtherPat <= 0
x:	multiplicity	0 <= electronIndicesPF <= 0
y:	multiplicity	0 <= photonIndicesPat <= 0
z:	multiplicity	0 <= muonIndicesPF <= 0
A:	multiplicity	0 <= electronIndicesUnmatchedPF <= 0
B:	multiplicity	0 <= photonIndicesUnmatchedPat <= 0
C:	deadEcalFilter	xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500

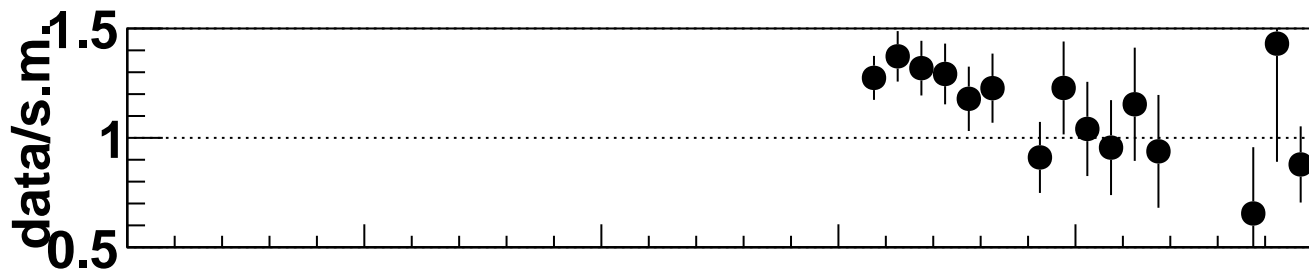
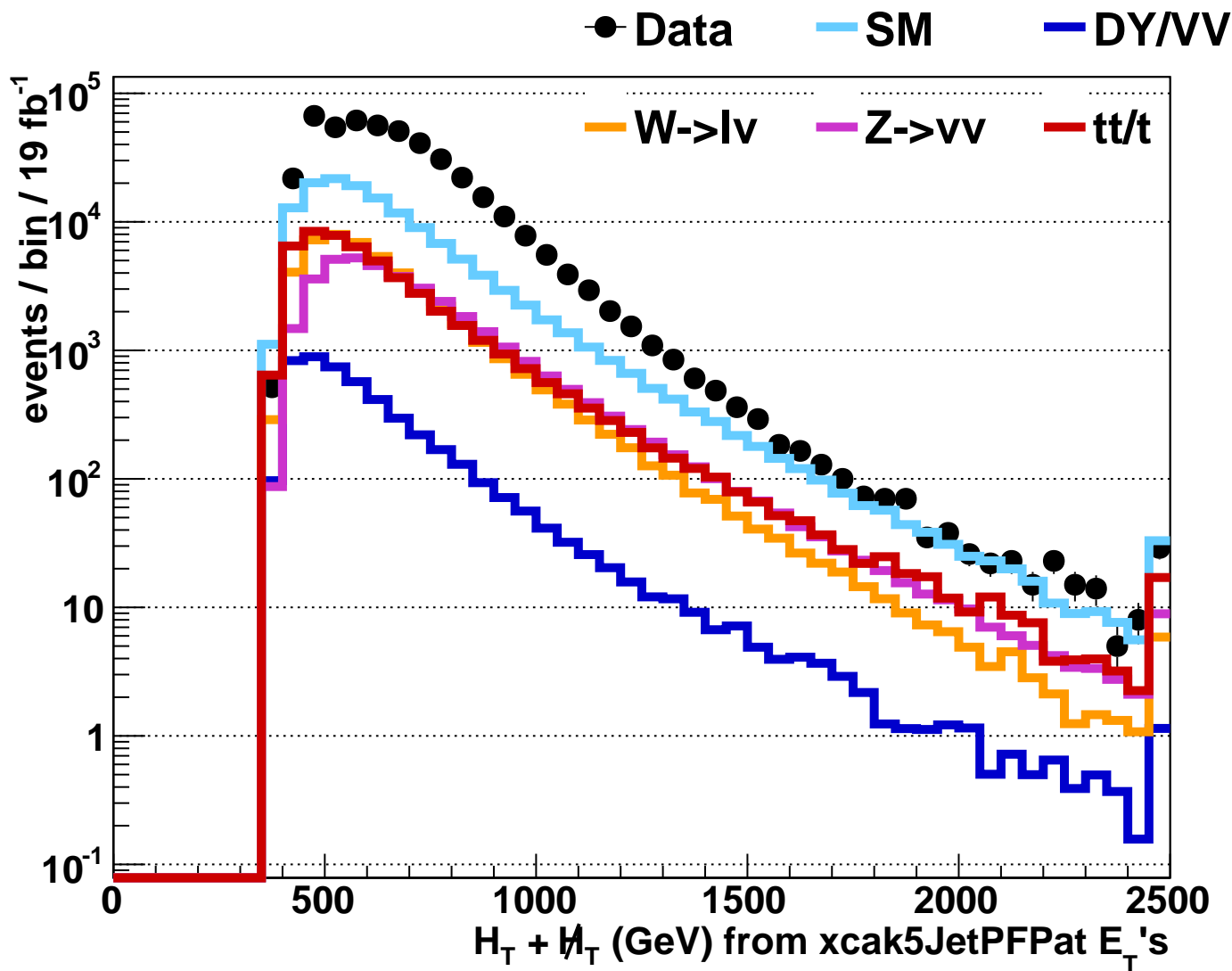
	Data	SM	DY/VV	W->lν	Z->νν
l:	139728253	1.7269(4)e+8	1.5599(6)e+7	1.3952(4)e+8	1.1794(2)e+7
m:	139728065	-	-	-	-
n:	139600741	-	-	-	-
o:	10701040	-	-	-	-
p:	10479362	4.664(2)e+7	4.328(3)e+6	3.100(2)e+7	6.113(1)e+6
q:	10313235	1.0522(5)e+7	8.35(1)e+5	5.802(5)e+6	1.4714(6)e+6
r:	8744352	2.3977(9)e+6	1.716(2)e+5	9.628(7)e+5	2.281(1)e+5
s:	7450225	1.1536(5)e+6	6.828(7)e+4	3.506(3)e+5	8.863(6)e+4
t:	7446364	1.1516(5)e+6	6.818(7)e+4	3.503(3)e+5	8.862(6)e+4
u:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
v:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
w:	6960603	1.1139(5)e+6	6.586(7)e+4	3.413(3)e+5	8.741(5)e+4
x:	6936664	9.505(4)e+5	4.973(7)e+4	2.522(2)e+5	8.739(5)e+4
y:	6905535	9.427(4)e+5	4.895(6)e+4	2.473(2)e+5	8.736(5)e+4
z:	6880817	7.843(4)e+5	3.433(6)e+4	1.572(2)e+5	8.735(5)e+4
A:	6879619	7.838(4)e+5	3.430(6)e+4	1.571(2)e+5	8.734(5)e+4
B:	6879103	7.837(4)e+5	3.429(6)e+4	1.570(2)e+5	8.733(5)e+4
C:	1312306	2.351(2)e+5	9.29(3)e+3	6.33(1)e+4	4.425(4)e+4

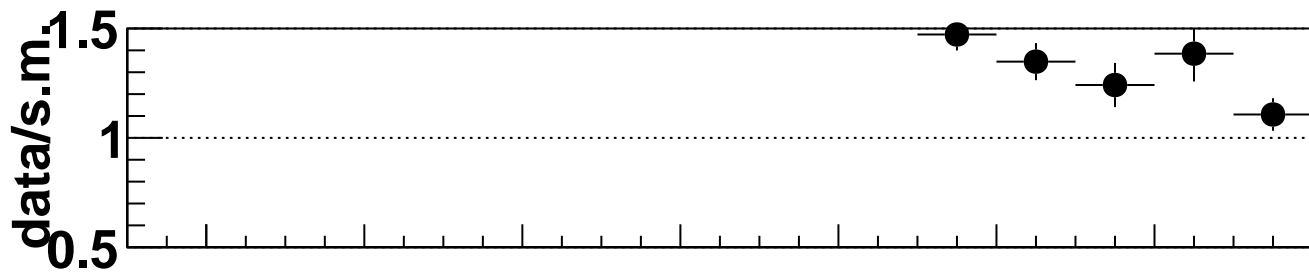
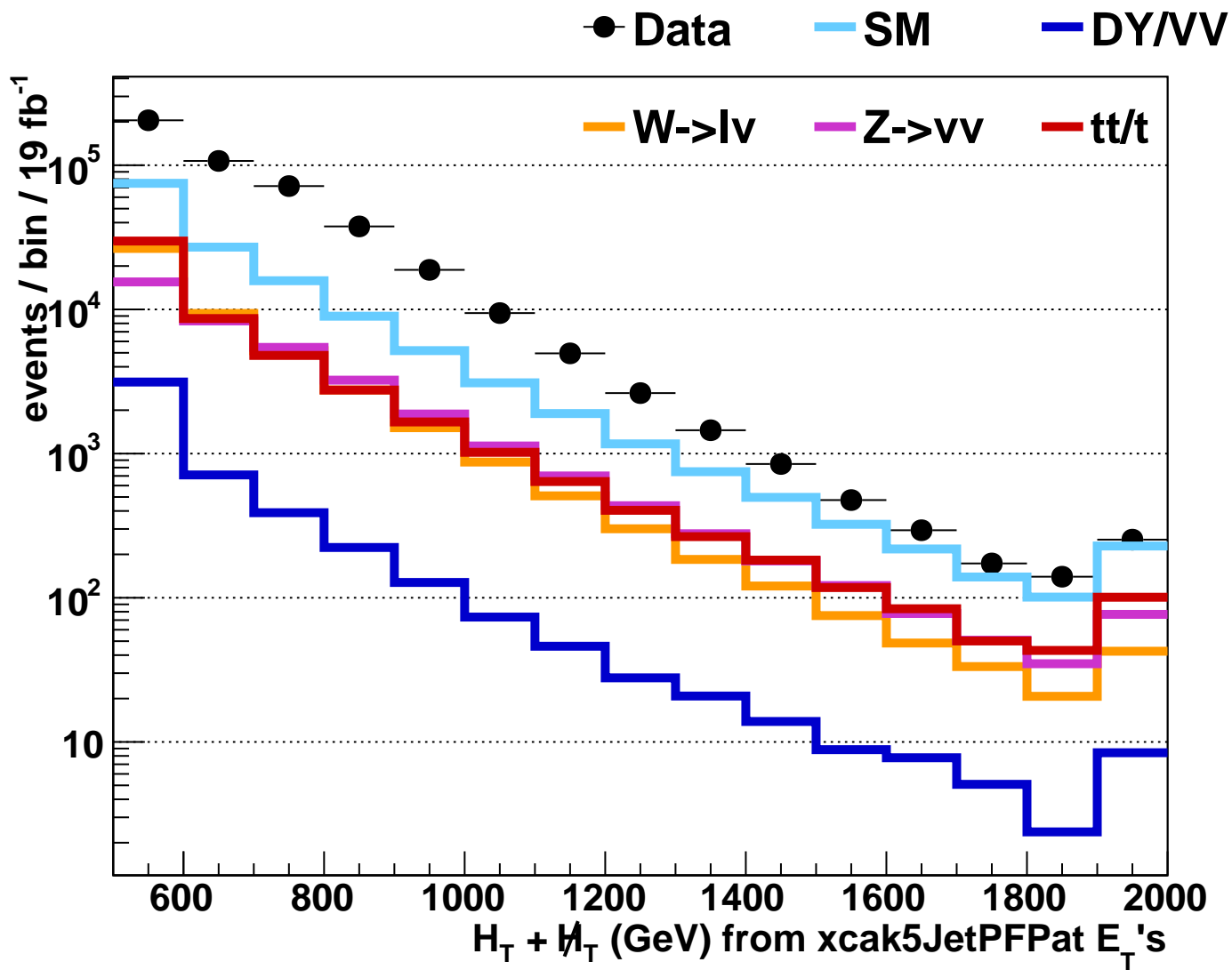


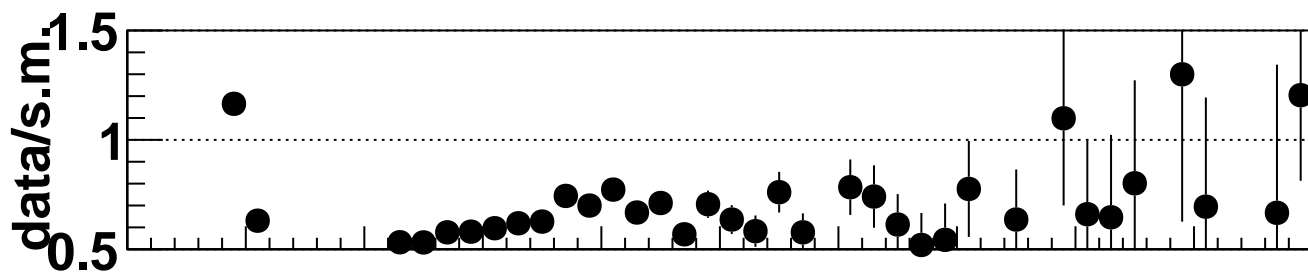
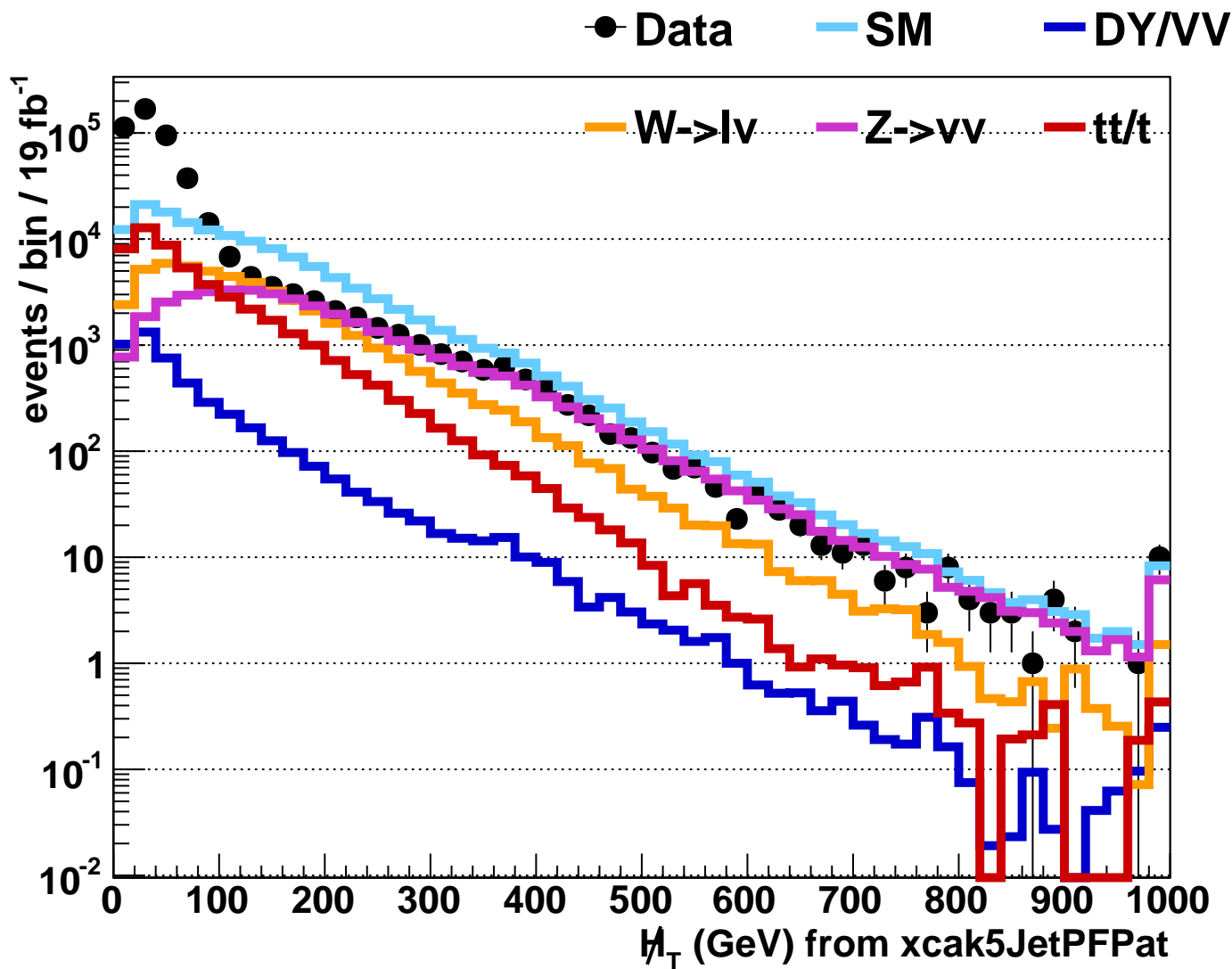
m:	l1Filter	L1Tech_BPTX_plus_AND_minus.v0
n:	physicsDeclaredFilter	physicsDeclaredFilter
o:	HTxTriggerMap	HTxTriggerMap
p:	jetEtaSelector	xcak5JetPFPat; eta[index[0]] <=2.5
q:	jetPtSelector	xcak5JetPFPat; pT[index[0]]>=100.0 GeV
r:	jetPtSelector	xcak5JetPFPat; pT[index[1]]>=100.0 GeV
s:	value	375.00<=xcak5JetPFSumEtPat
t:	uniquelyMatchedNonisoMuons	xcak5JetPFPat
u:	multiplicity	0 <= xcak5JetPFIndicesWithOddMuonPat <= 0
v:	multiplicity	2 <= xcak5JetPFIndicesPat
w:	multiplicity	0 <= xcak5JetPFIndicesOtherPat <= 0
x:	multiplicity	0 <= electronIndicesPF <= 0
y:	multiplicity	0 <= photonIndicesPat <= 0
z:	multiplicity	0 <= muonIndicesPF <= 0
A:	multiplicity	0 <= electronIndicesUnmatchedPF <= 0
B:	multiplicity	0 <= photonIndicesUnmatchedPat <= 0
C:	deadEcalFilter	xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
D:	value	xcak5JetPFMhthighPtPatOvermetP4TypeIPF<=1.25

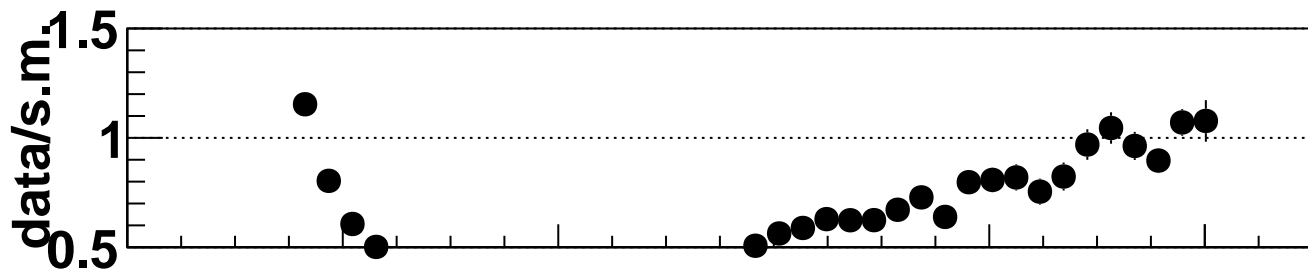
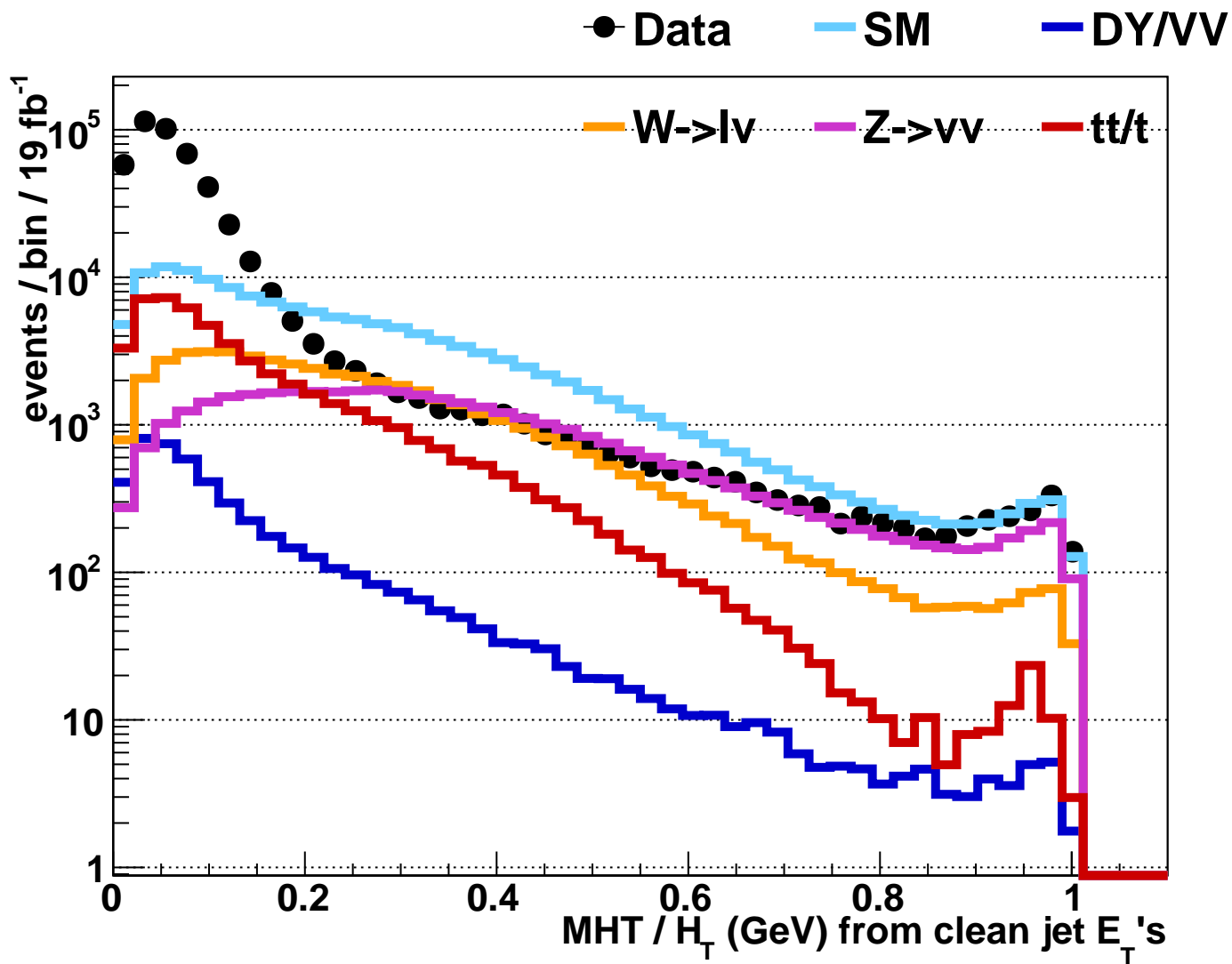
	Data	SM	DY/VV	W->lv	Z->vv
m:	139728065	-	-	-	-
n:	139600741	-	-	-	-
o:	10701040	-	-	-	-
p:	10479362	4.664(2)e+7	4.328(3)e+6	3.100(2)e+7	6.113(1)e+6
q:	10313235	1.0522(5)e+7	8.35(1)e+5	5.802(5)e+6	1.4714(6)e+6
r:	8744352	2.3977(9)e+6	1.716(2)e+5	9.628(7)e+5	2.281(1)e+5
s:	7450225	1.1536(5)e+6	6.828(7)e+4	3.506(3)e+5	8.863(6)e+4
t:	7446364	1.1516(5)e+6	6.818(7)e+4	3.503(3)e+5	8.862(6)e+4
u:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
v:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
w:	6960603	1.1139(5)e+6	6.586(7)e+4	3.413(3)e+5	8.741(5)e+4
x:	6936664	9.505(4)e+5	4.973(7)e+4	2.522(2)e+5	8.739(5)e+4
y:	6905535	9.427(4)e+5	4.895(6)e+4	2.473(2)e+5	8.736(5)e+4
z:	6880817	7.843(4)e+5	3.433(6)e+4	1.572(2)e+5	8.735(5)e+4
A:	6879619	7.838(4)e+5	3.430(6)e+4	1.571(2)e+5	8.734(5)e+4
B:	6879103	7.837(4)e+5	3.429(6)e+4	1.570(2)e+5	8.733(5)e+4
C:	1312306	2.351(2)e+5	9.29(3)e+3	6.33(1)e+4	4.425(4)e+4
D:	460848	1.404(1)e+5	4.80(2)e+3	4.752(9)e+4	3.748(4)e+4

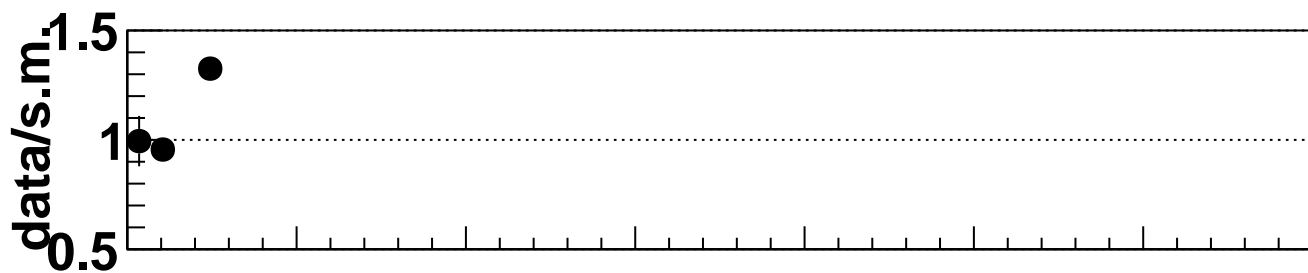
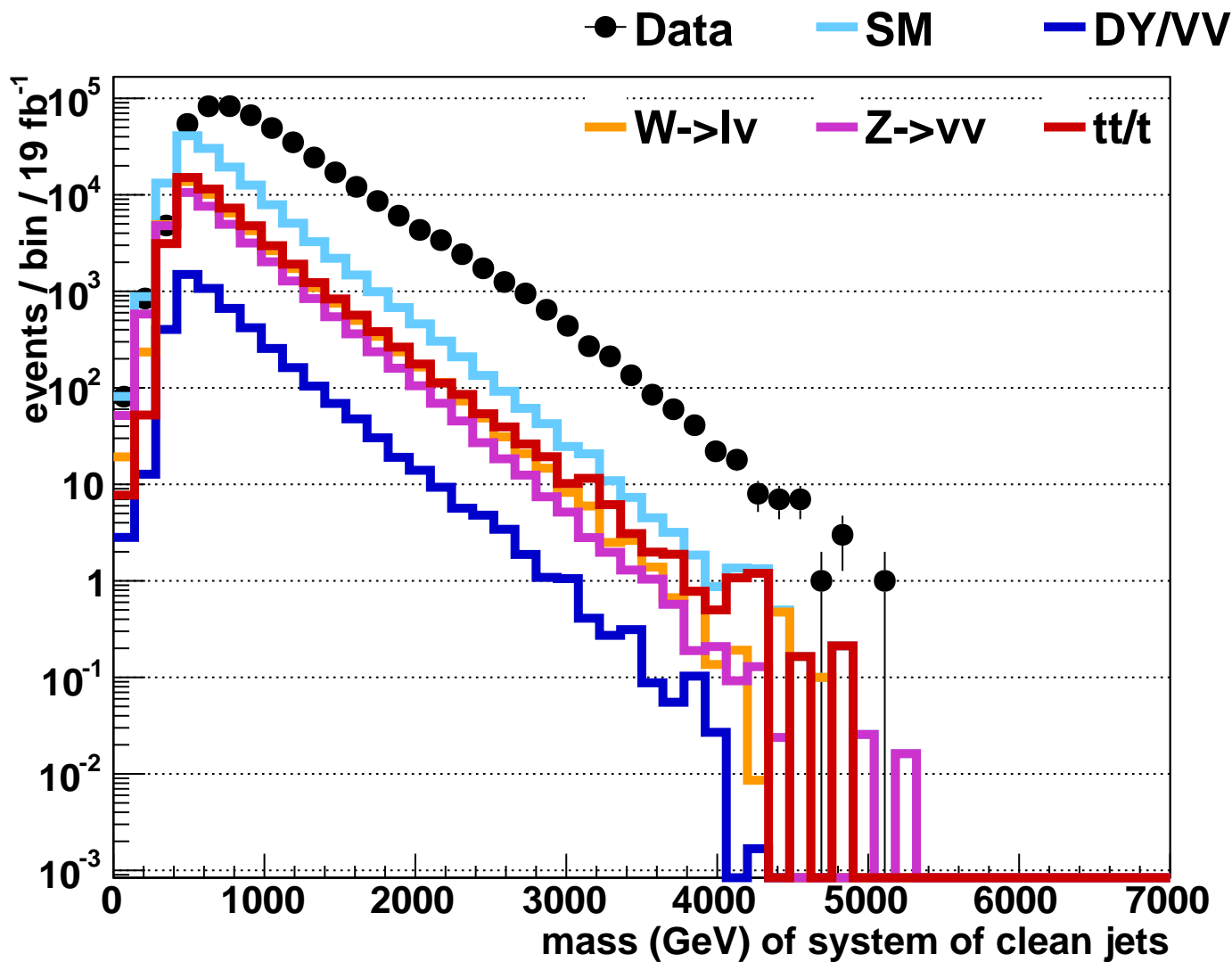




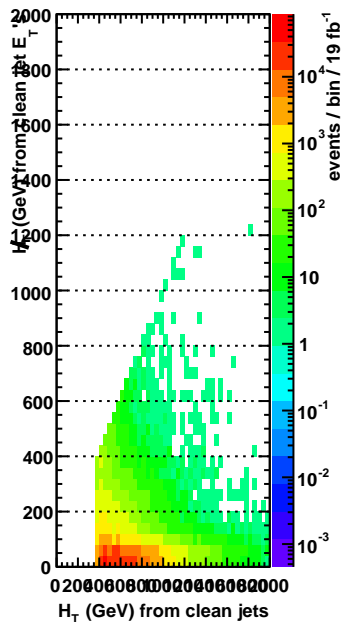




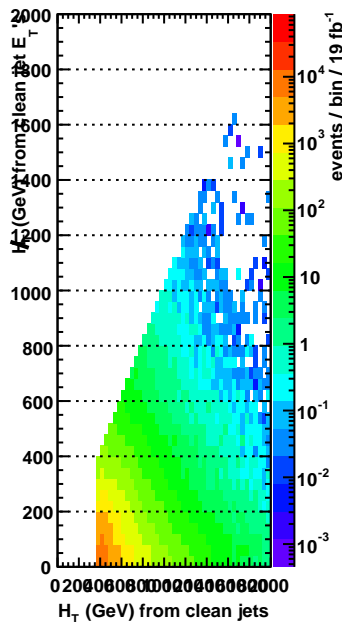




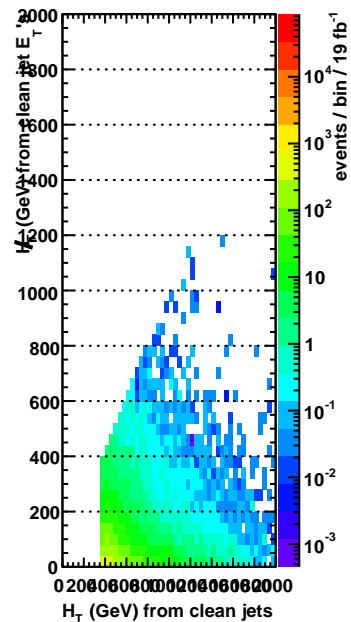
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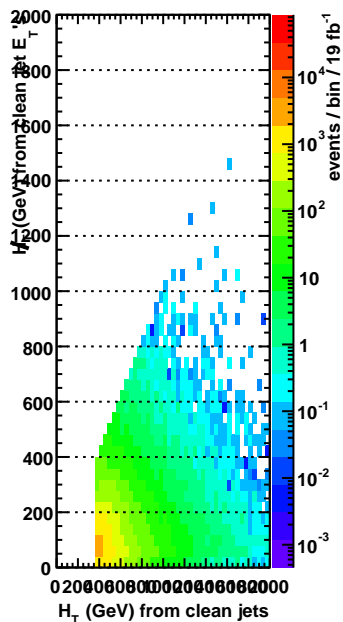
SM



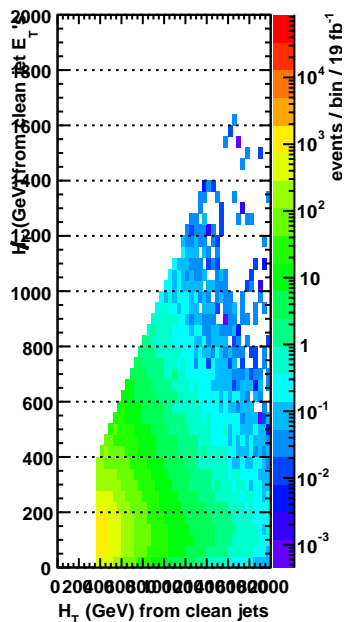
DY/VV



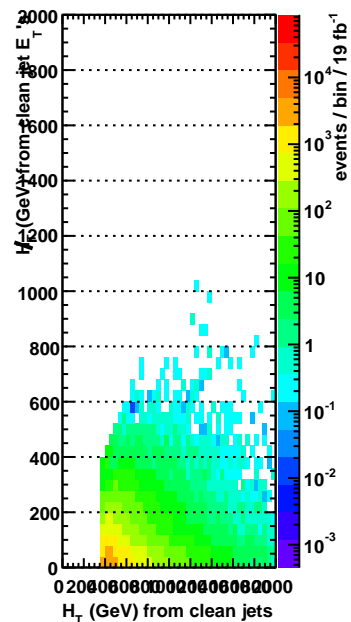
W->lv

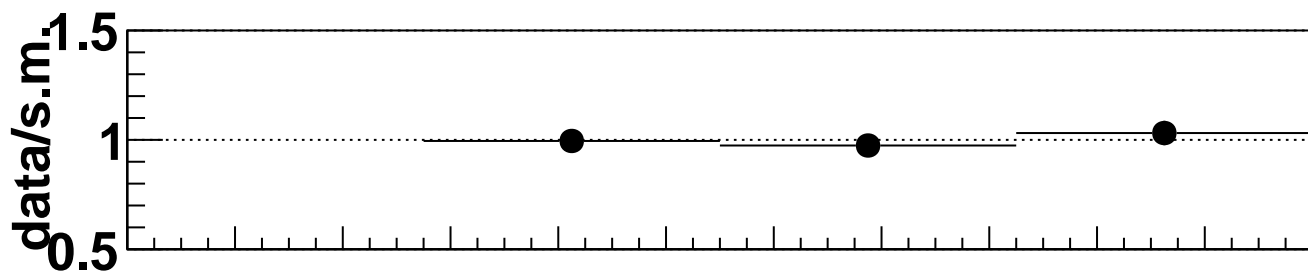
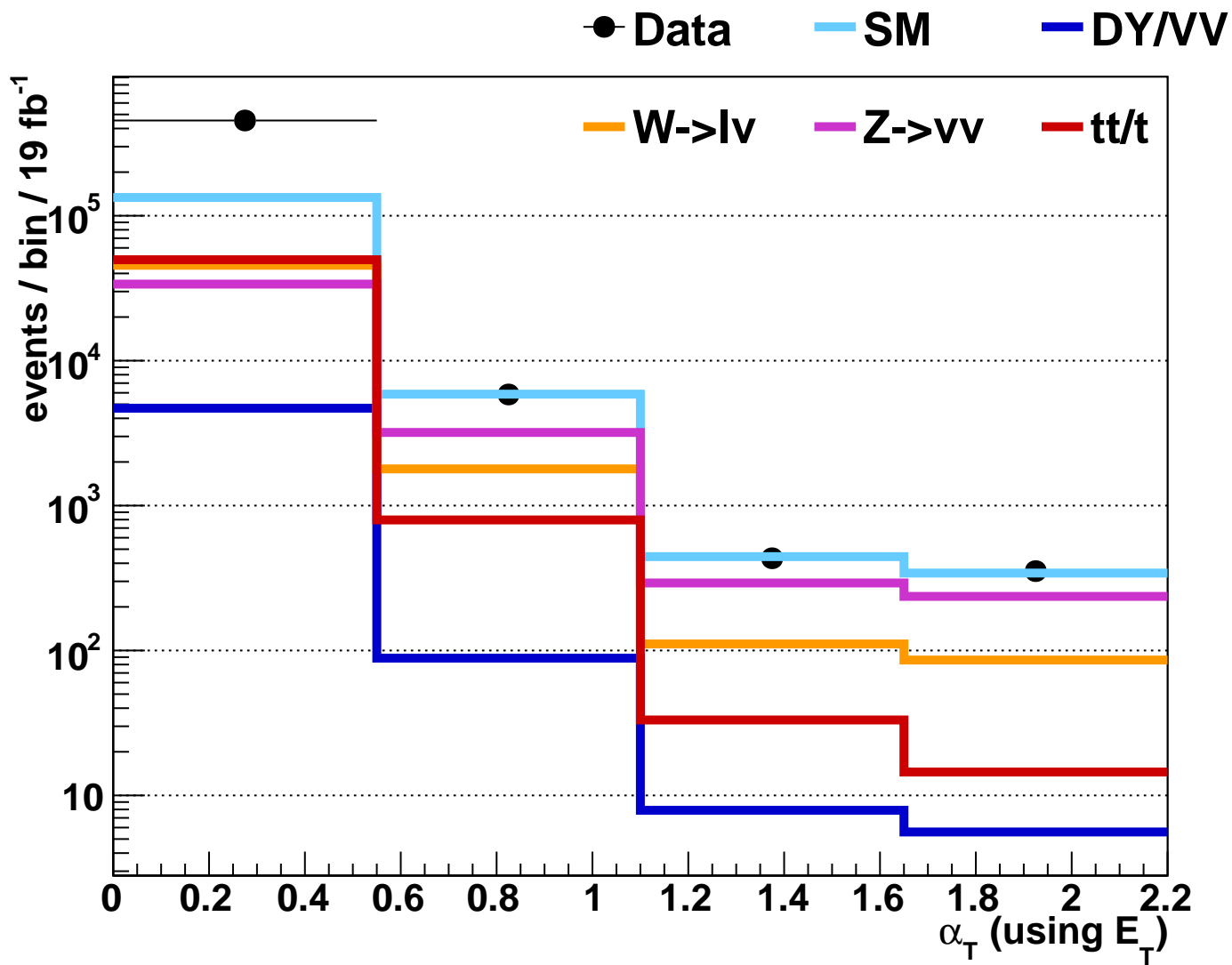


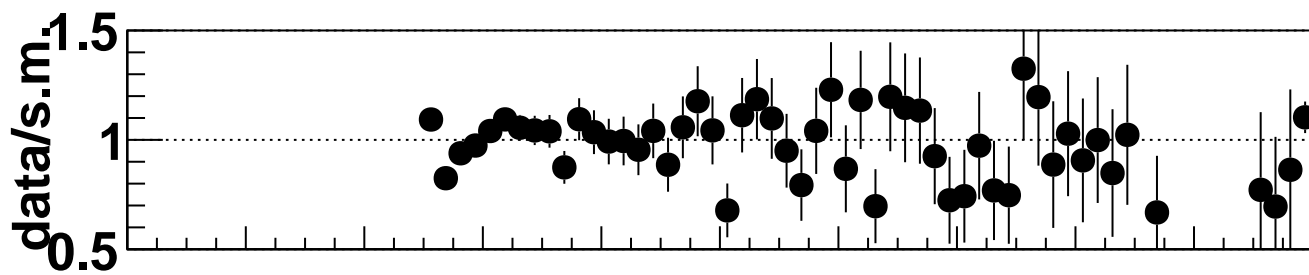
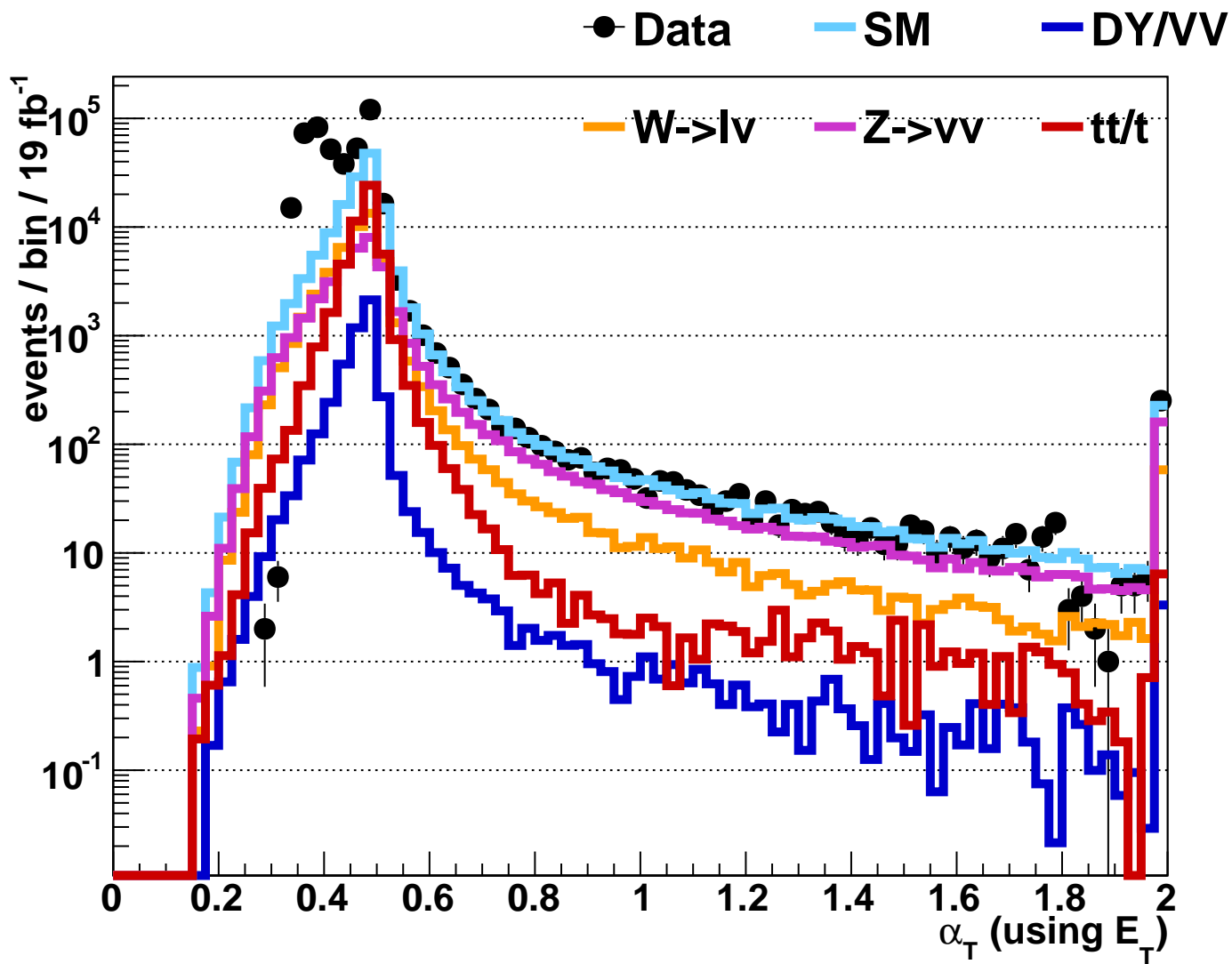
Z->vv

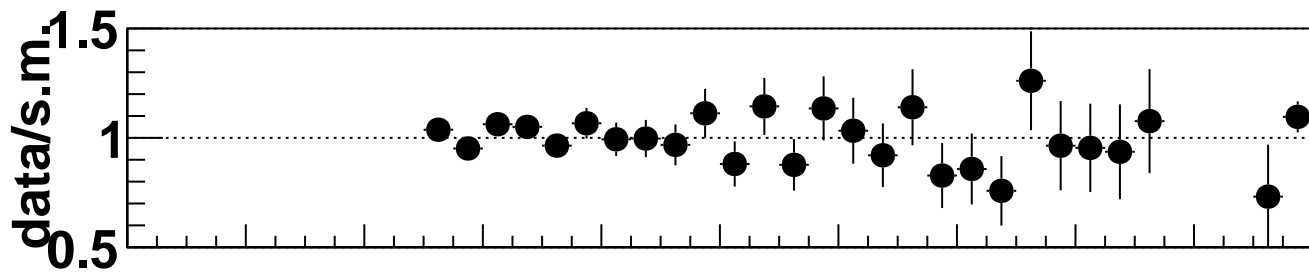
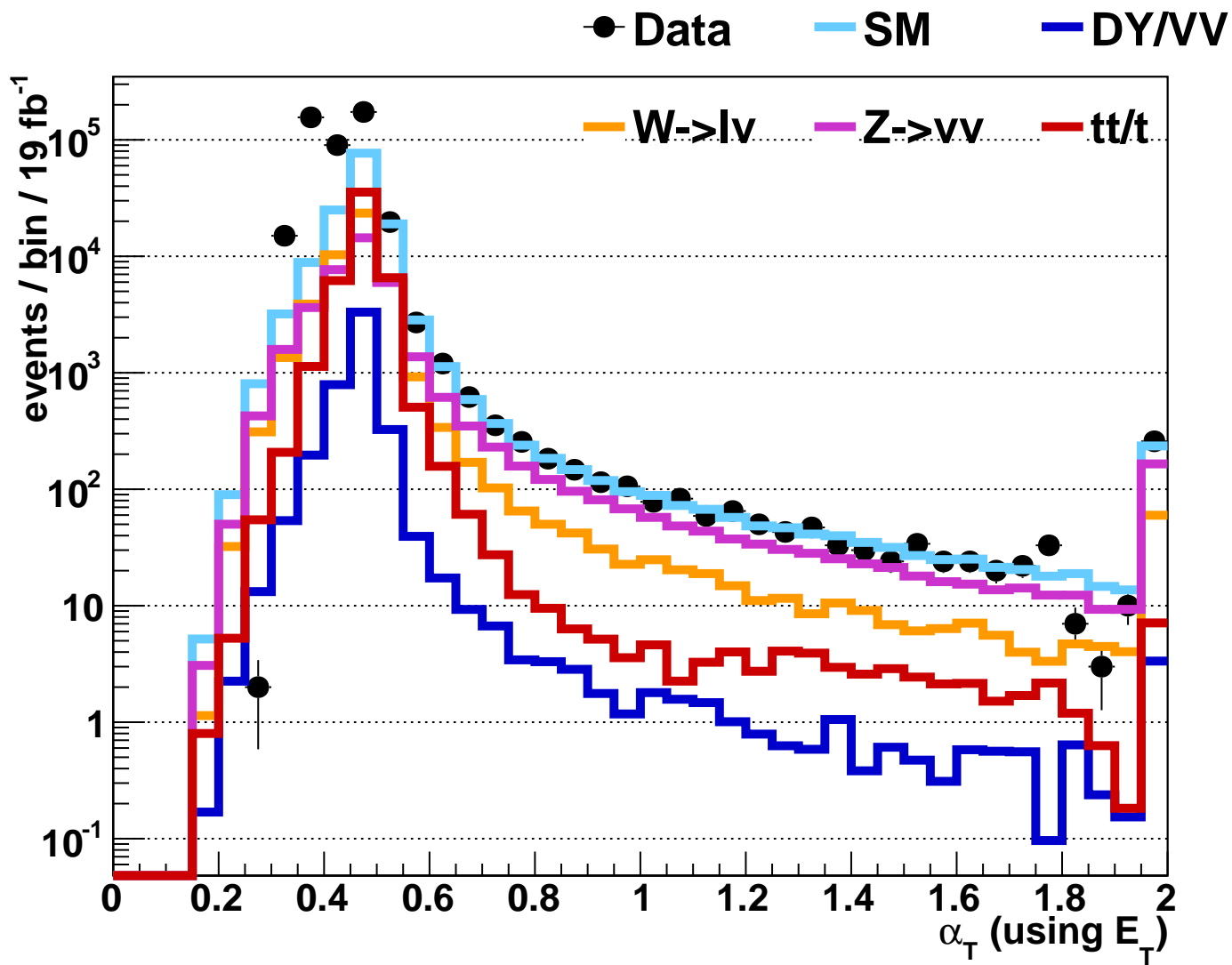


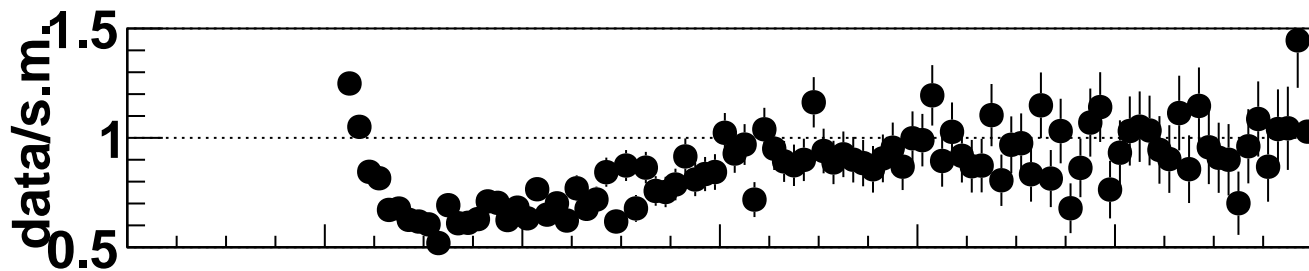
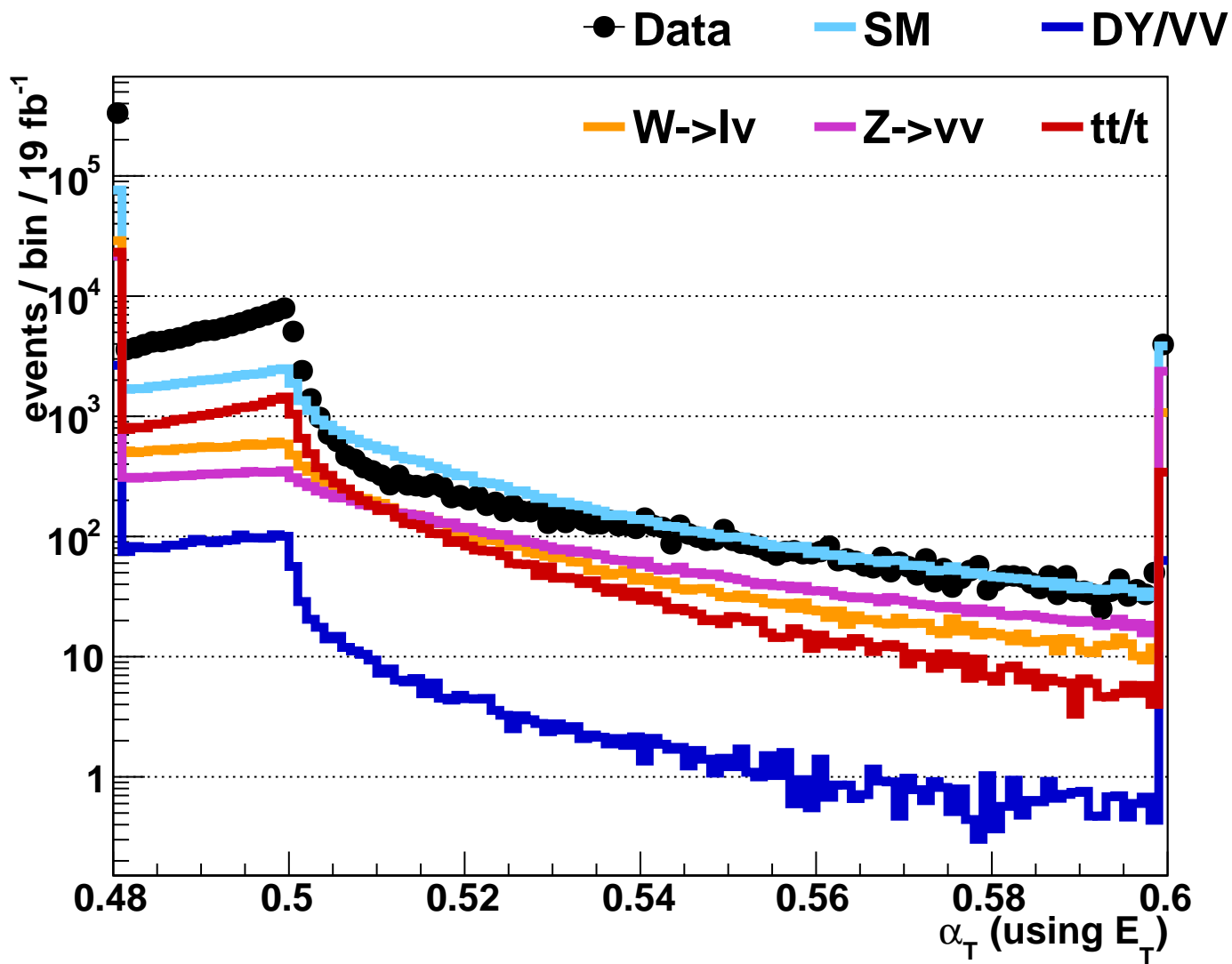
tt/t

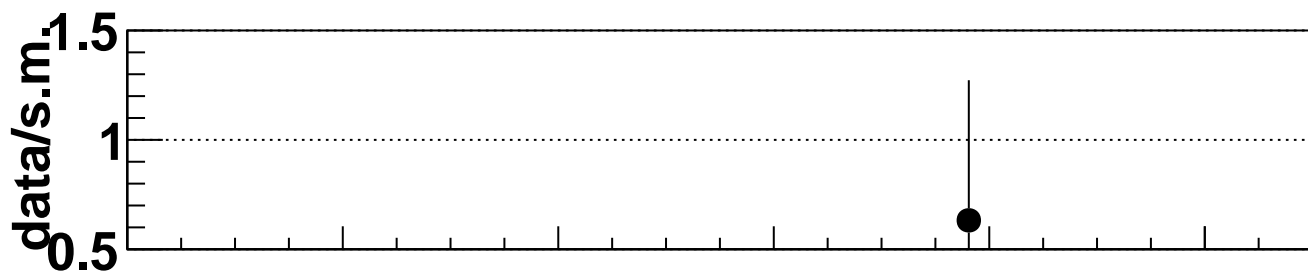
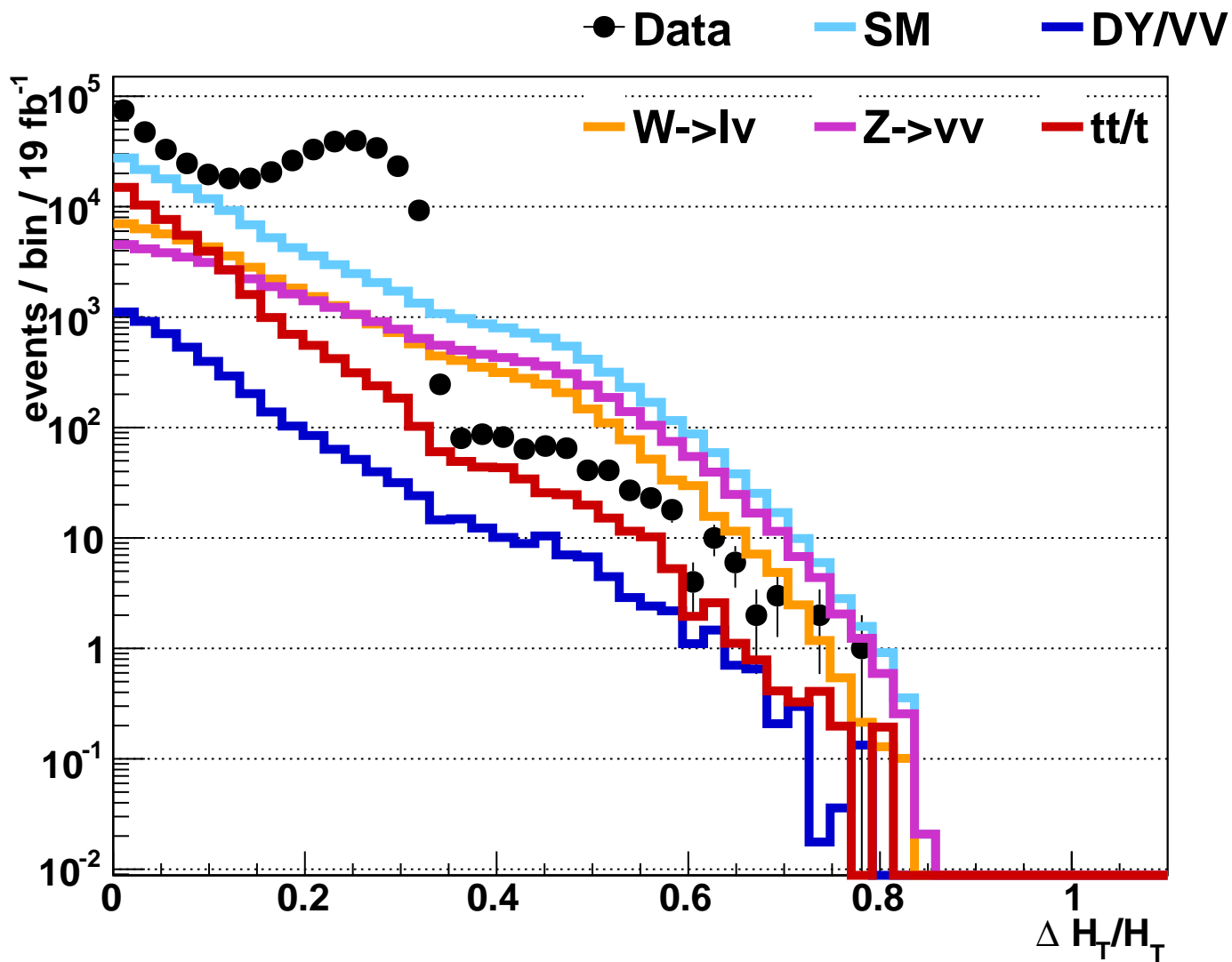


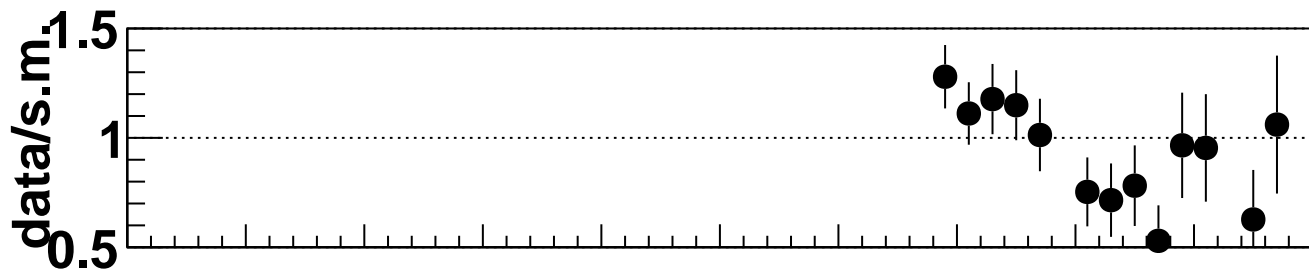
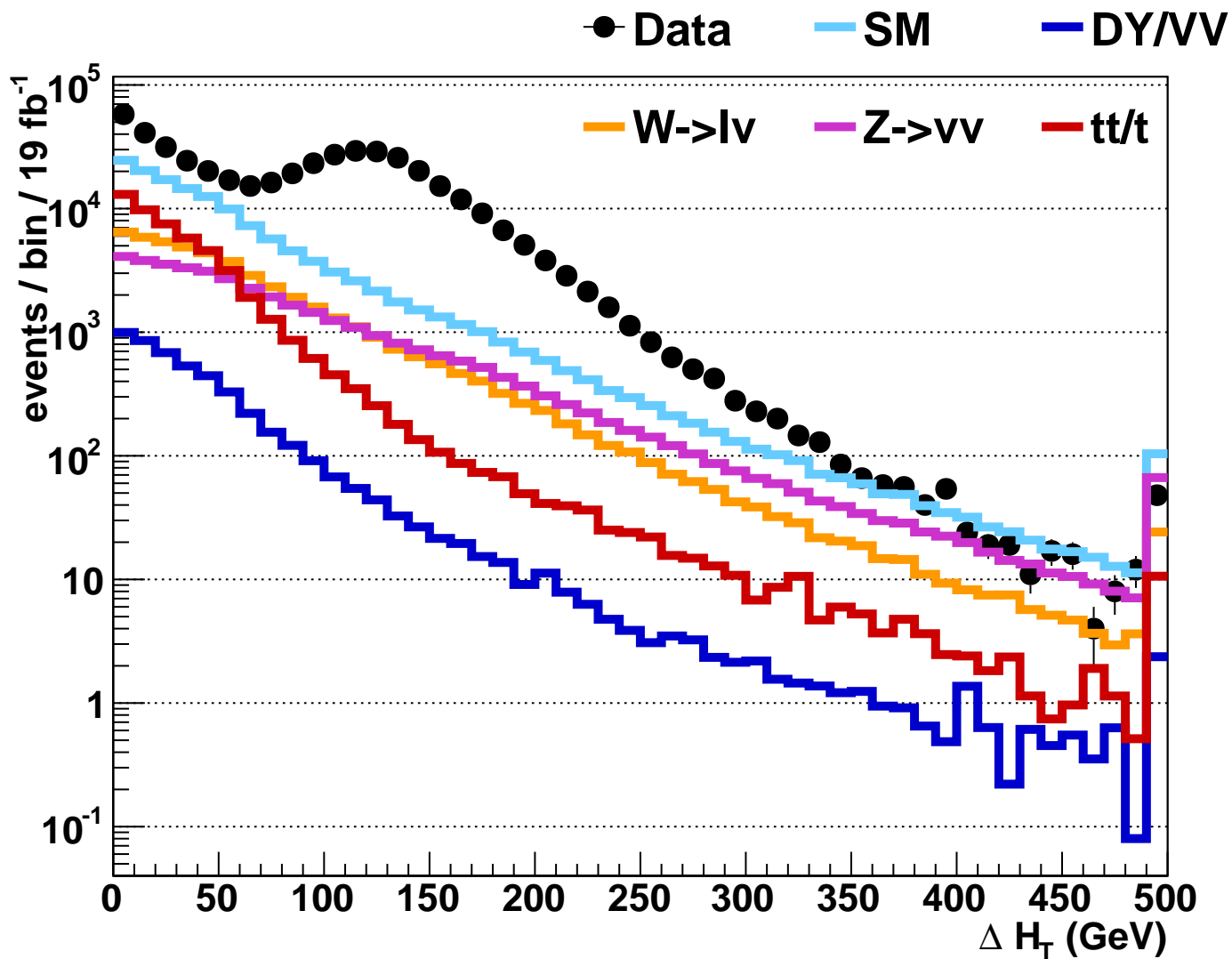




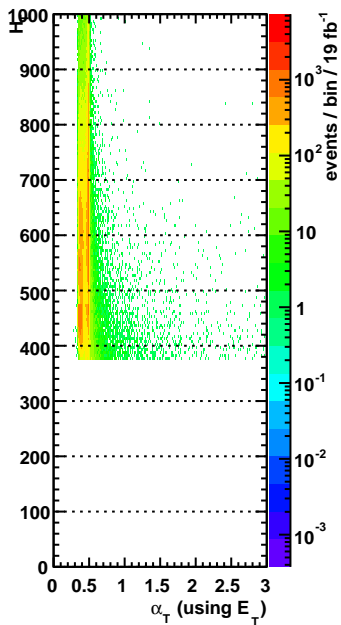




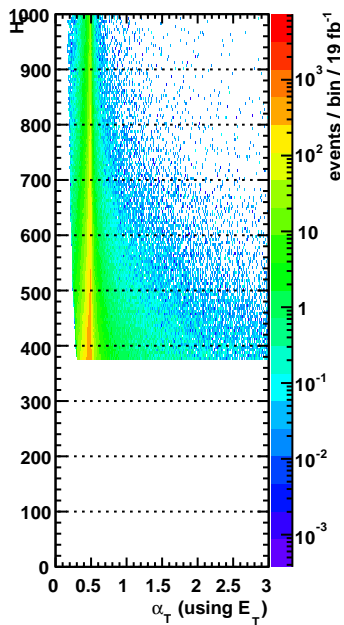




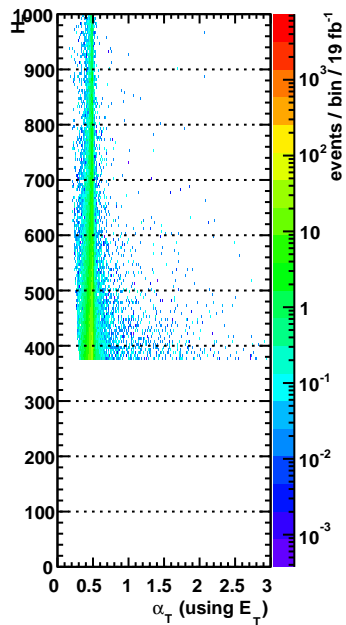
Data



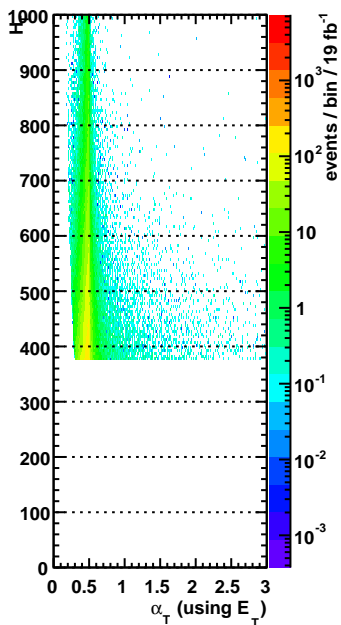
SM



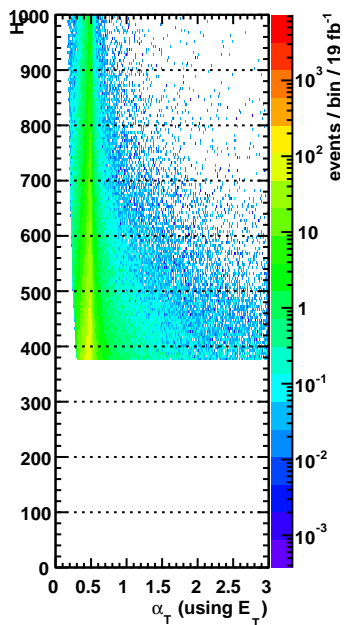
DY/VV



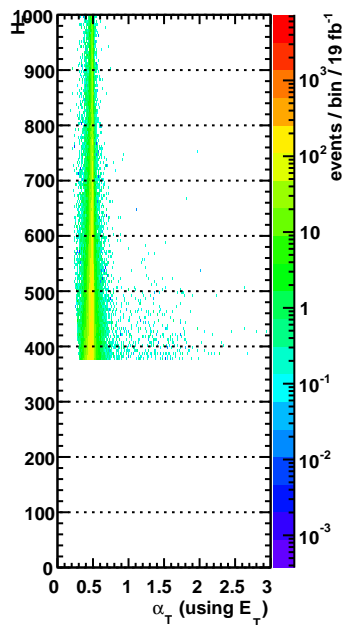
W->lv



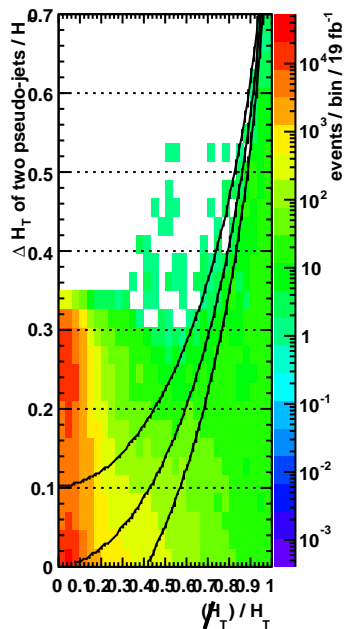
Z->vv



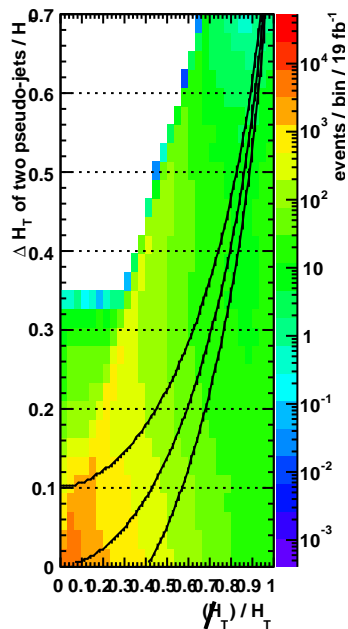
tt/t



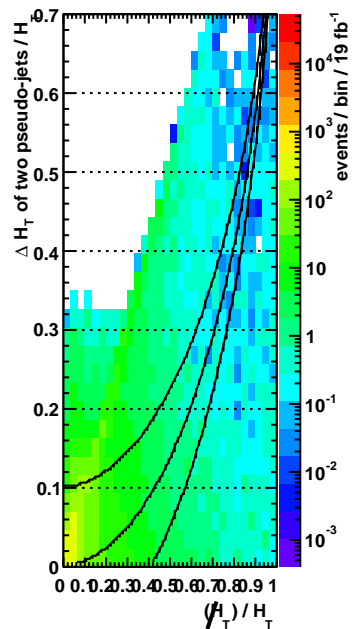
Data



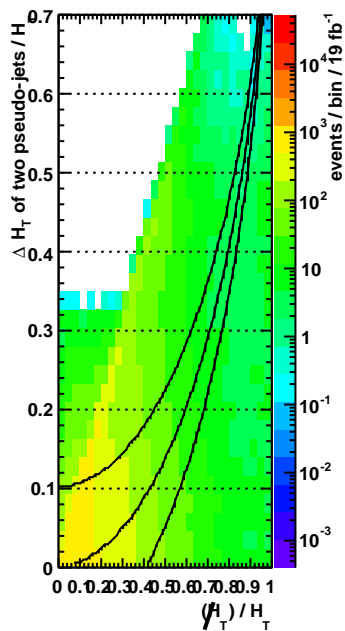
SM



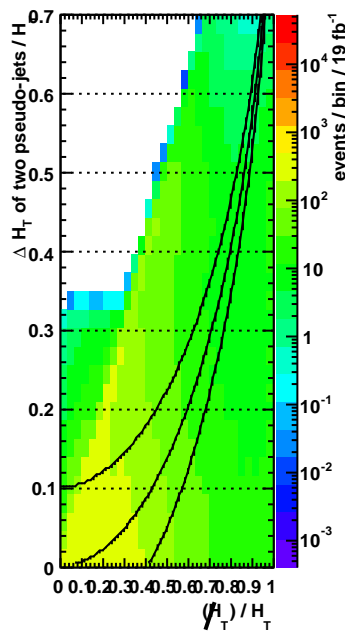
DY/VV



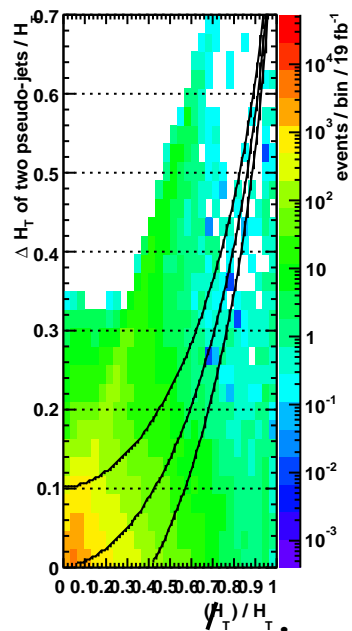
W-→lv



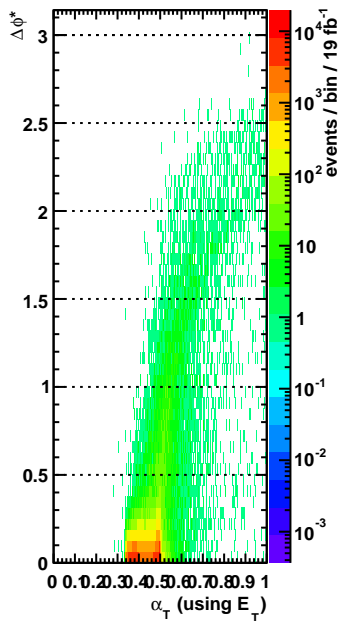
Z-→vv



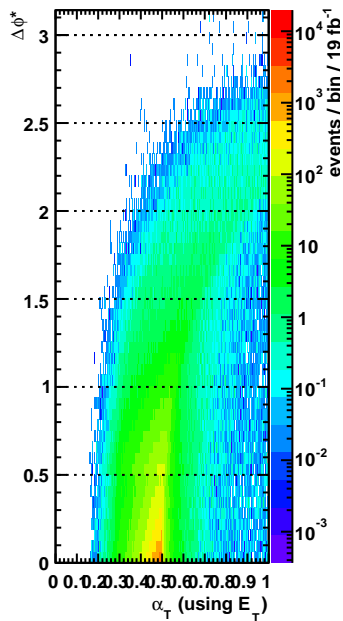
tt/t



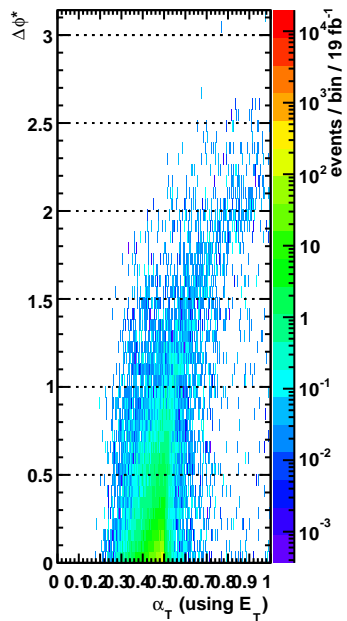
Data



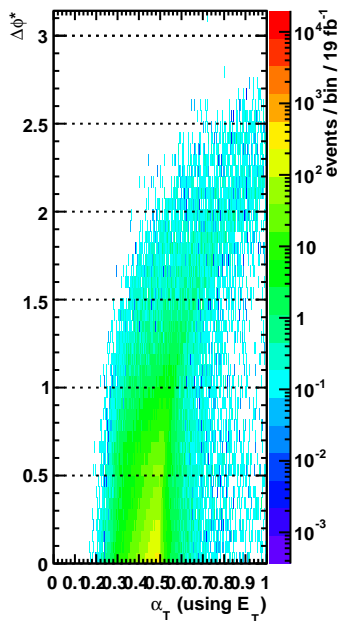
SM



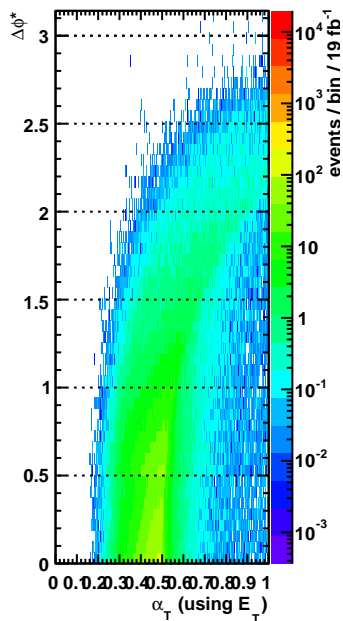
DY/VV



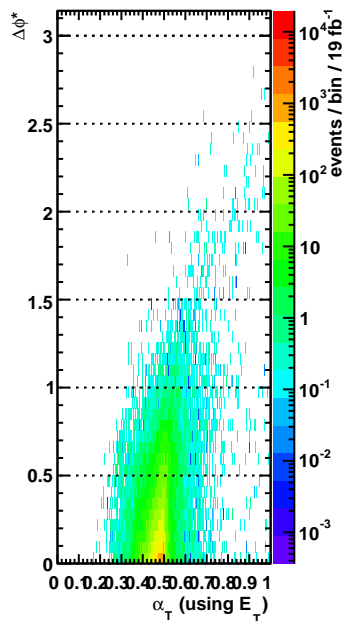
W->lv

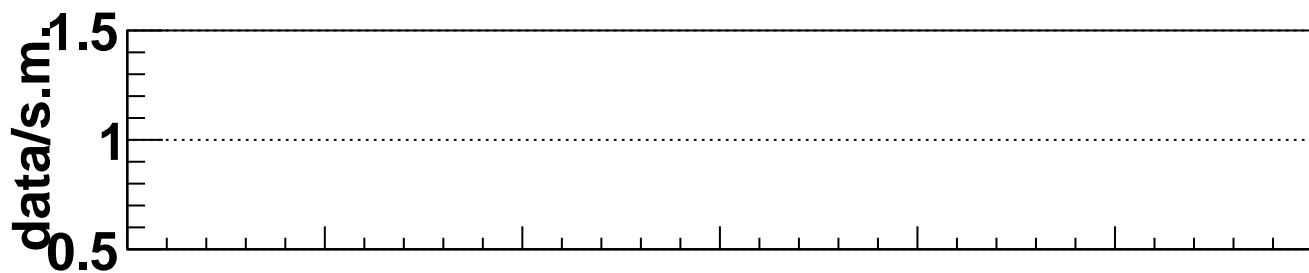
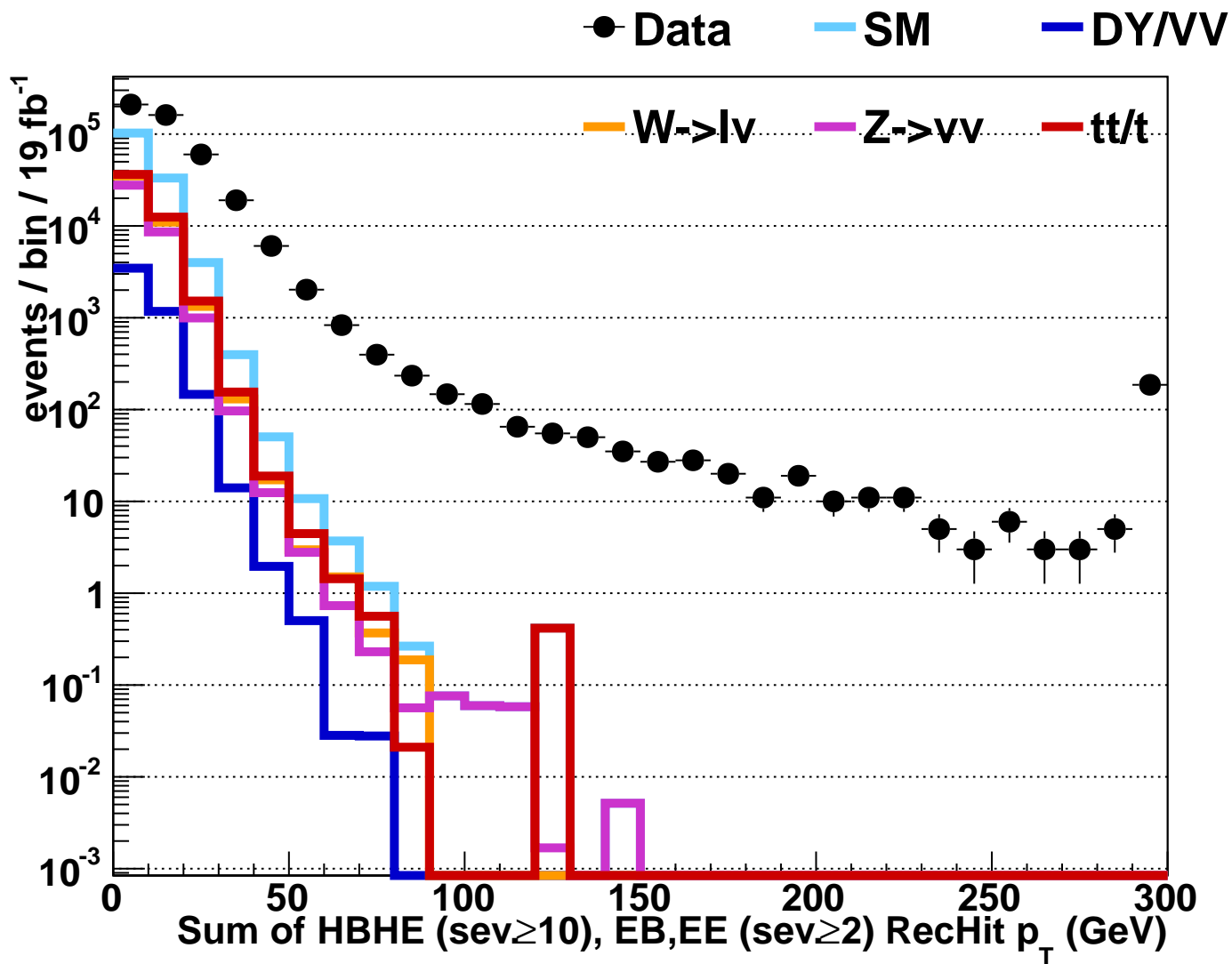


Z->vv



tt/t





```

o: HTxTriggerMap HTxTriggerMap

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

u: multiplicity 0 <= xcak5JetPFIndicesWithOddMuonPat <= 0
v: multiplicity 2 <= xcak5JetPFIndicesPat
w: multiplicity 0 <= xcak5JetPFIndicesOtherPat <= 0
x: multiplicity 0 <= electronIndicesPF <= 0
y: multiplicity 0 <= photonIndicesPat <= 0

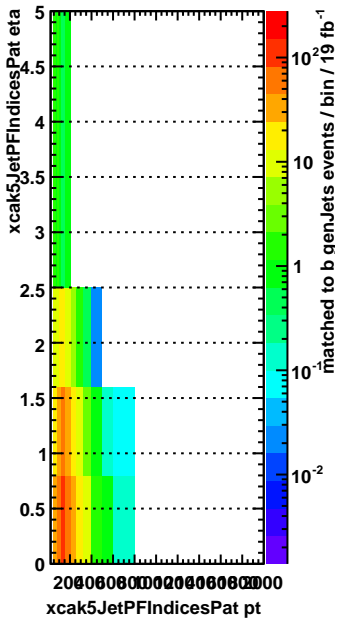
z: multiplicity 0 <= muonIndicesPF <= 0
A: multiplicity 0 <= electronIndicesUnmatchedPF <= 0
B: multiplicity 0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
D: value xcak5JetPFMhthighPtPatOvermetP4TypeIPF<=1.25

E: value PFRecHitSumPt<=30.00
F: value 0.55<=xcak5JetPFAlphaTEtPat

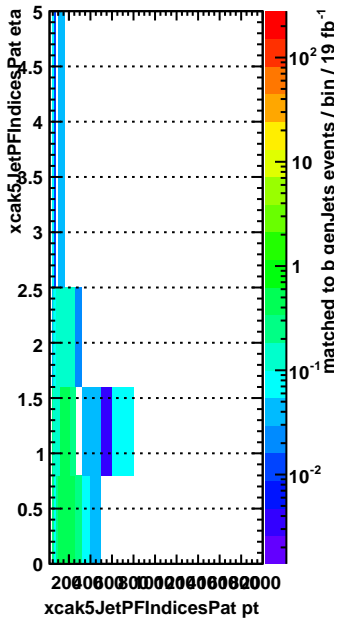
```

	Data	SM	DY/VV	W->lv	Z->vv
o:	10701040	-	-	-	-
p:	10479362	4.664(2)e+7	4.328(3)e+6	3.100(2)e+7	6.113(1)e+6
q:	10313235	1.0522(5)e+7	8.35(1)e+5	5.802(5)e+6	1.4714(6)e+6
r:	8744352	2.3977(9)e+6	1.716(2)e+5	9.628(7)e+5	2.281(1)e+5
s:	7450225	1.1536(5)e+6	6.828(7)e+4	3.506(3)e+5	8.863(6)e+4
t:	7446364	1.1516(5)e+6	6.818(7)e+4	3.503(3)e+5	8.862(6)e+4
u:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
v:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
w:	6960603	1.1139(5)e+6	6.586(7)e+4	3.413(3)e+5	8.741(5)e+4
x:	6936664	9.505(4)e+5	4.973(7)e+4	2.522(2)e+5	8.739(5)e+4
y:	6905535	9.427(4)e+5	4.895(6)e+4	2.473(2)e+5	8.736(5)e+4
z:	6880817	7.843(4)e+5	3.433(6)e+4	1.572(2)e+5	8.735(5)e+4
A:	6879619	7.838(4)e+5	3.430(6)e+4	1.571(2)e+5	8.734(5)e+4
B:	6879103	7.837(4)e+5	3.429(6)e+4	1.570(2)e+5	8.733(5)e+4
C:	1312306	2.351(2)e+5	9.29(3)e+3	6.33(1)e+4	4.425(4)e+4
D:	460848	1.404(1)e+5	4.80(2)e+3	4.752(9)e+4	3.748(4)e+4
E:	431473	1.399(1)e+5	4.78(2)e+3	4.737(9)e+4	3.737(4)e+4
F:	6313	6.64(2)e+3	102(3)	1.98(2)e+3	3.71(1)e+3

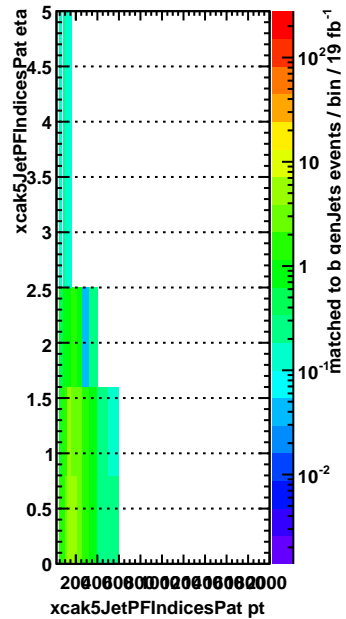
SM



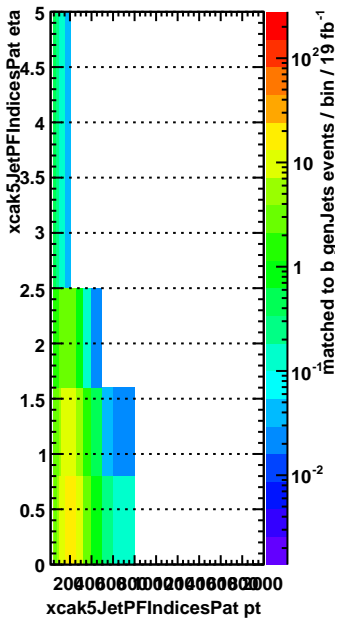
DY/VV



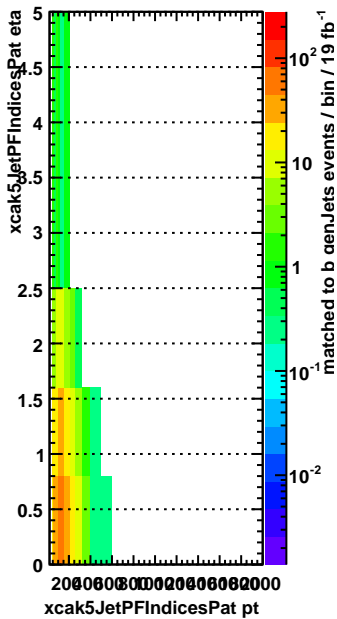
W->lv



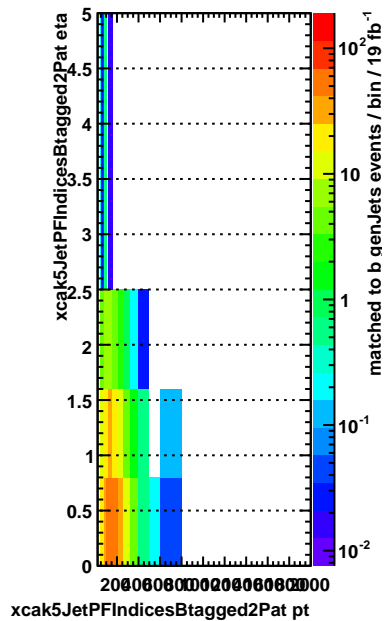
Z->vv



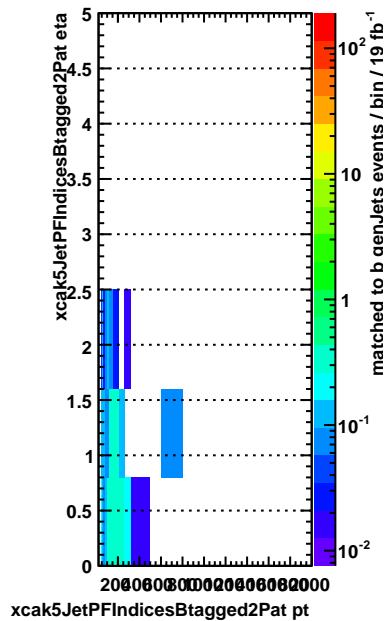
tt/t



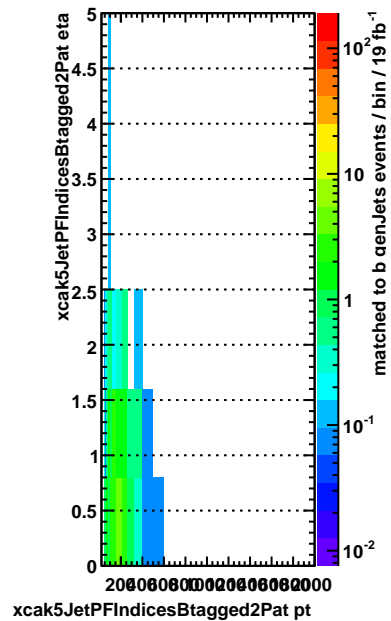
SM



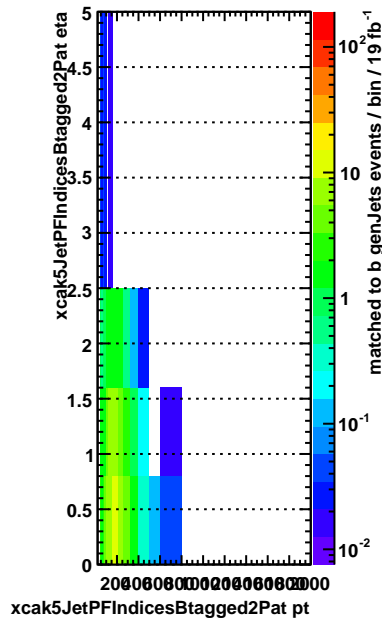
DY/VV



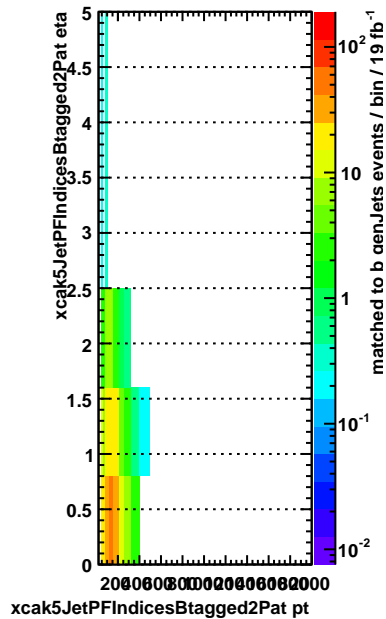
W->lv



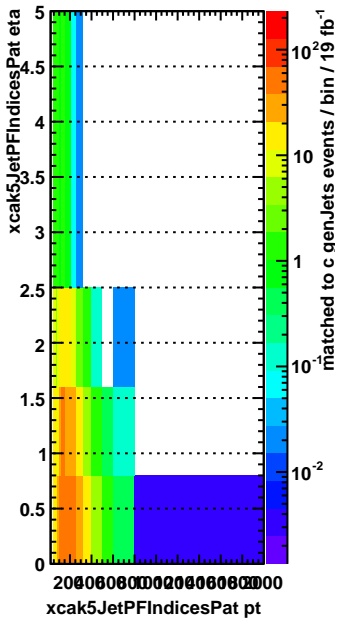
Z->vv



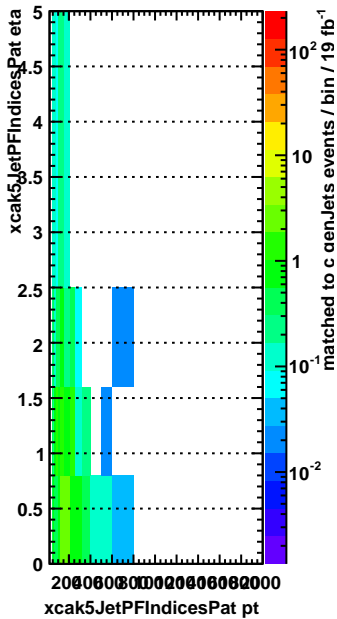
tt/t



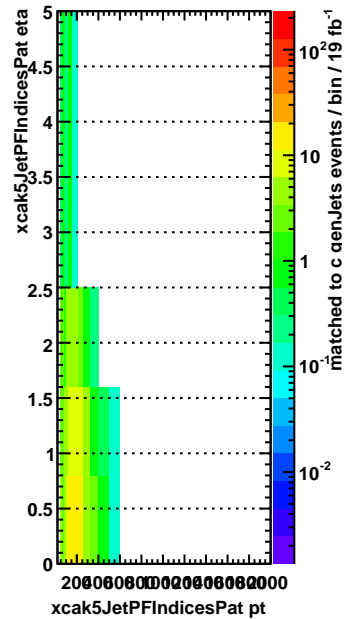
SM



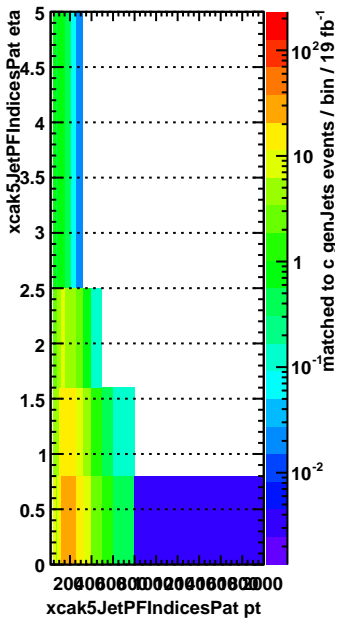
DY/VV



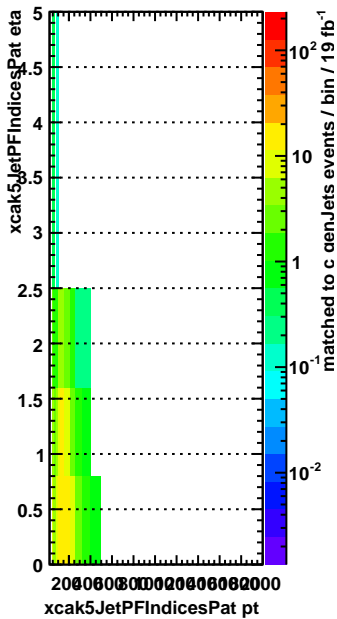
W->lv



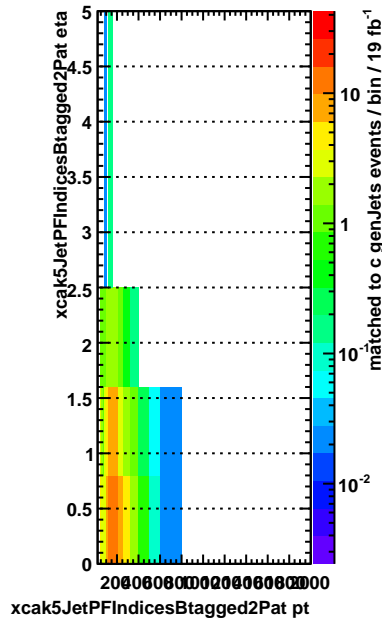
Z->vv



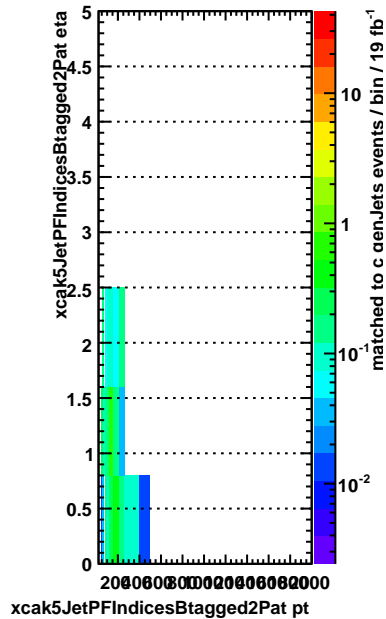
tt/t



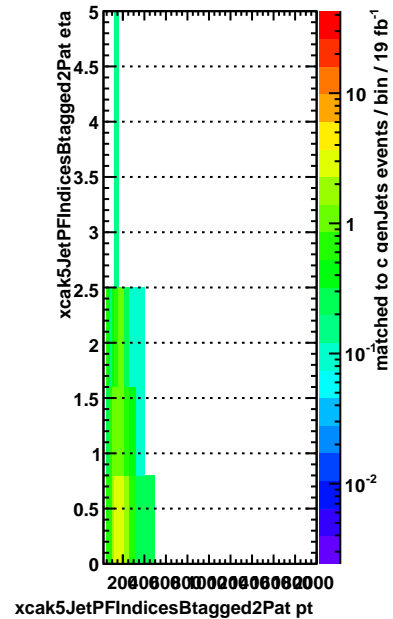
SM



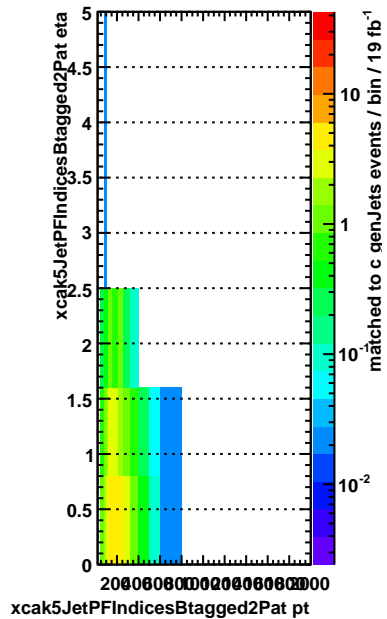
DY/VV



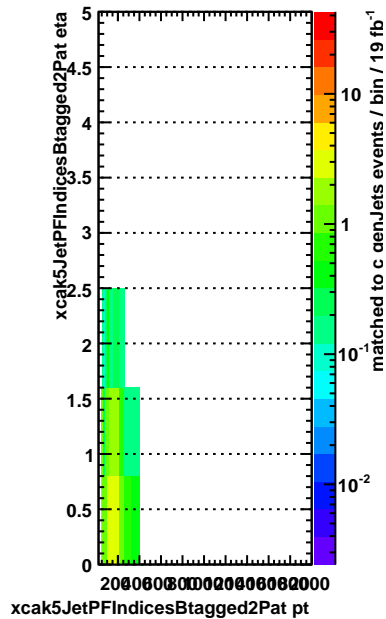
W->lv



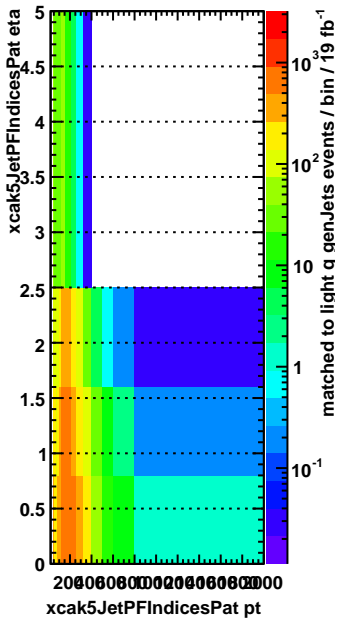
Z->vv



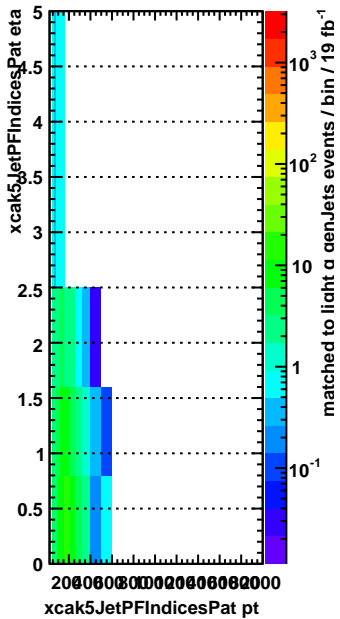
tt/t



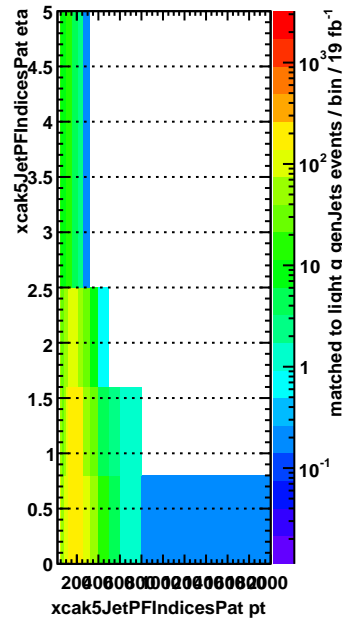
SM



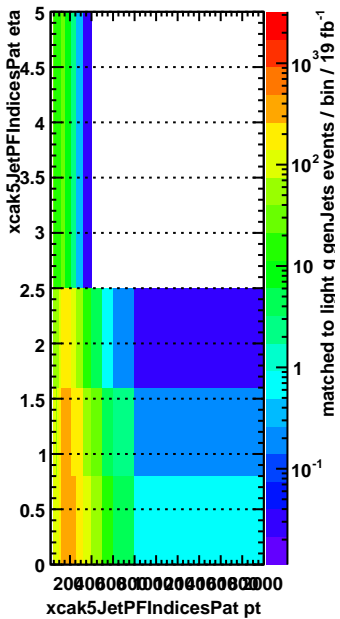
DY/VV



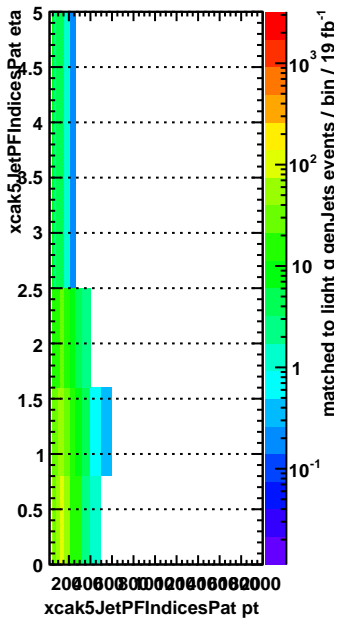
W->lv



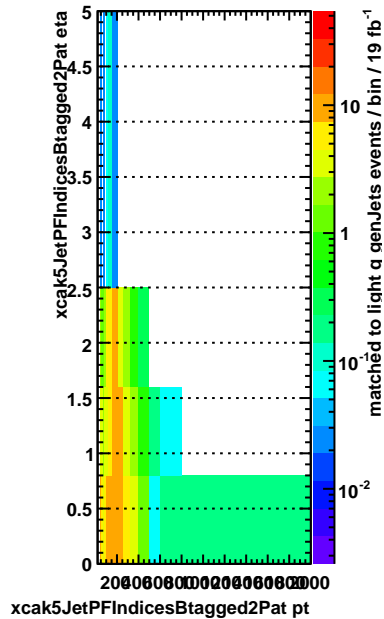
Z->vv



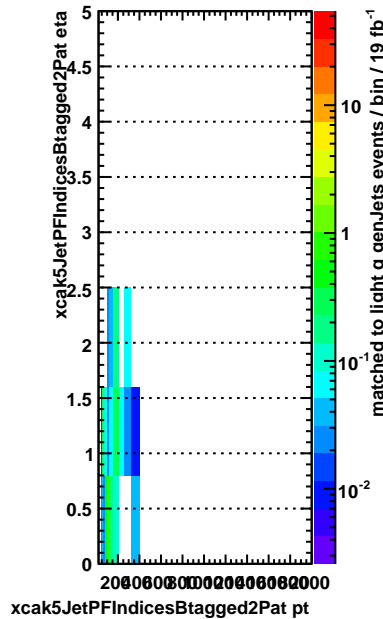
tt/t



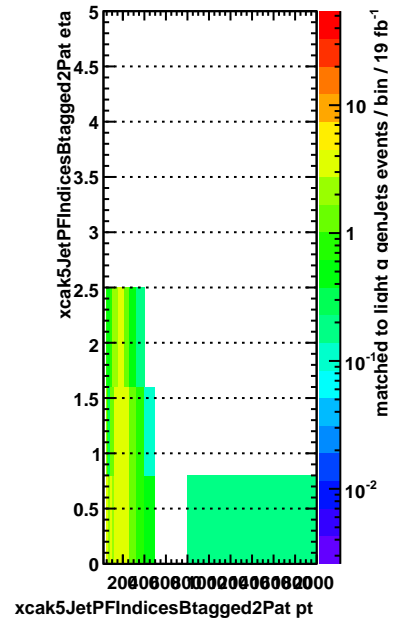
SM



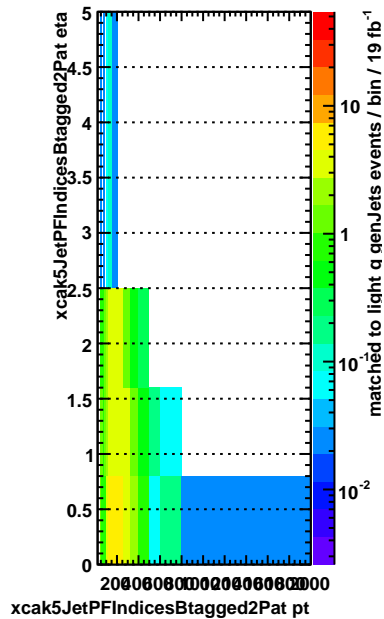
DY/VV



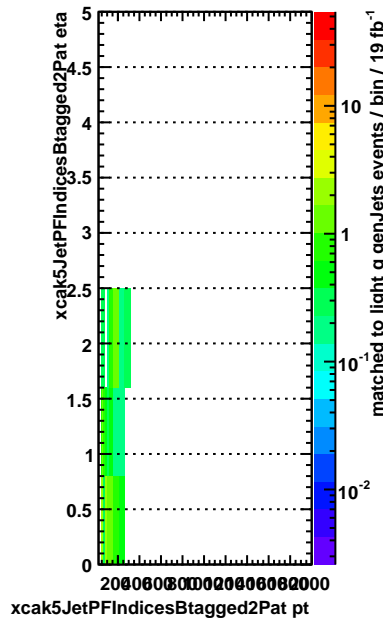
W->lv

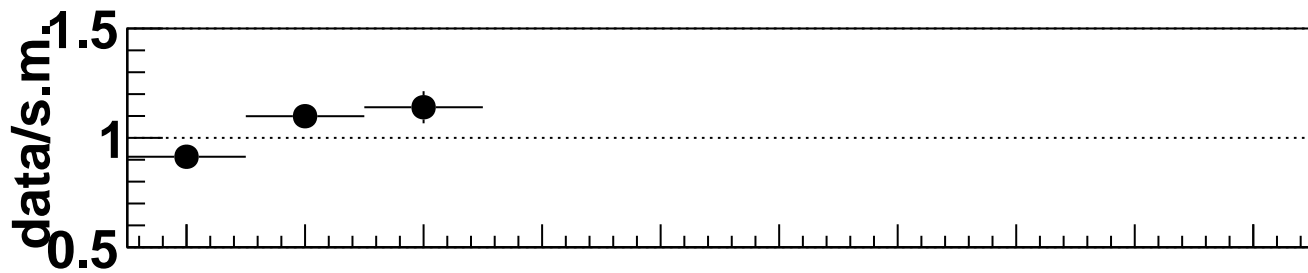
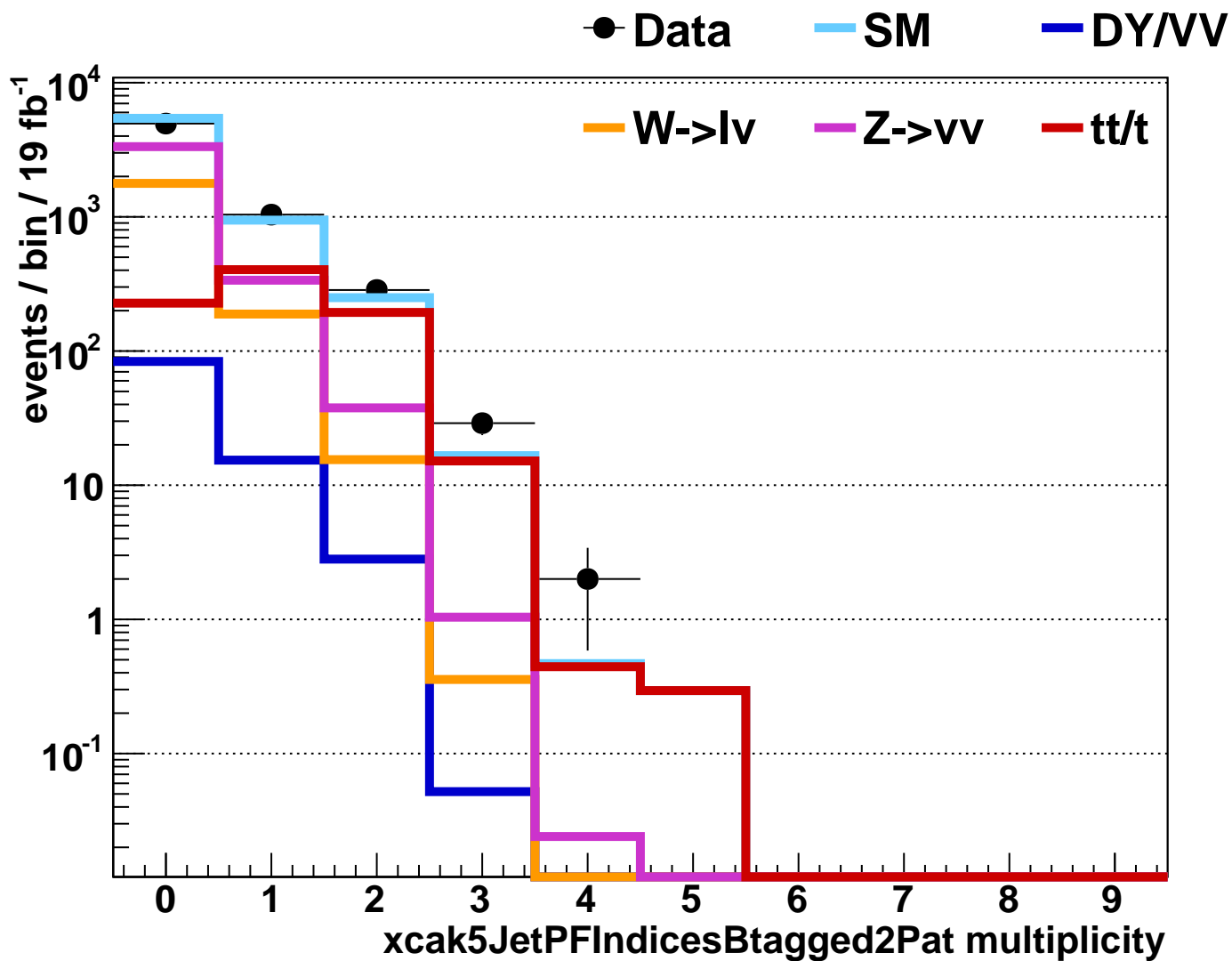


Z->vv



tt/t





```

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

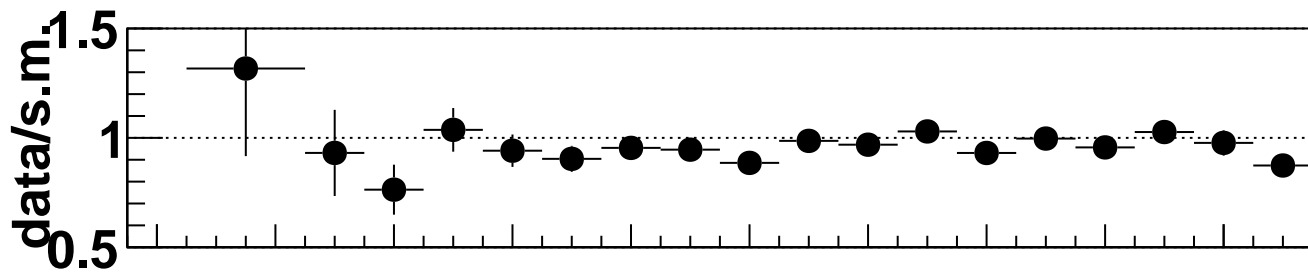
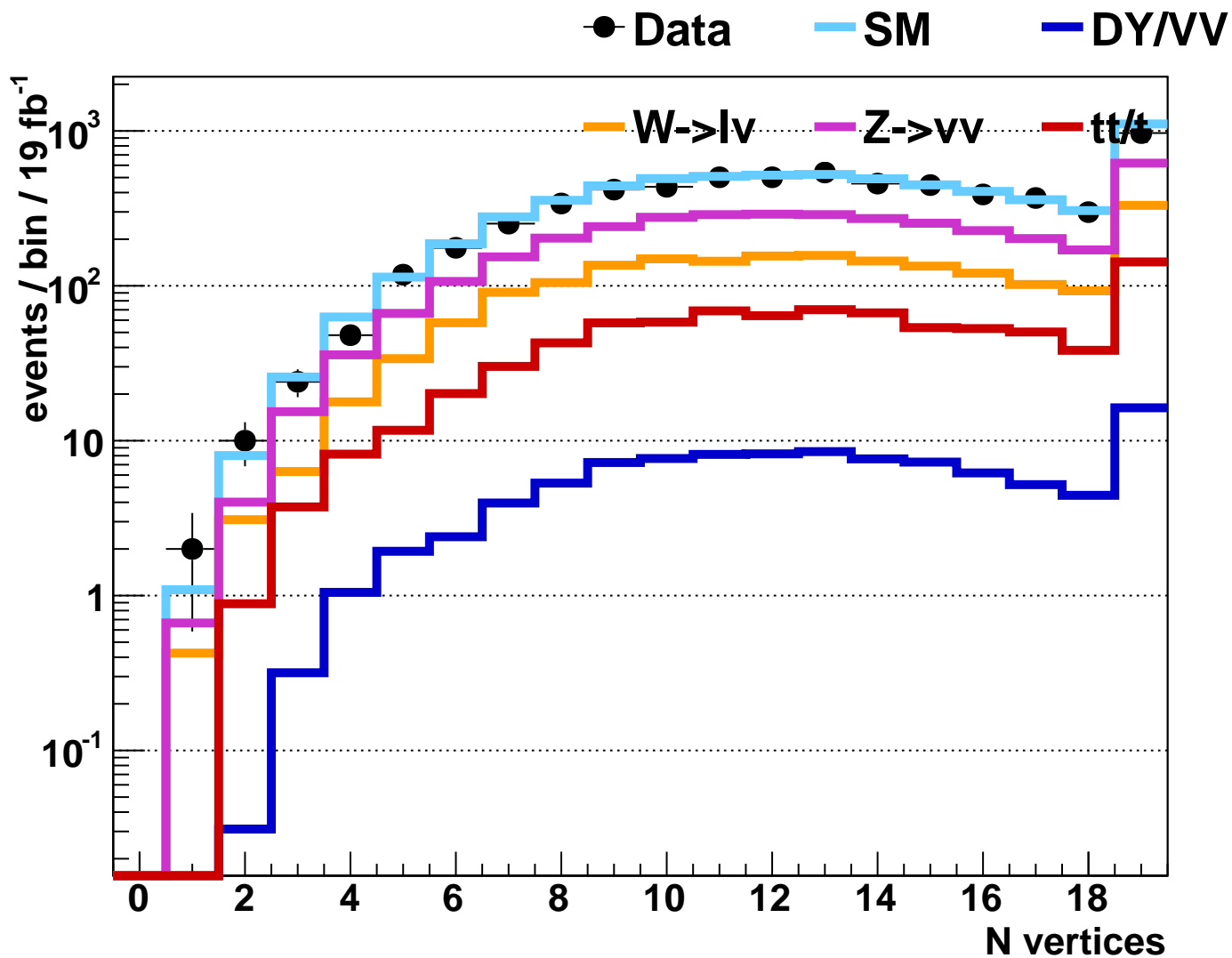
u: multiplicity           0 <= xcak5JetPFIndicesWithOddMuonPat <= 0
v: multiplicity           2 <= xcak5JetPFIndicesPat
w: multiplicity           0 <= xcak5JetPFIndicesOtherPat <= 0
x: multiplicity           0 <= electronIndicesPF <= 0
y: multiplicity           0 <= photonIndicesPat <= 0

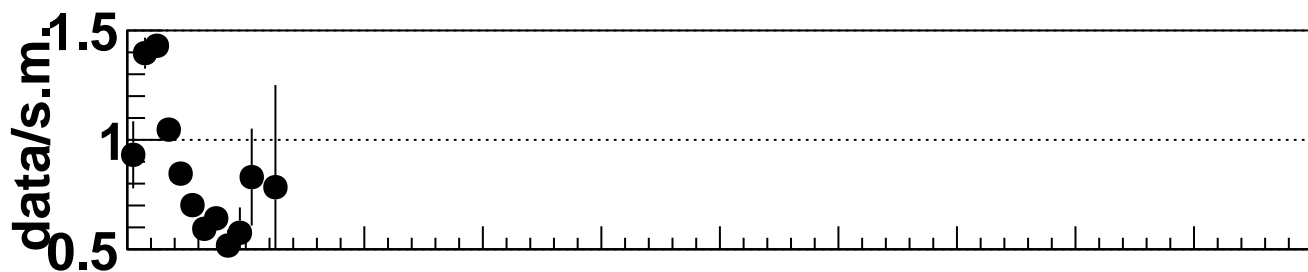
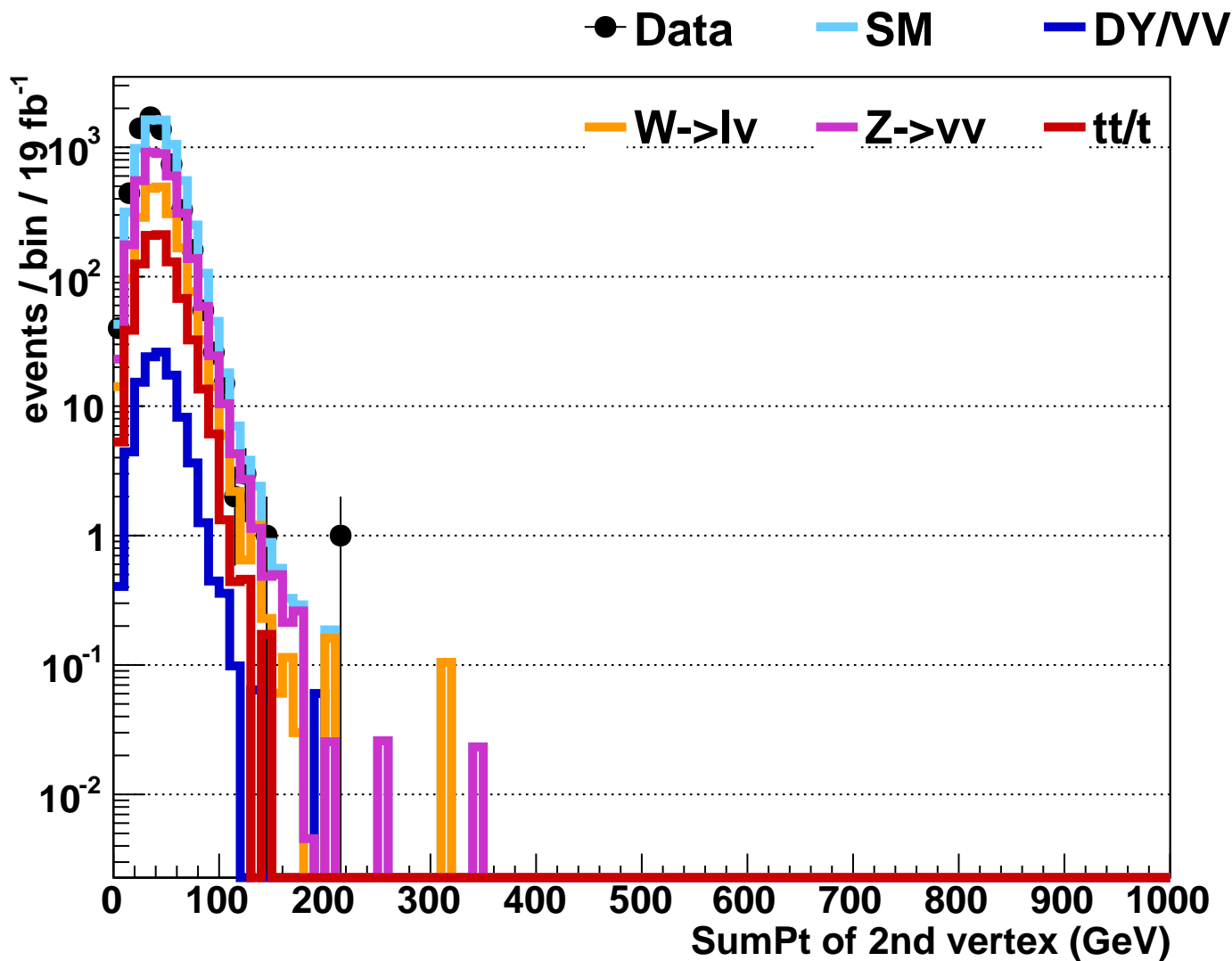
z: multiplicity           0 <= muonIndicesPF <= 0
A: multiplicity           0 <= electronIndicesUnmatchedPF <= 0
B: multiplicity           0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter         xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
D: value                  xcak5JetPFMhthighPtPatOvermetP4TypeIPF<=1.25

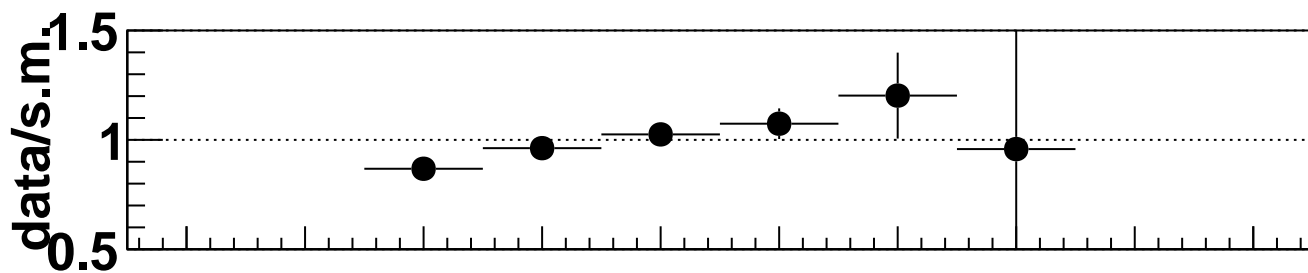
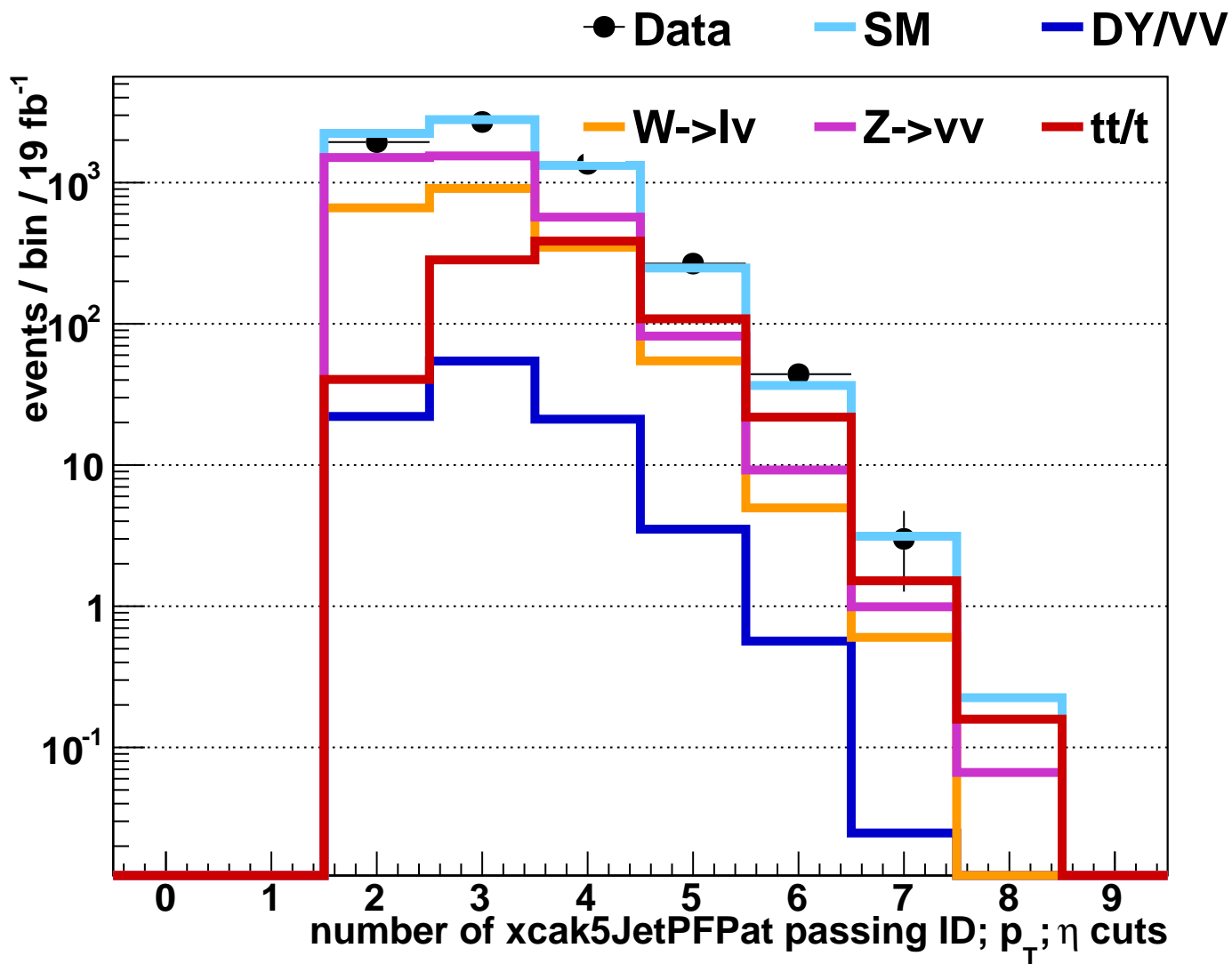
E: value                  PFRecHitSumPt<=30.00
F: value                  0.55<=xcak5JetPFAlphaTETtPat
G: value                  1.00<=hcalLaserEvent2012
H: value                  1.00<=ecalLaserCalibEvent2012

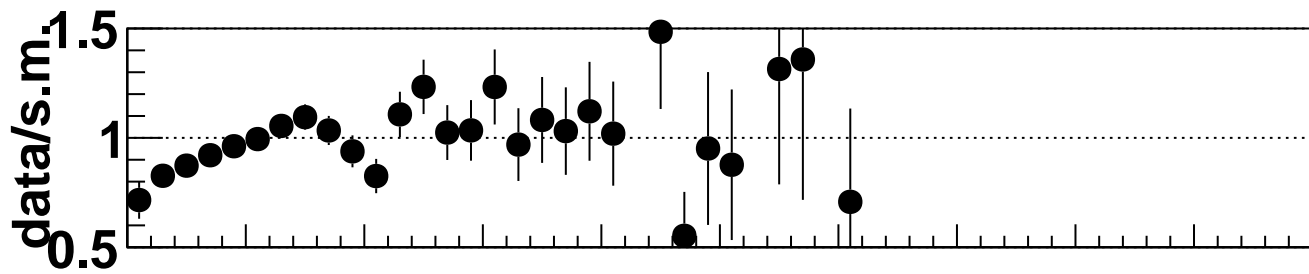
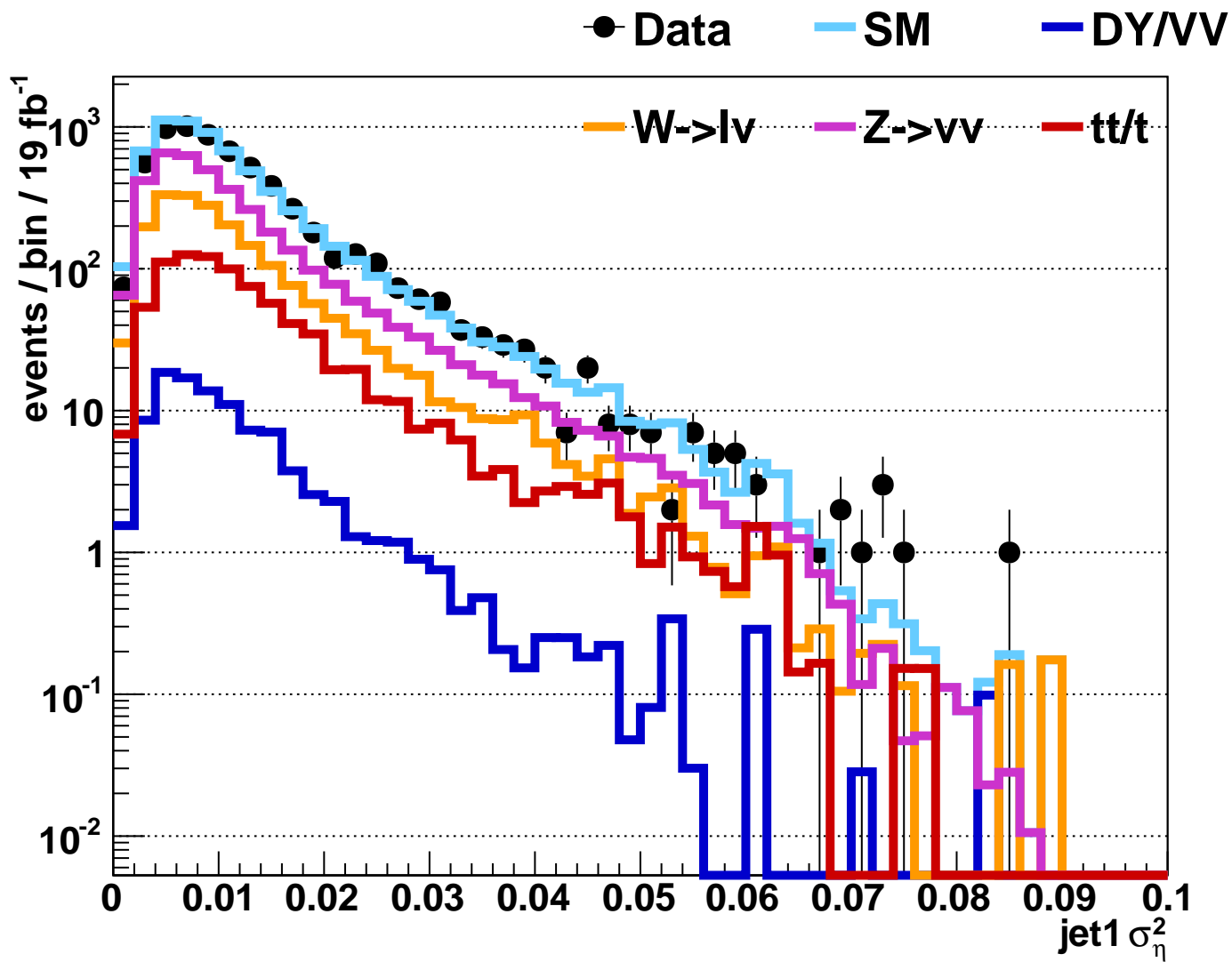
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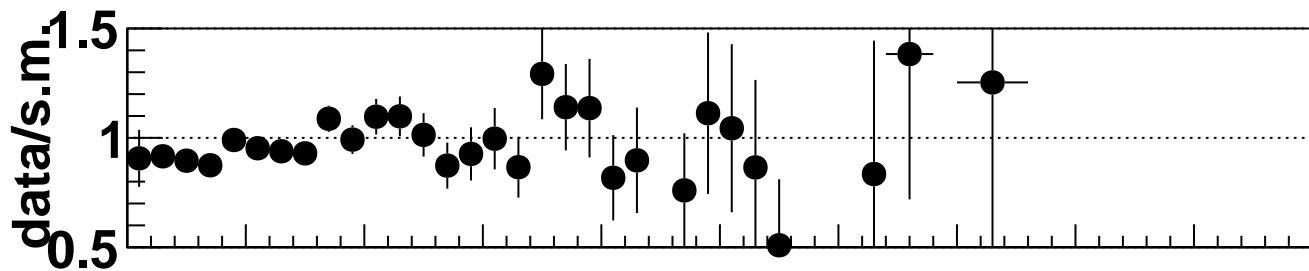
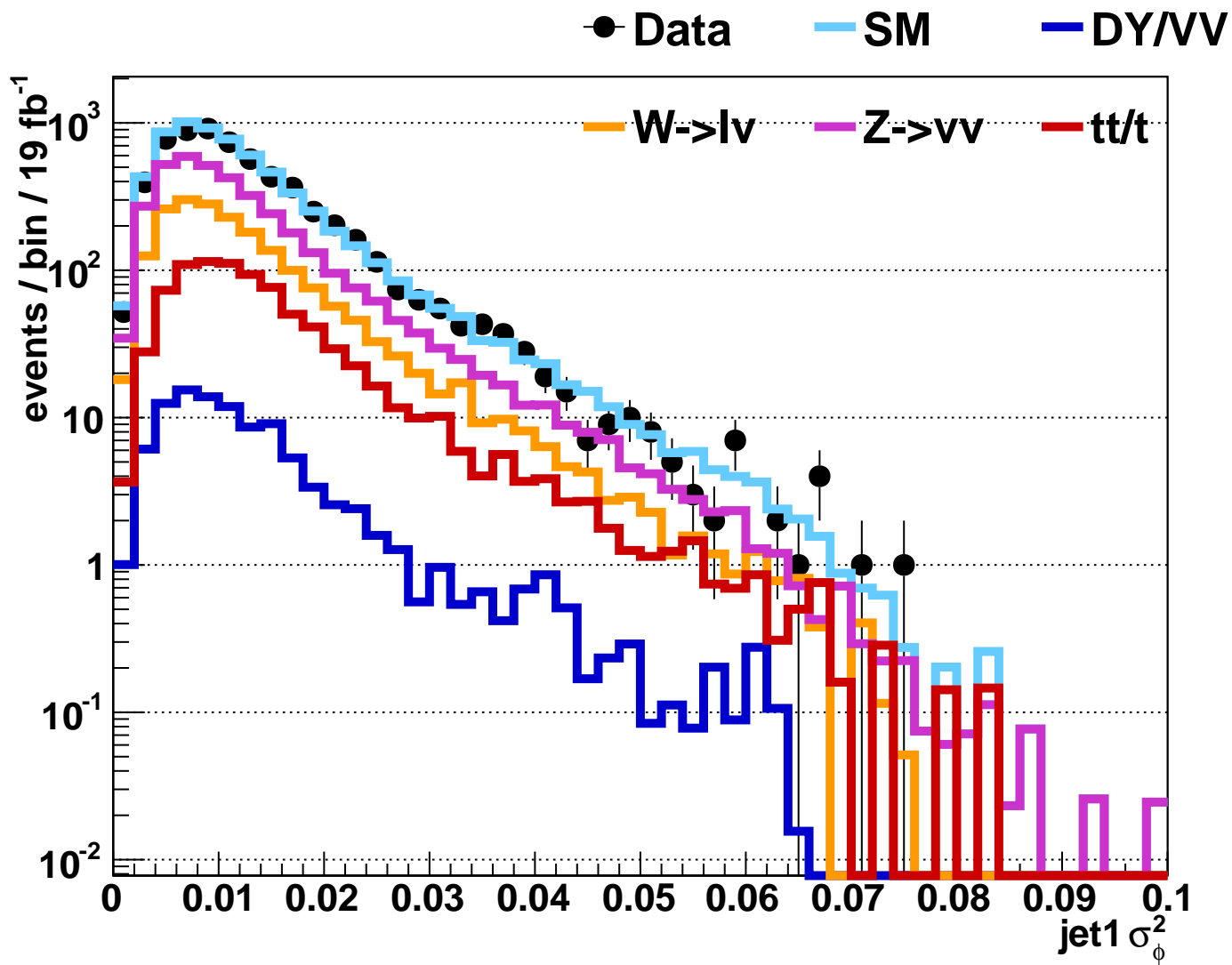
	Data	SM	DY/VV	W->lv	Z->vv
q:	10313235	1.0522(5)e+7	8.35(1)e+5	5.802(5)e+6	1.4714(6)e+6
r:	8744352	2.3977(9)e+6	1.716(2)e+5	9.628(7)e+5	2.281(1)e+5
s:	7450225	1.1536(5)e+6	6.828(7)e+4	3.506(3)e+5	8.863(6)e+4
t:	7446364	1.1516(5)e+6	6.818(7)e+4	3.503(3)e+5	8.862(6)e+4
u:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
v:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
w:	6960603	1.1139(5)e+6	6.586(7)e+4	3.413(3)e+5	8.741(5)e+4
x:	6936664	9.505(4)e+5	4.973(7)e+4	2.522(2)e+5	8.739(5)e+4
y:	6905535	9.427(4)e+5	4.895(6)e+4	2.473(2)e+5	8.736(5)e+4
z:	6880817	7.843(4)e+5	3.433(6)e+4	1.572(2)e+5	8.735(5)e+4
A:	6879619	7.838(4)e+5	3.430(6)e+4	1.571(2)e+5	8.734(5)e+4
B:	6879103	7.837(4)e+5	3.429(6)e+4	1.570(2)e+5	8.733(5)e+4
C:	1312306	2.351(2)e+5	9.29(3)e+3	6.33(1)e+4	4.425(4)e+4
D:	460848	1.404(1)e+5	4.80(2)e+3	4.752(9)e+4	3.748(4)e+4
E:	431473	1.399(1)e+5	4.78(2)e+3	4.737(9)e+4	3.737(4)e+4
F:	6313	6.64(2)e+3	102(3)	1.98(2)e+3	3.71(1)e+3
G:	6313	-	-	-	-
H:	6297	-	-	-	-

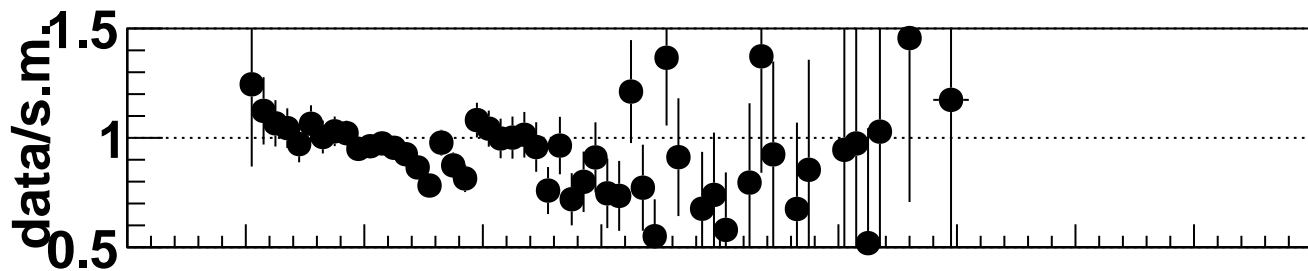
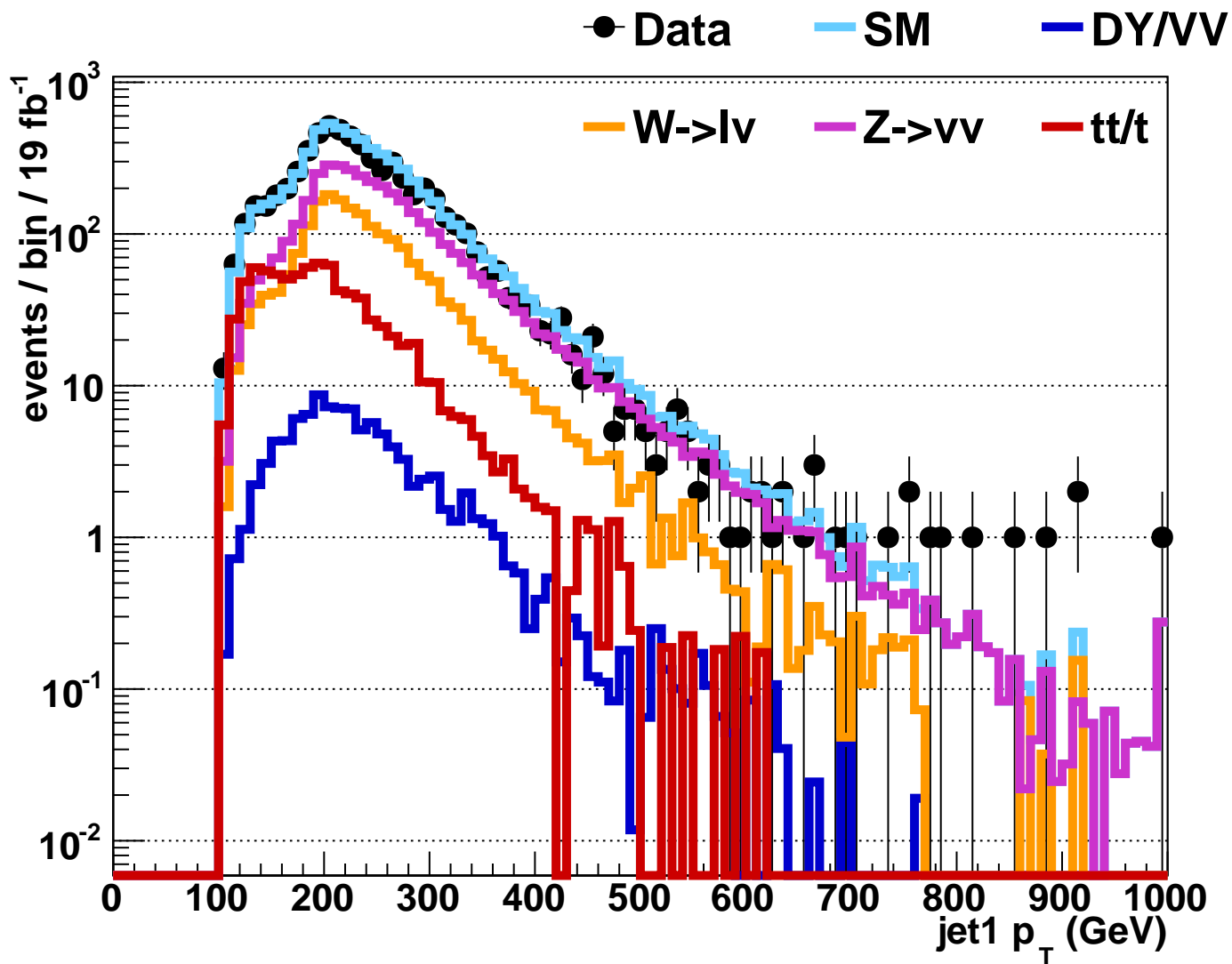


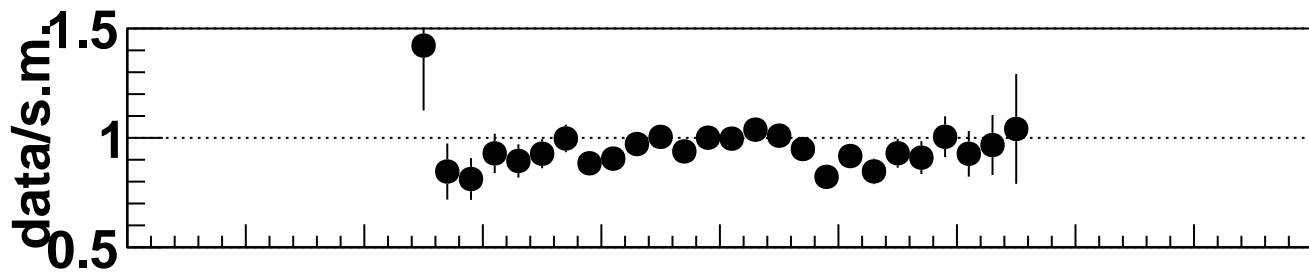
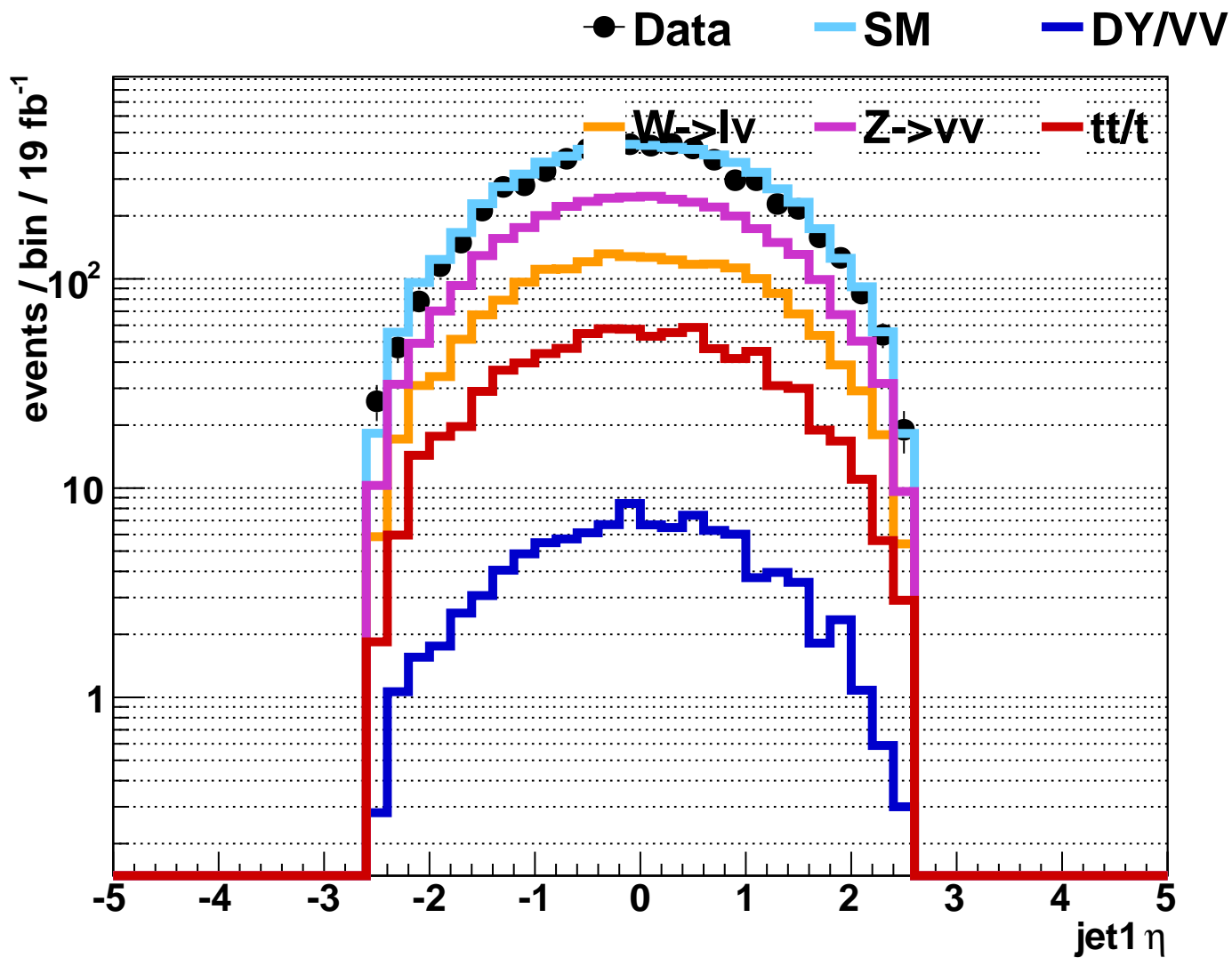


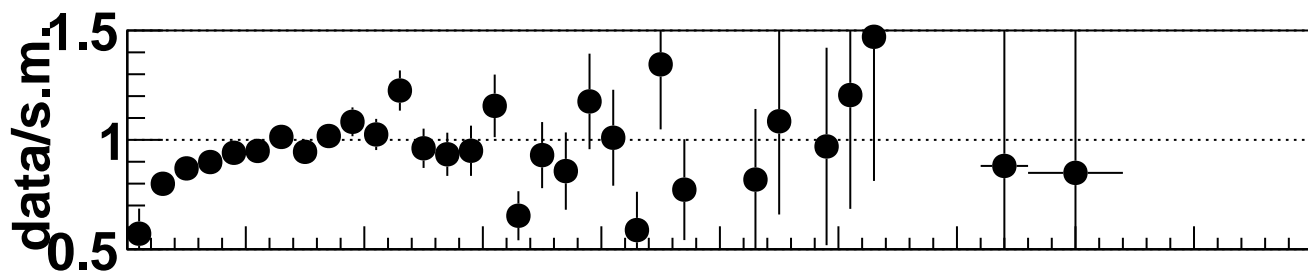
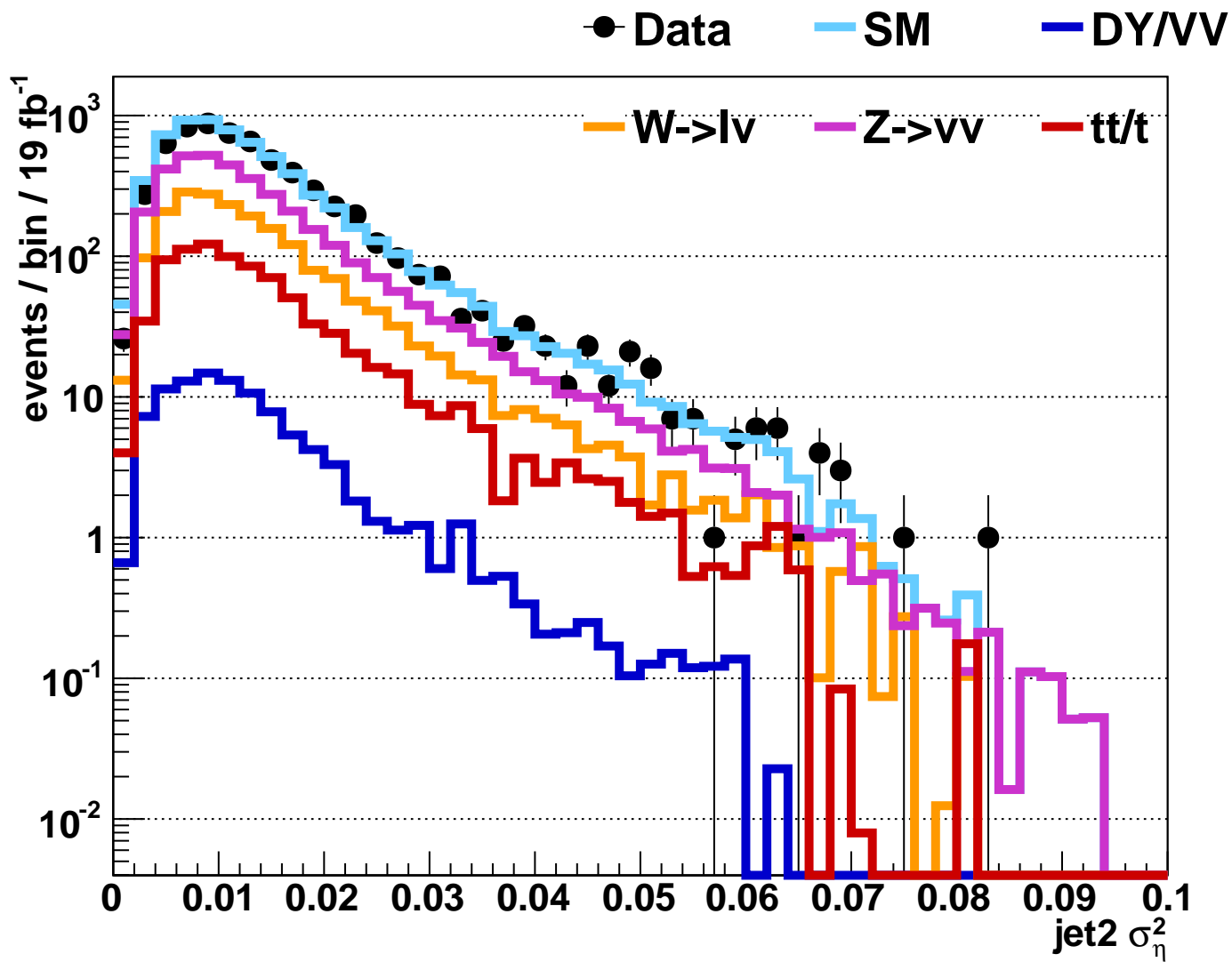


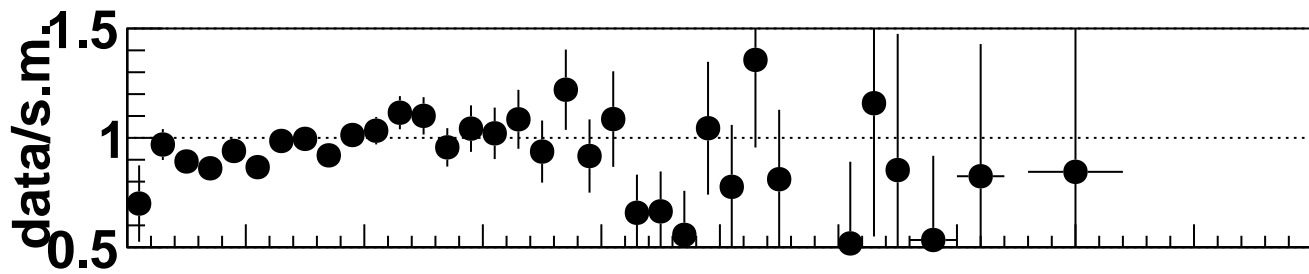
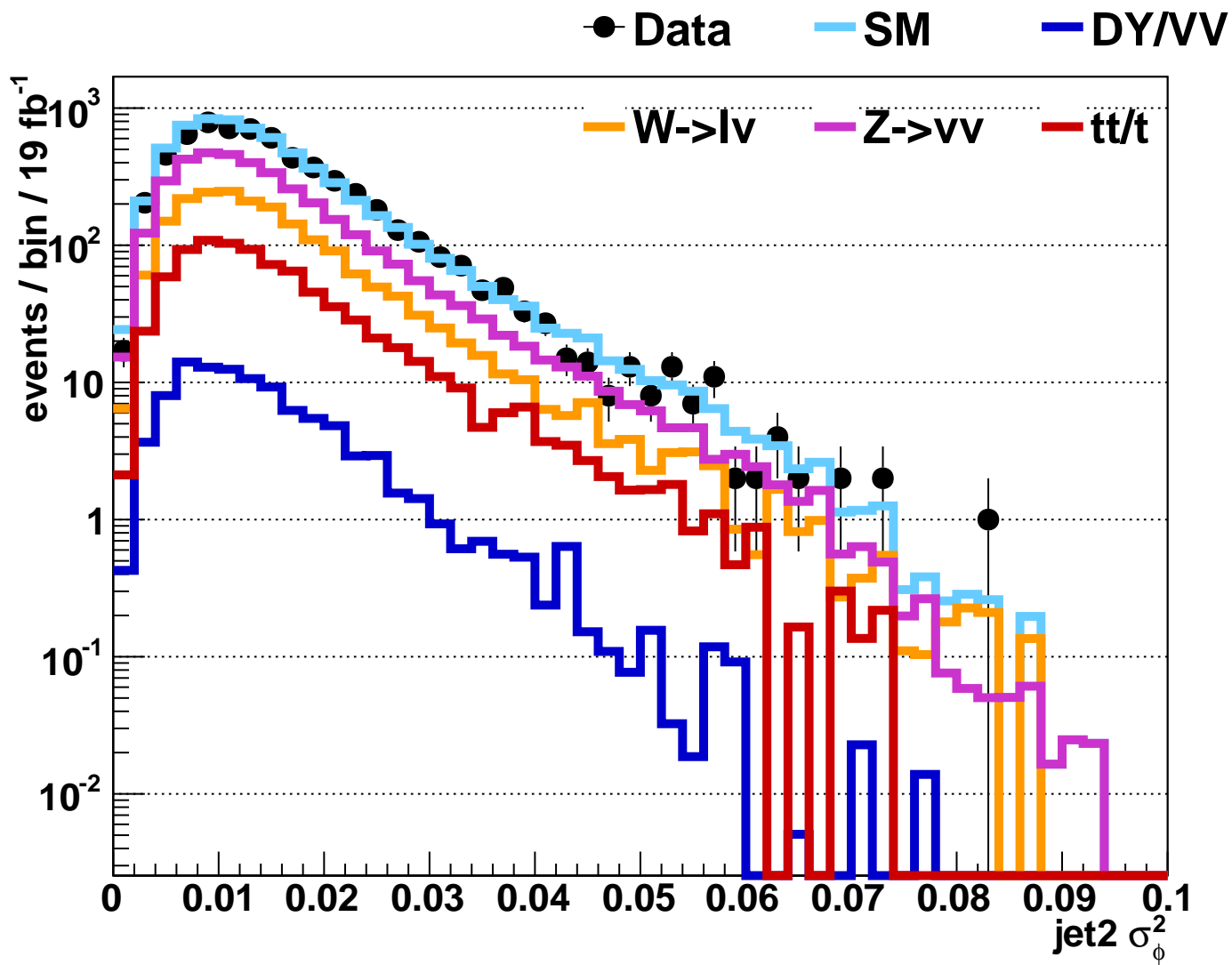


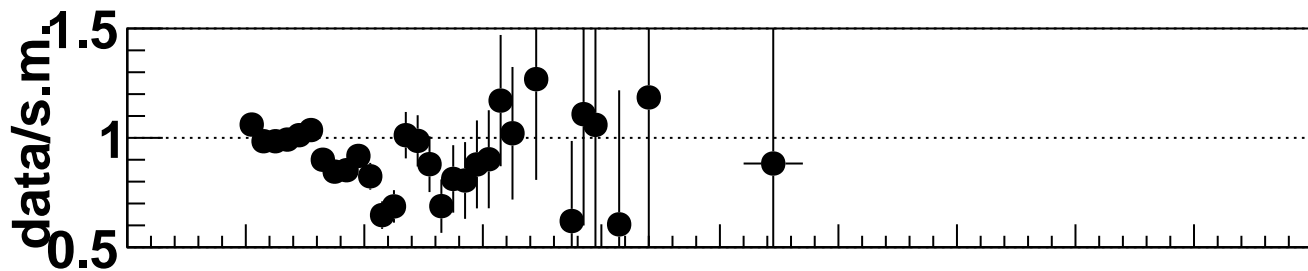
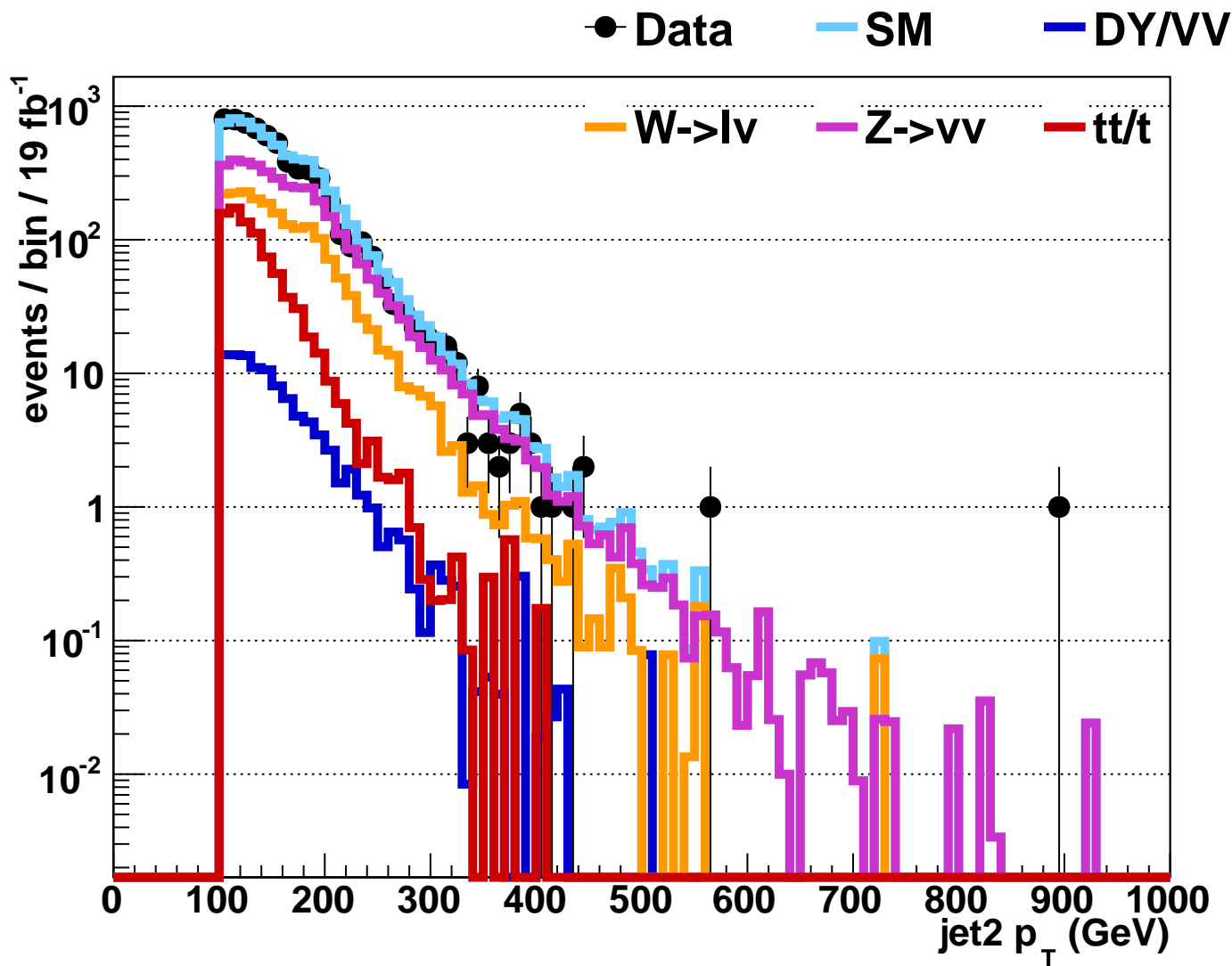


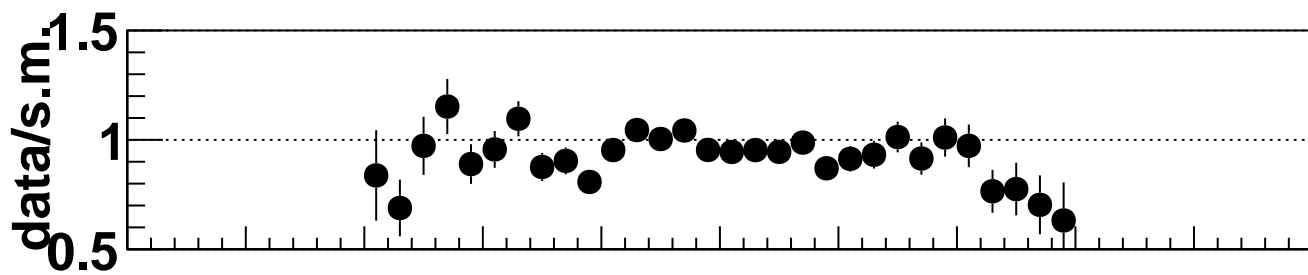
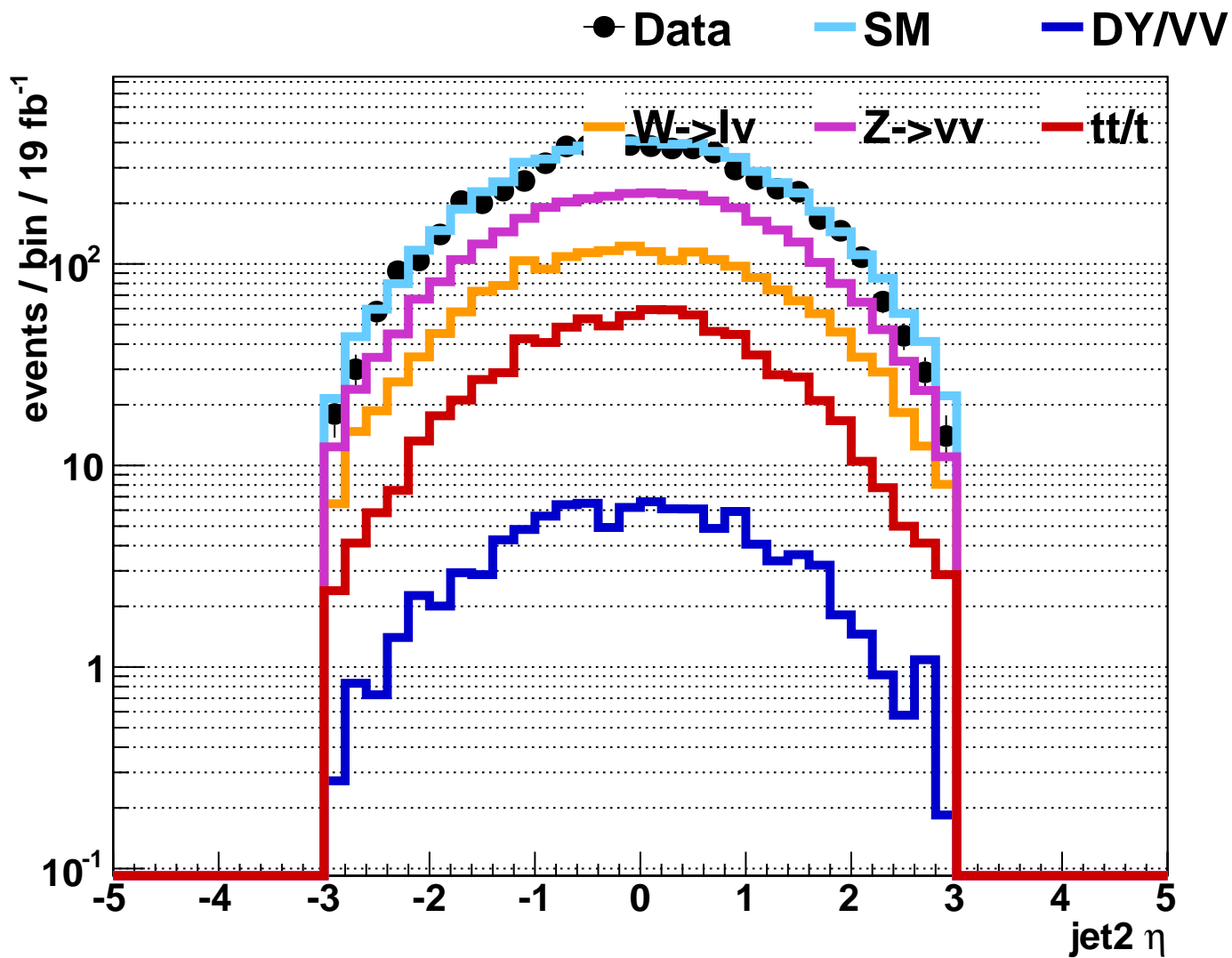


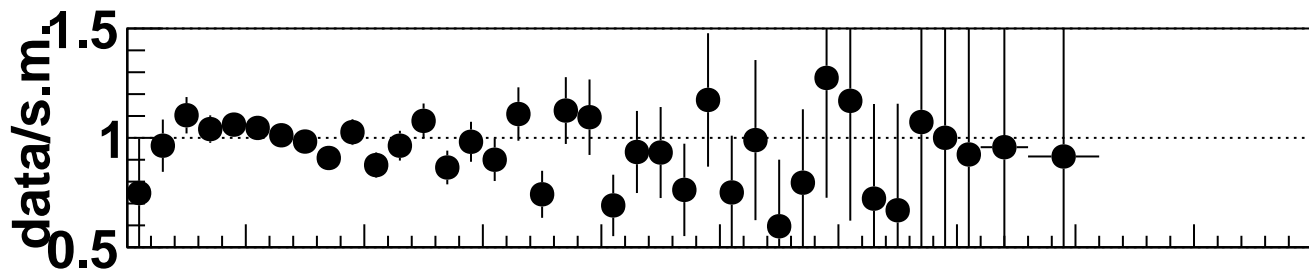
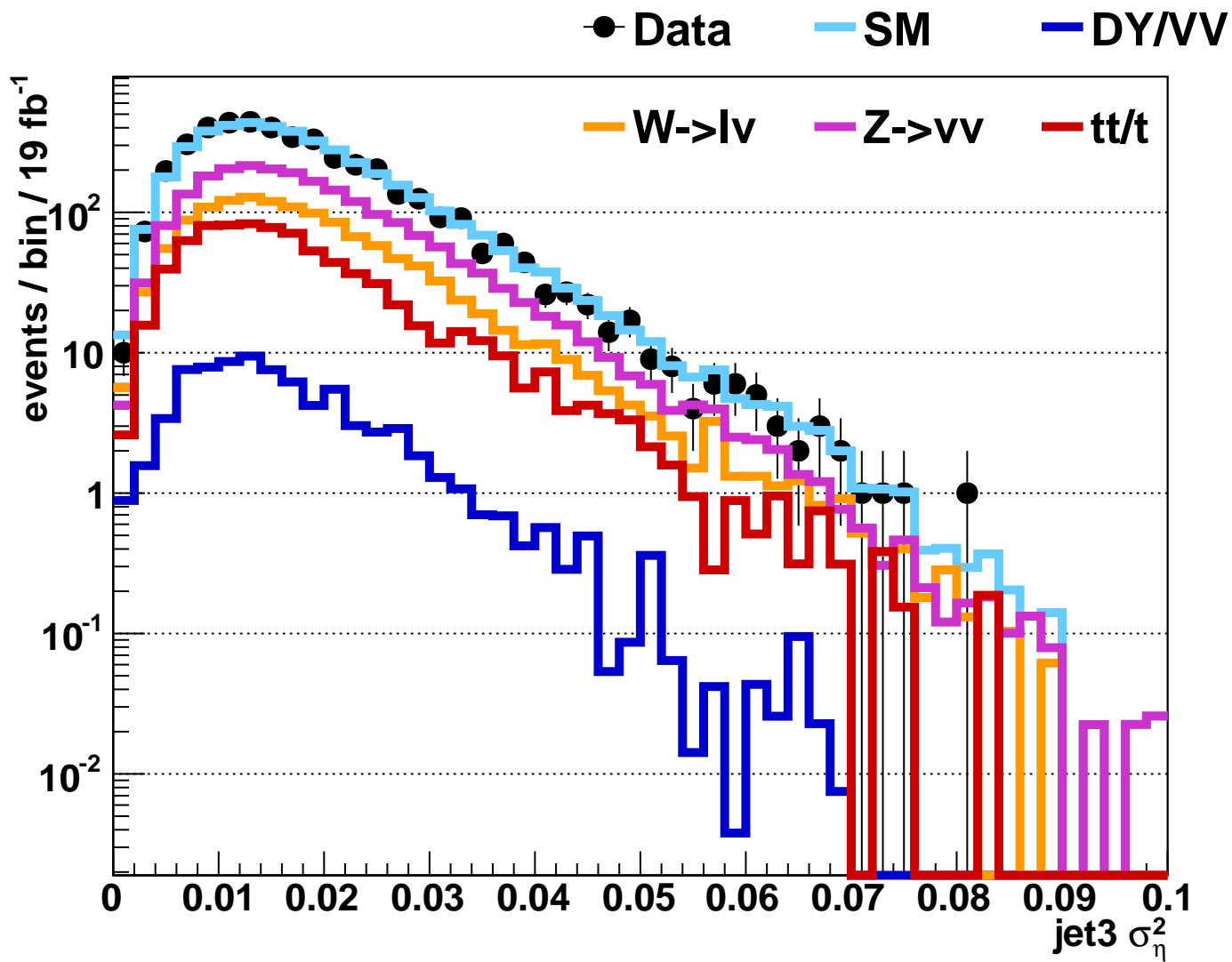


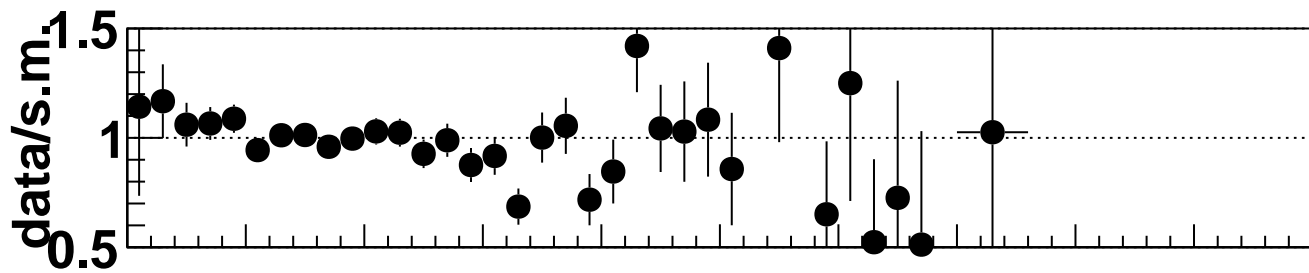
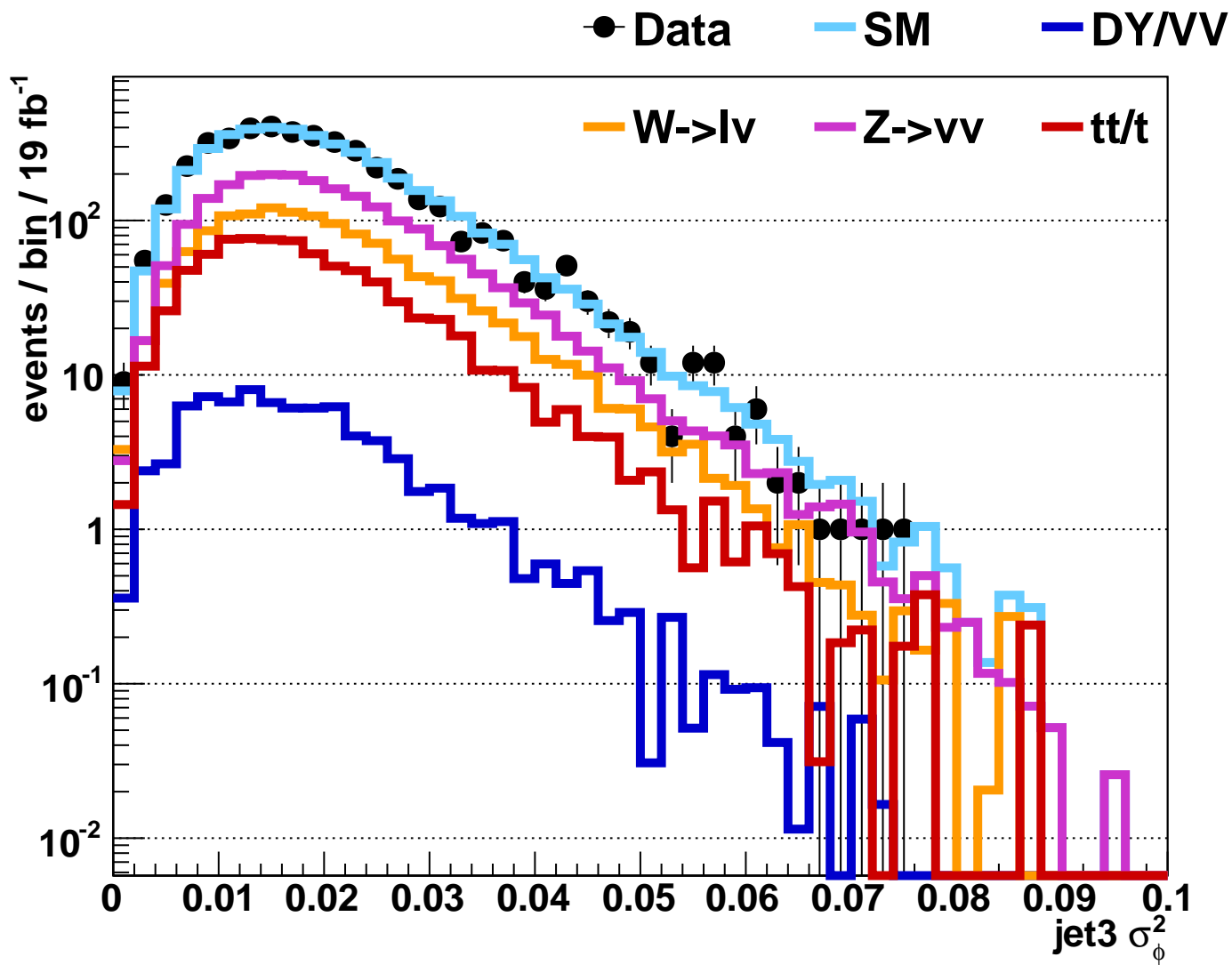


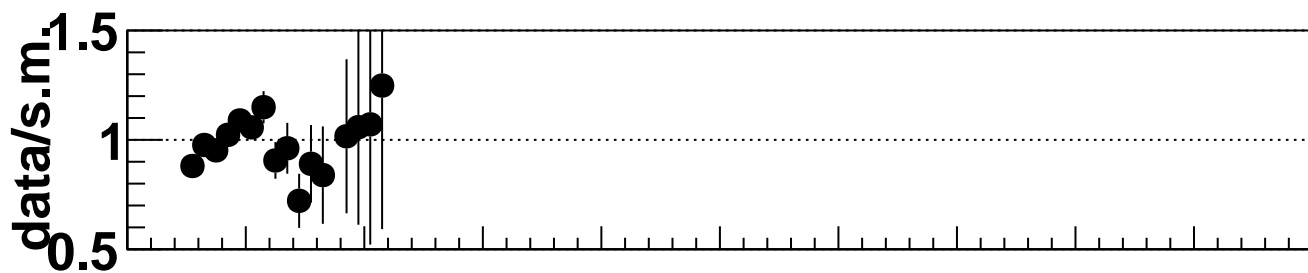
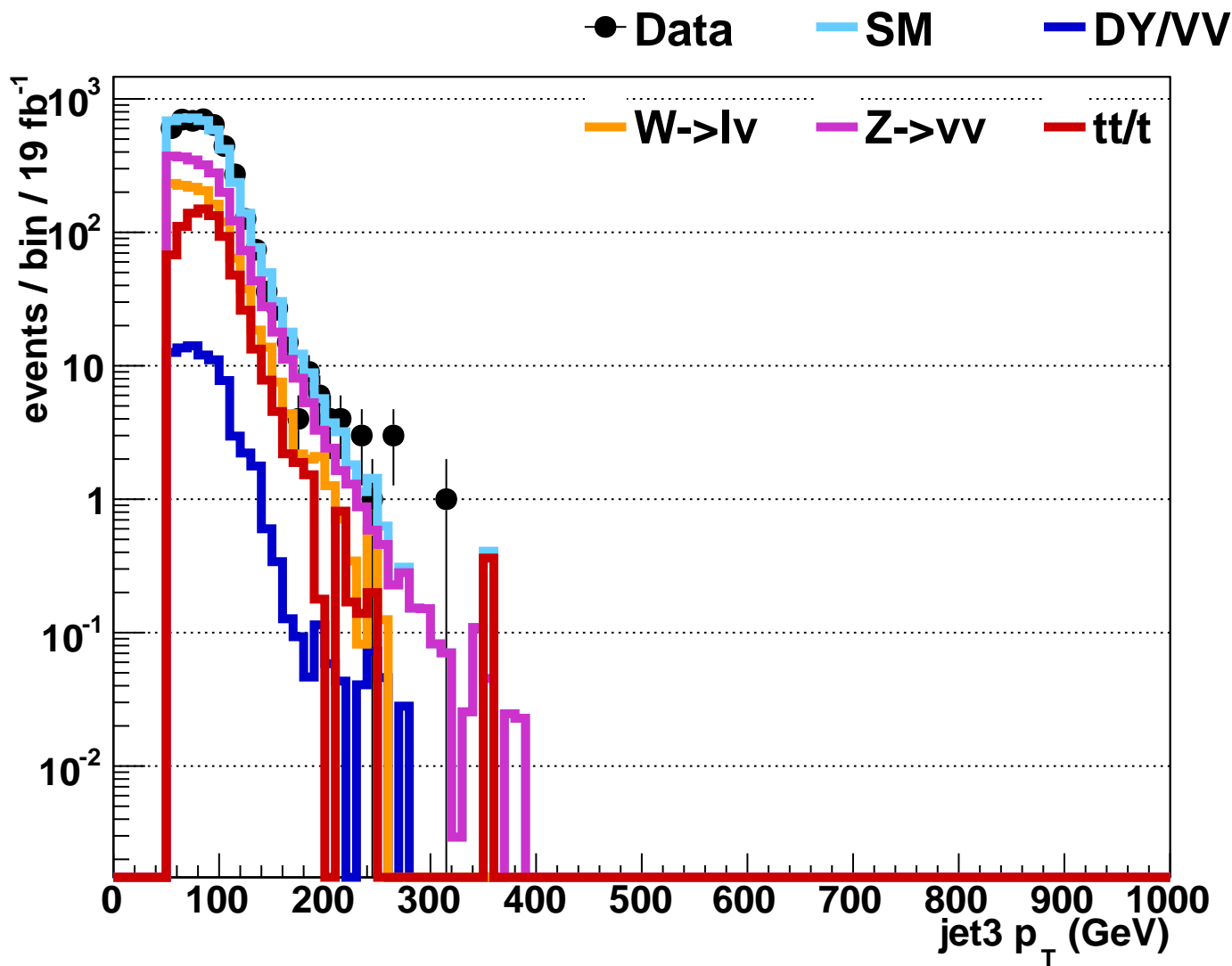


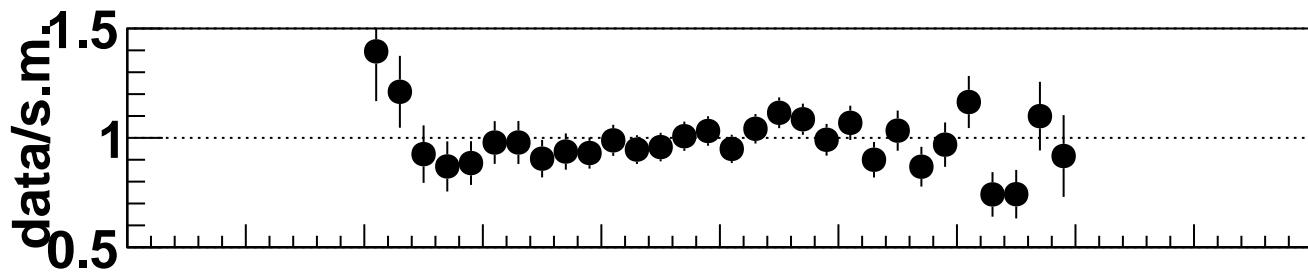
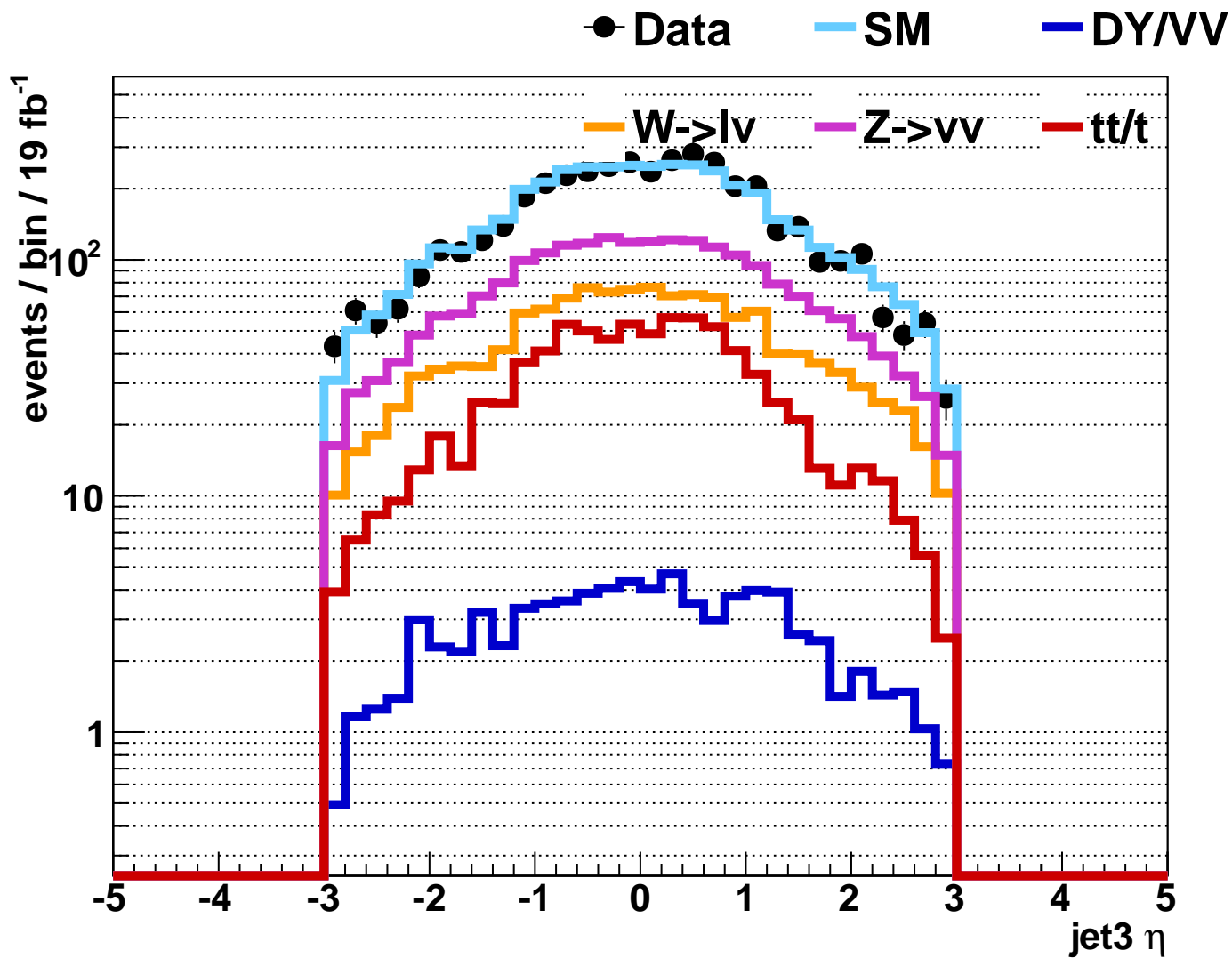


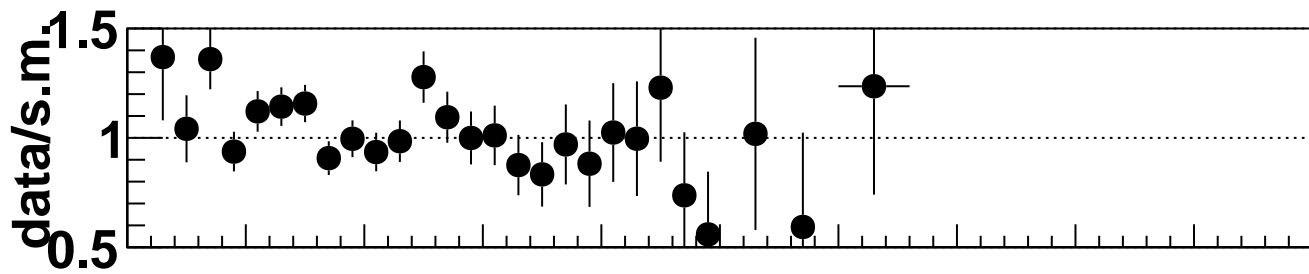
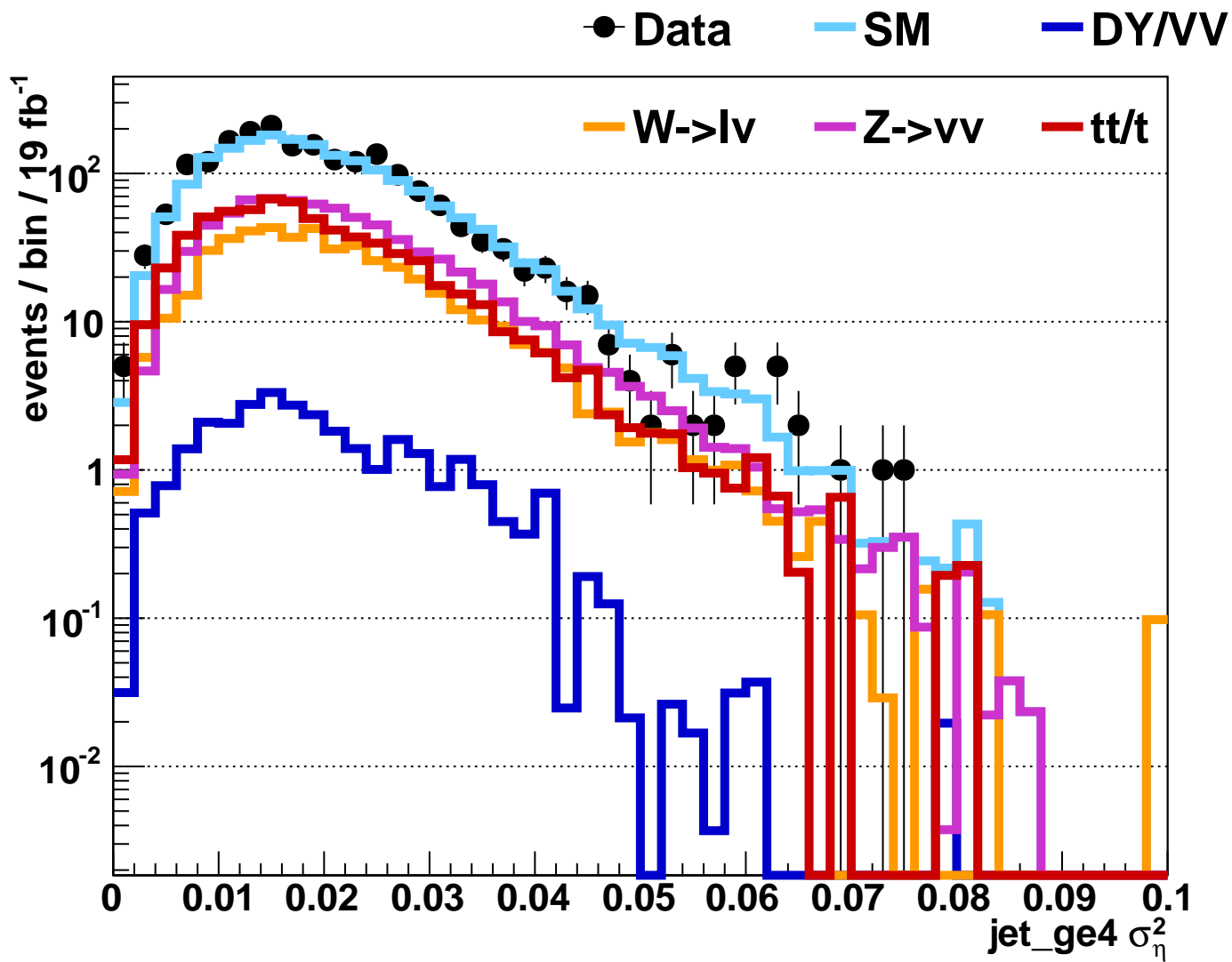


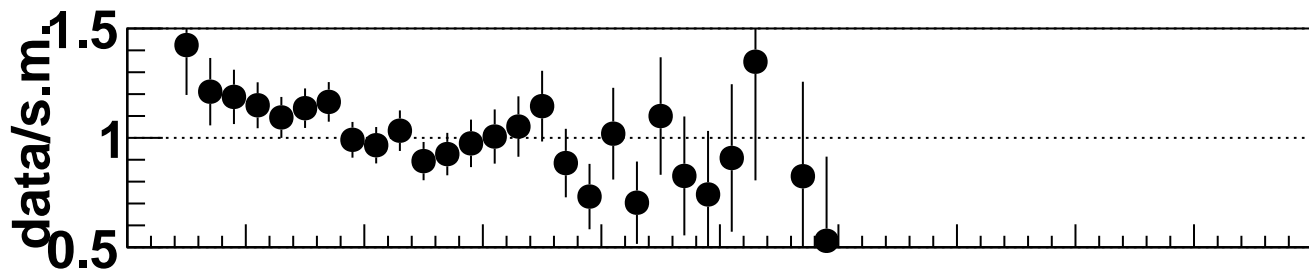
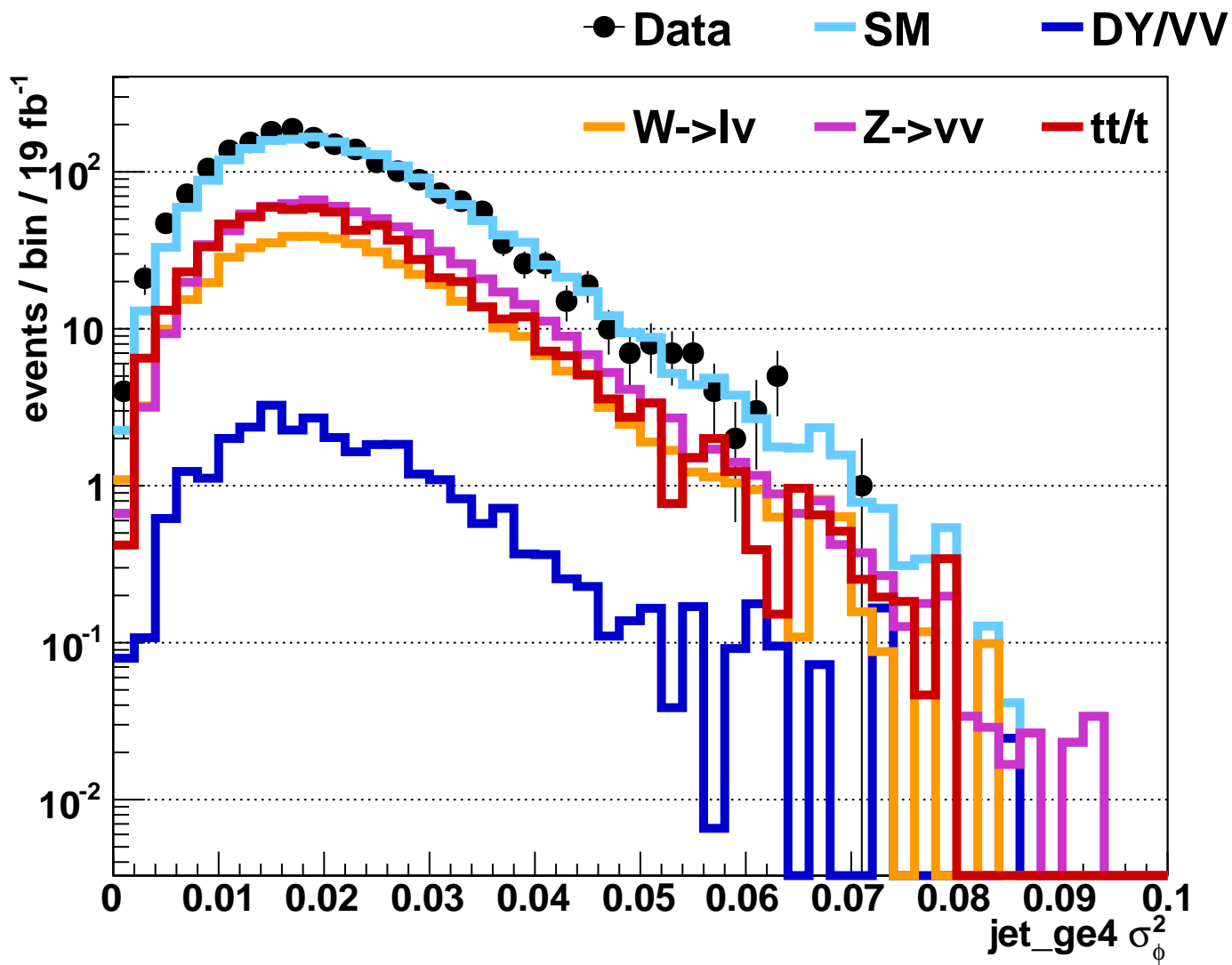


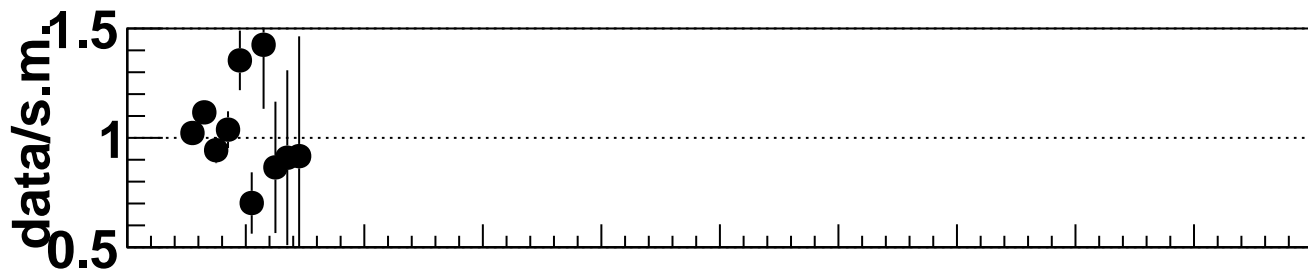
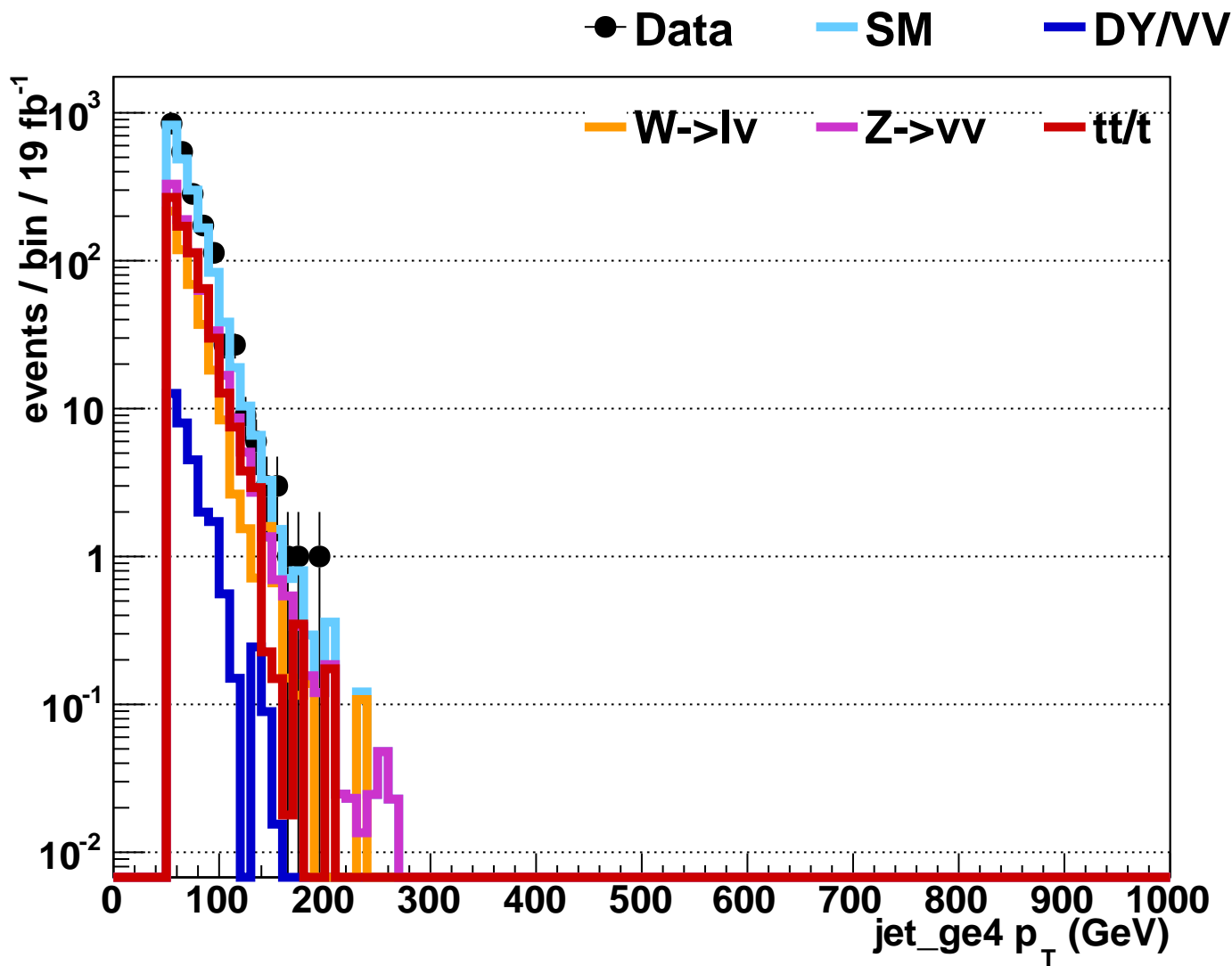


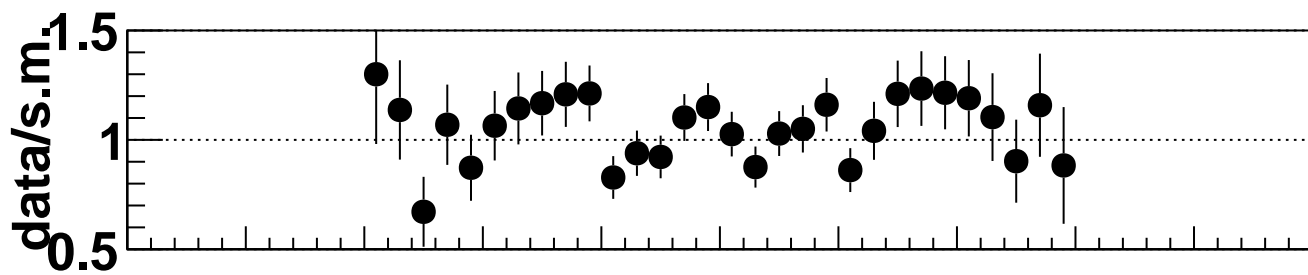
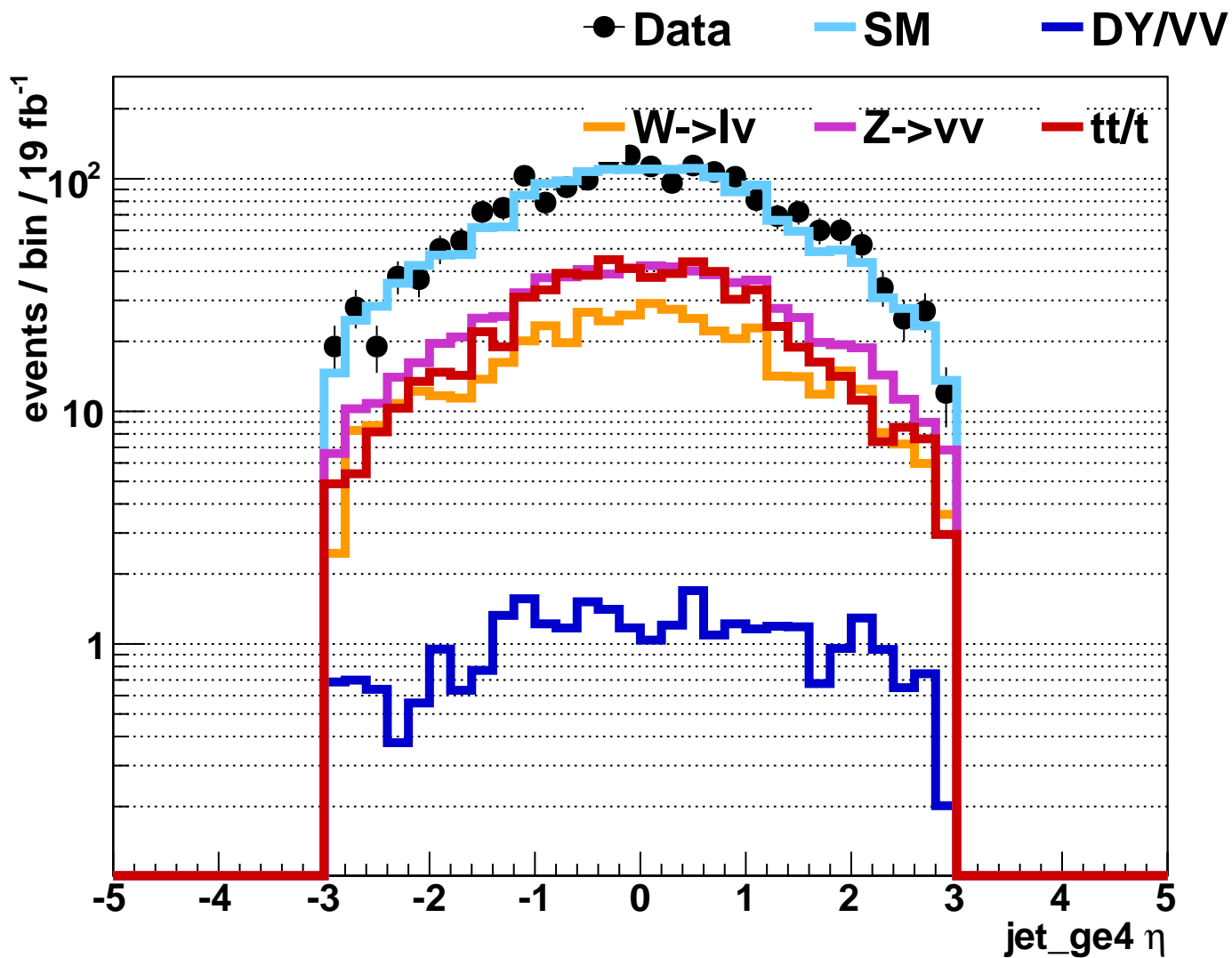


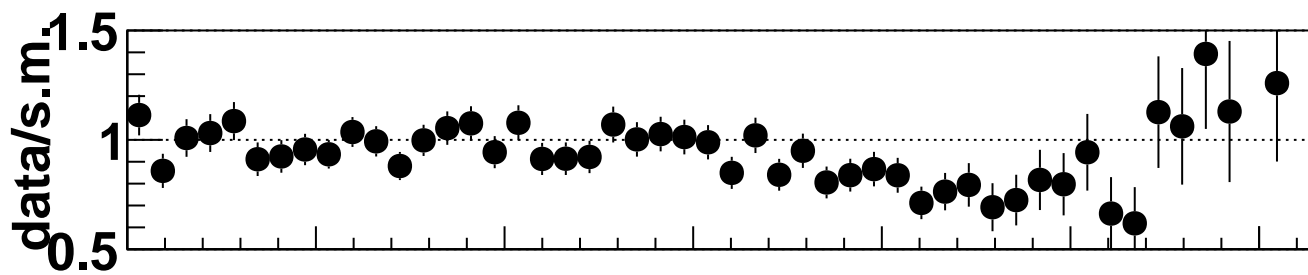
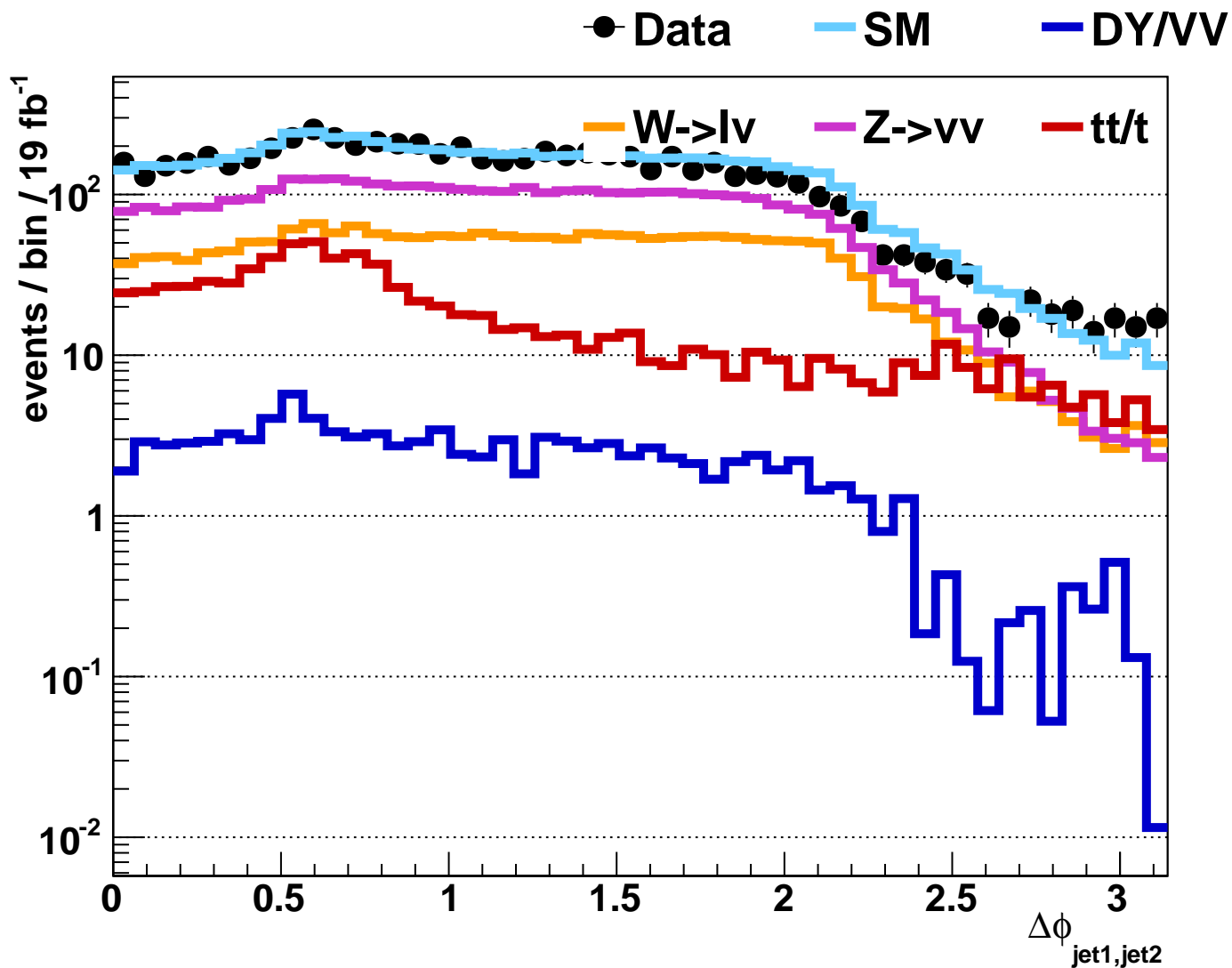


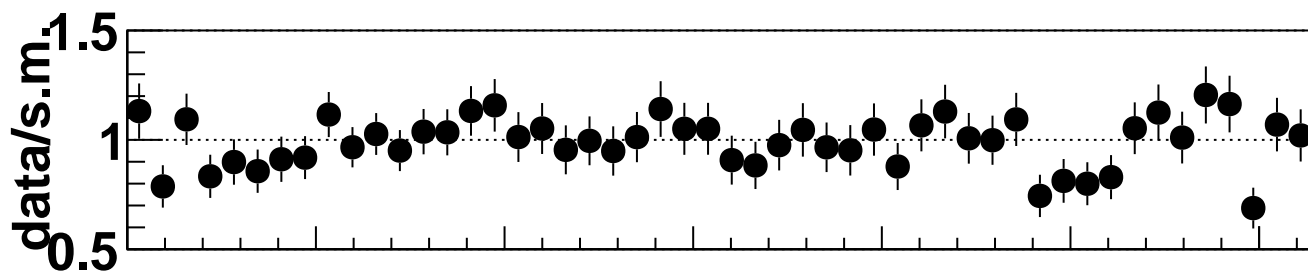
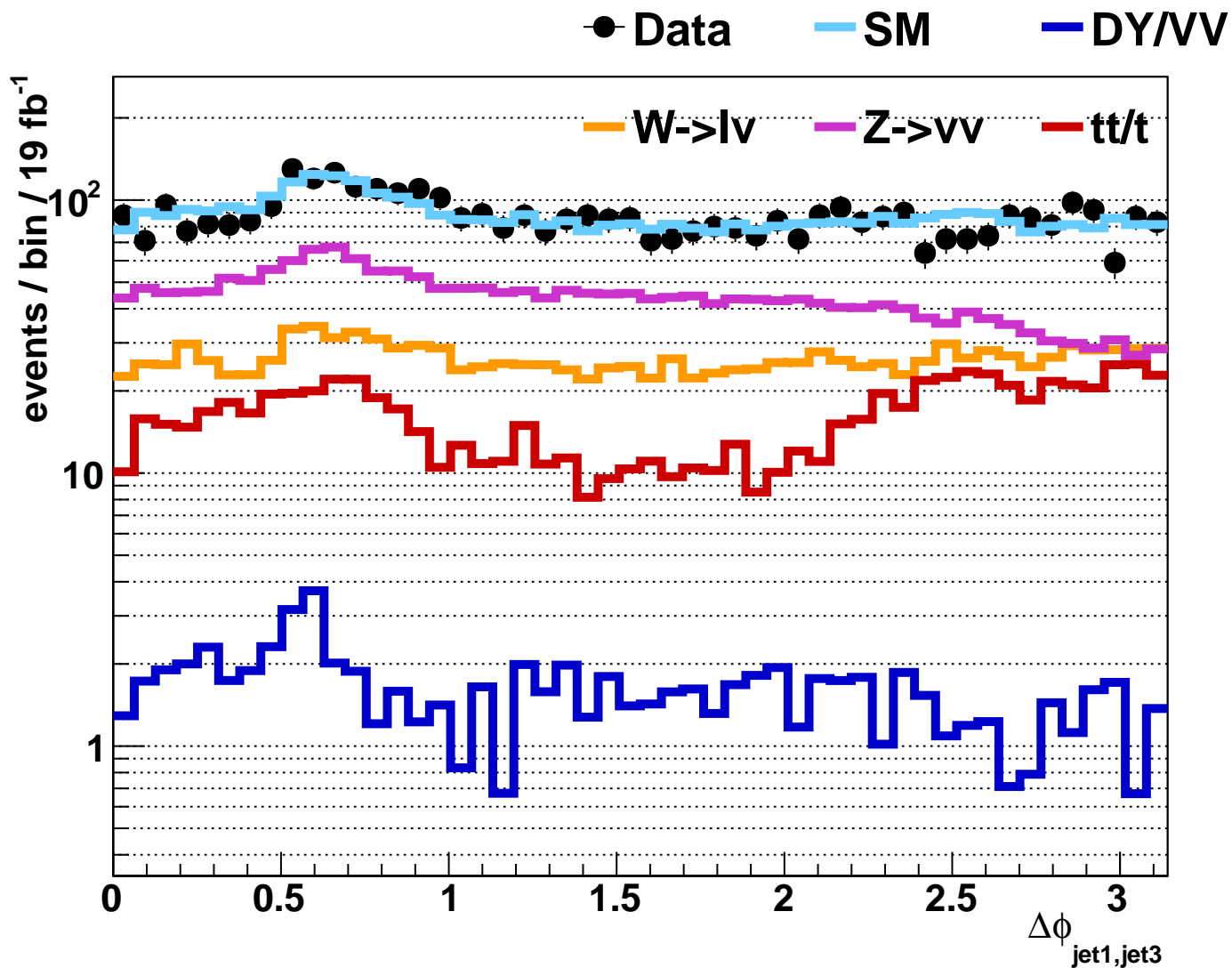


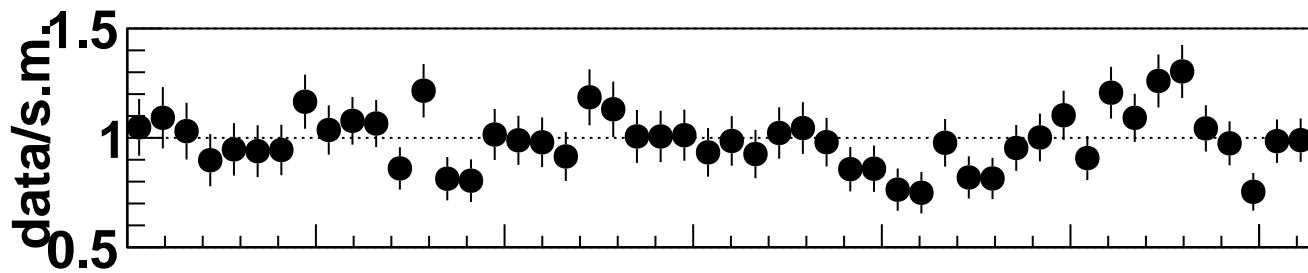
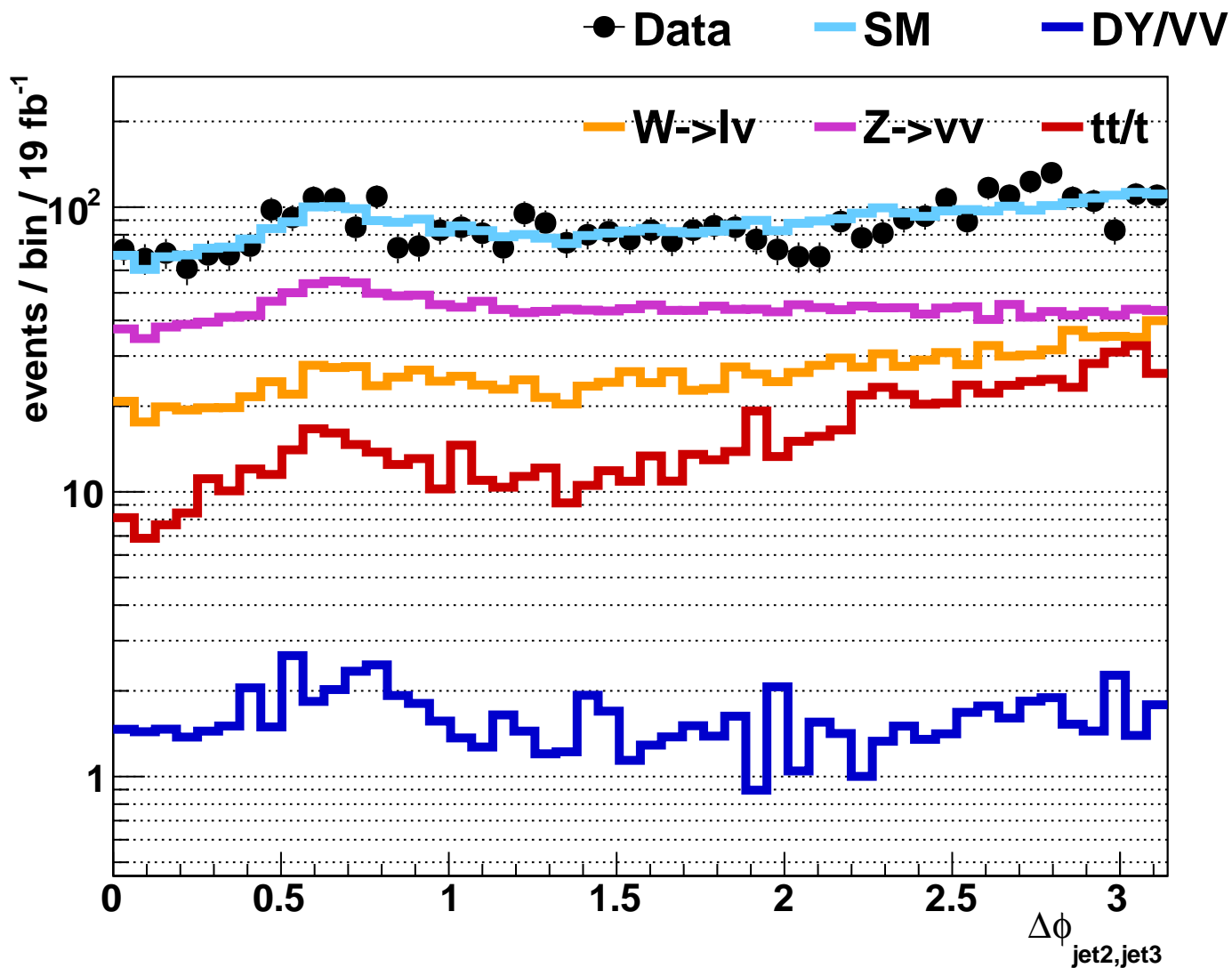












```

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

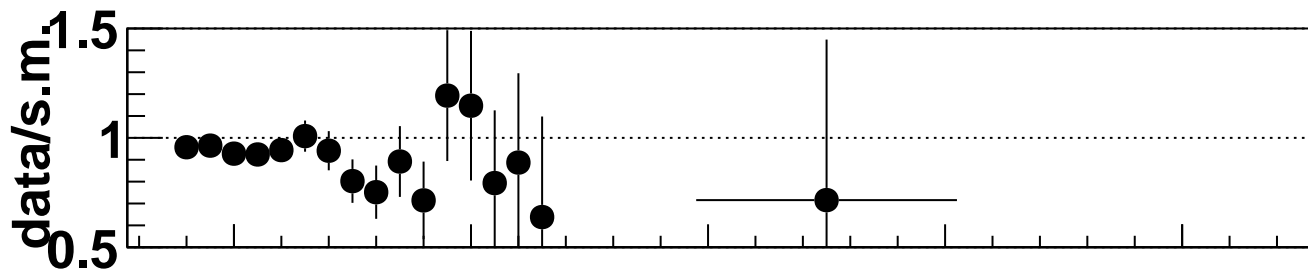
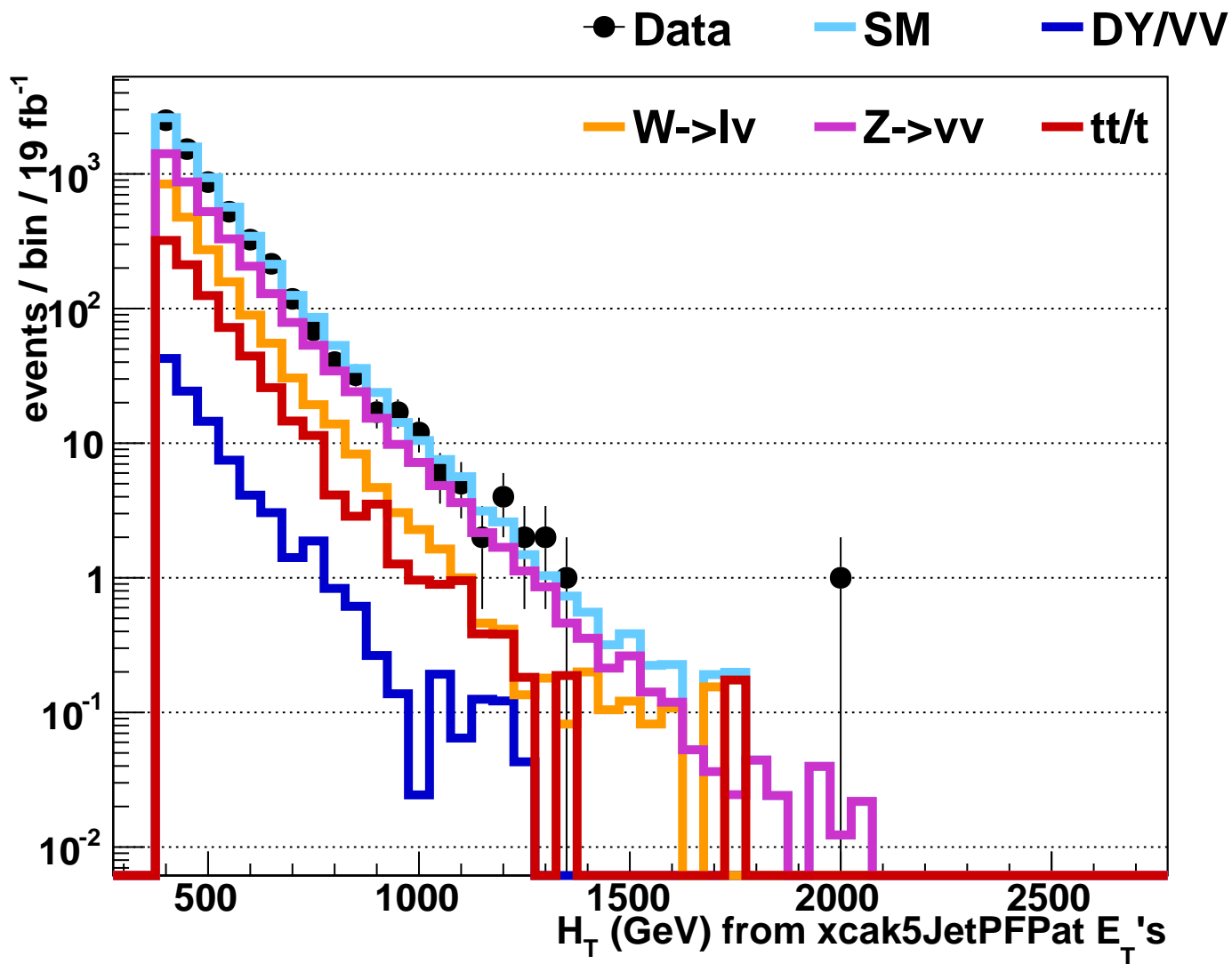
u:  multiplicity           0 <= xcak5JetPFIndicesWithOddMuonPat <= 0
v:  multiplicity           2 <= xcak5JetPFIndicesPat
w:  multiplicity           0 <= xcak5JetPFIndicesOtherPat <= 0
x:  multiplicity           0 <= electronIndicesPF <= 0
y:  multiplicity           0 <= photonIndicesPat <= 0

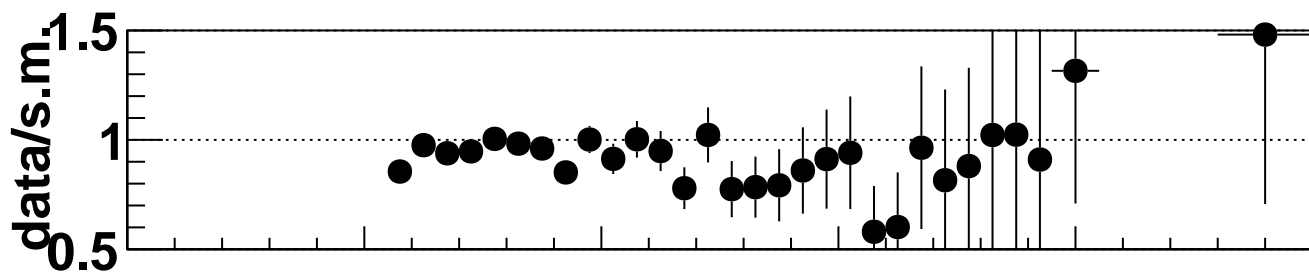
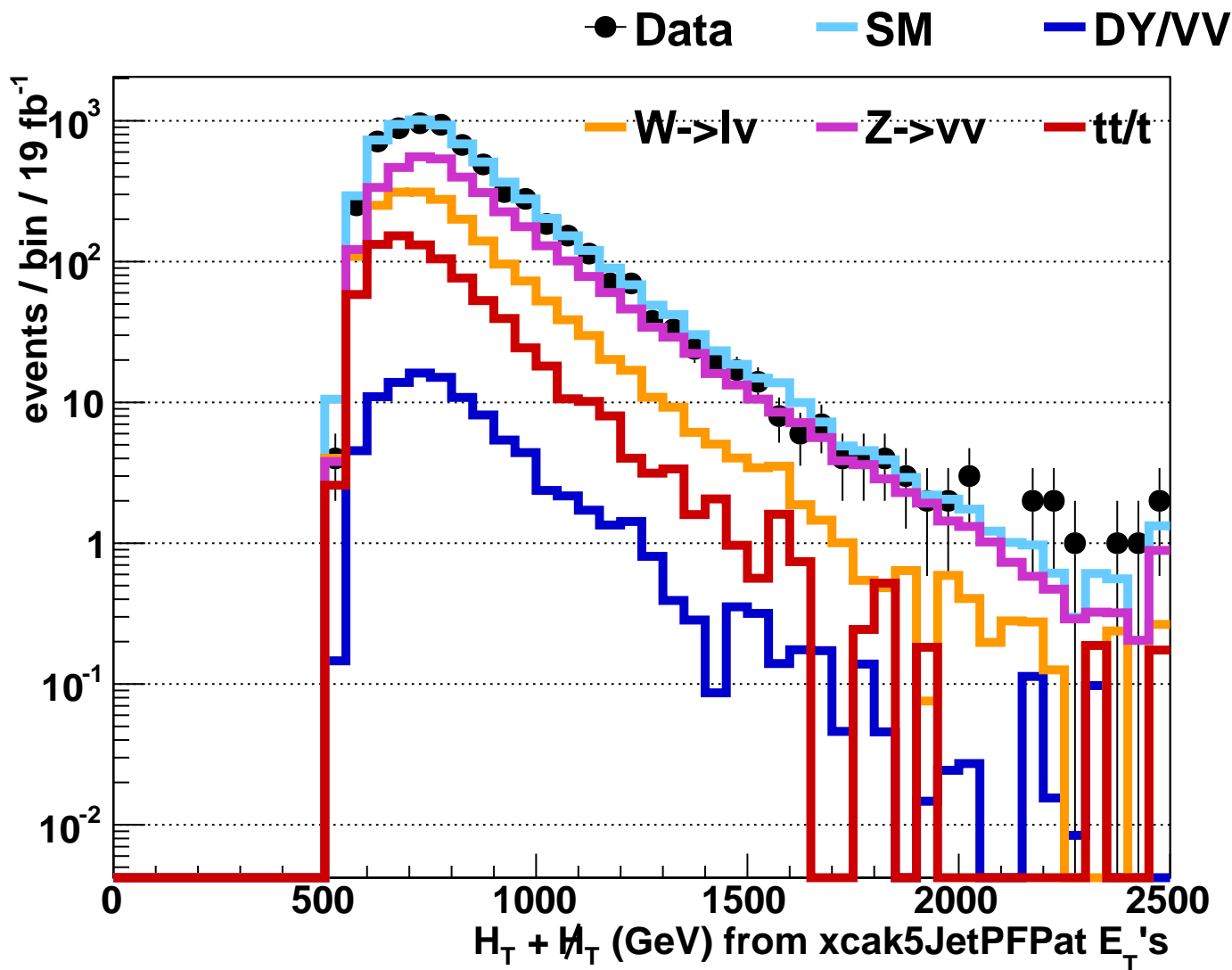
z:  multiplicity           0 <= muonIndicesPF <= 0
A:  multiplicity           0 <= electronIndicesUnmatchedPF <= 0
B:  multiplicity           0 <= photonIndicesUnmatchedPat <= 0
C:  deadEcalFilter         xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
D:  value                  xcak5JetPFMhthighPtPatOvermetP4TypeIPF<=1.25

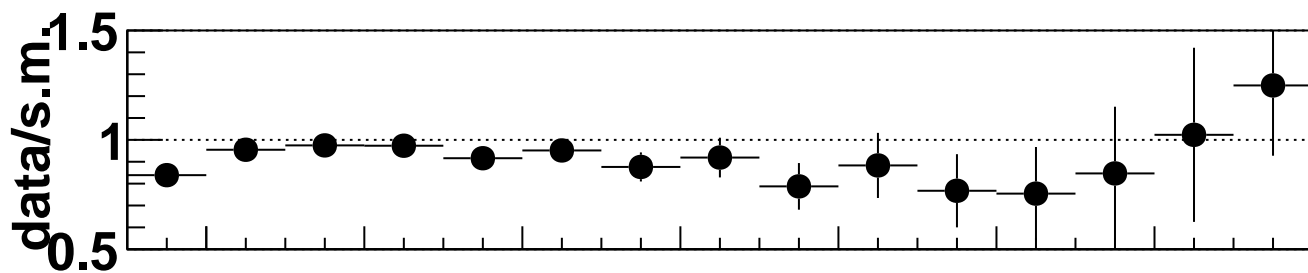
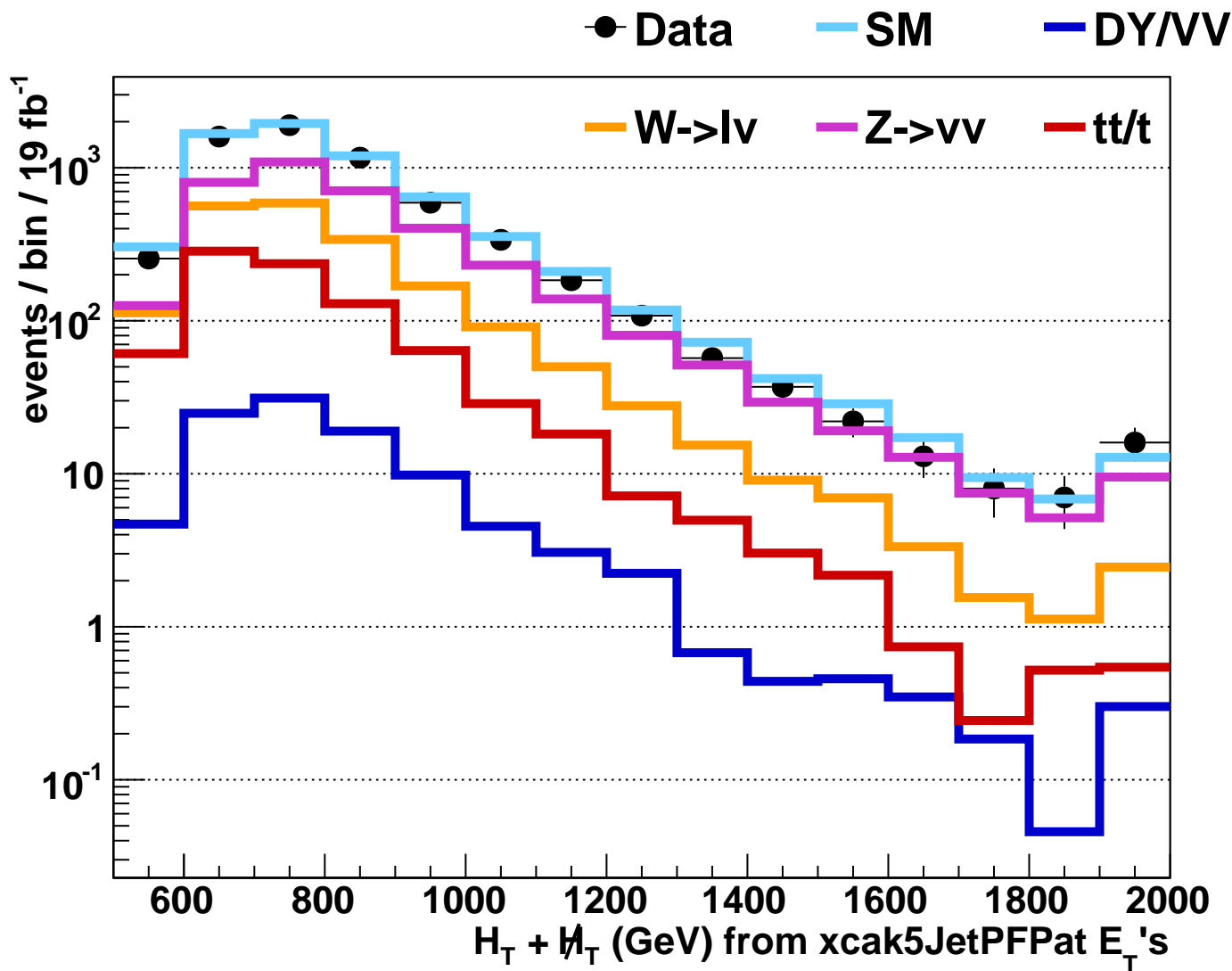
E:  value                  PFRecHitSumPt<=30.00
F:  value                  0.55<=xcak5JetPFAlphaTETetPat
G:  value                  1.00<=hcalLaserEvent2012
H:  value                  1.00<=ecalLaserCalibEvent2012
[ jetSumPlots1 ]

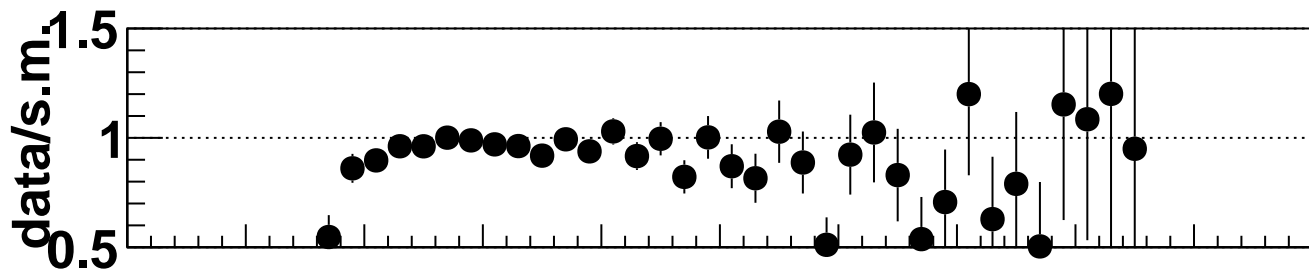
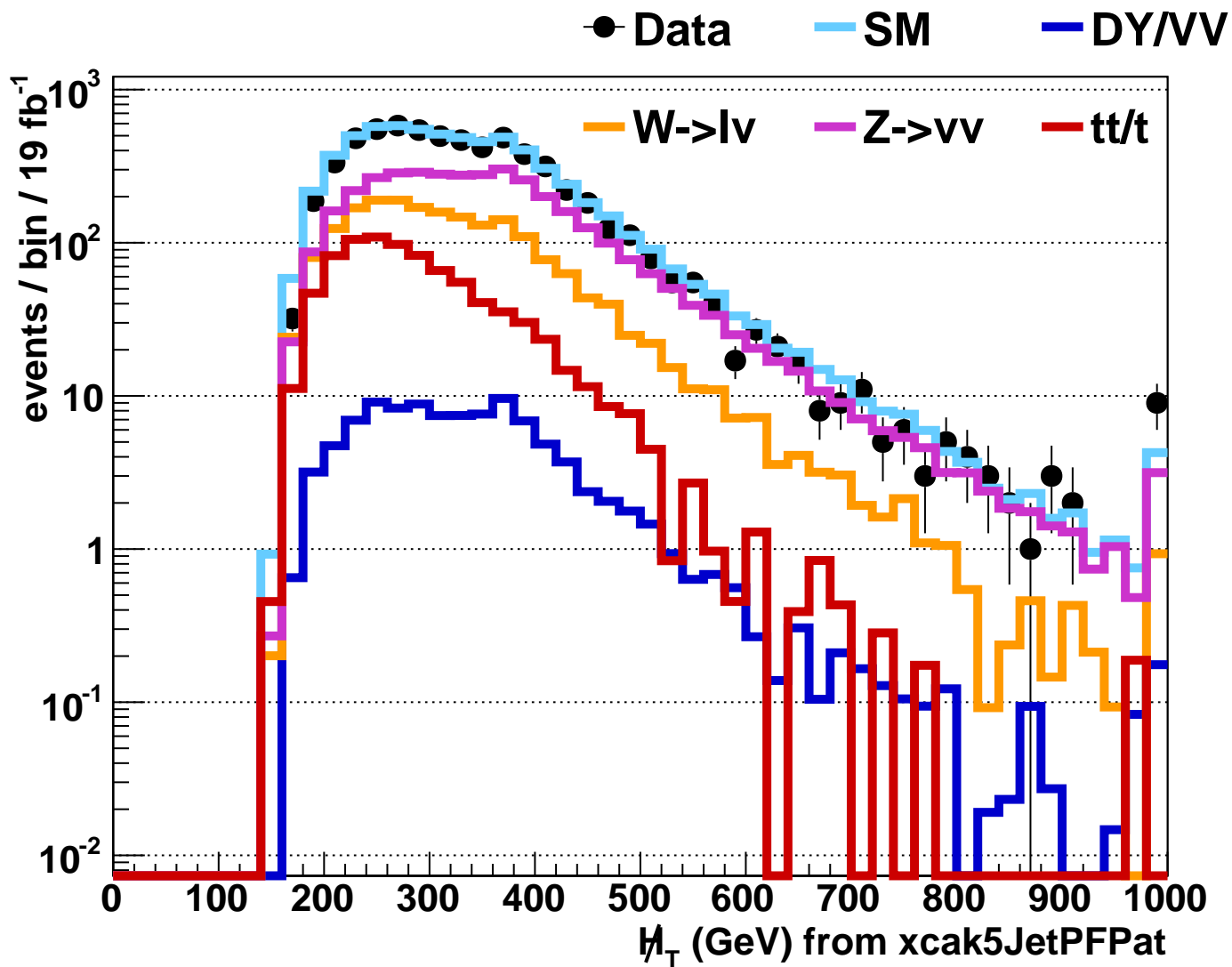
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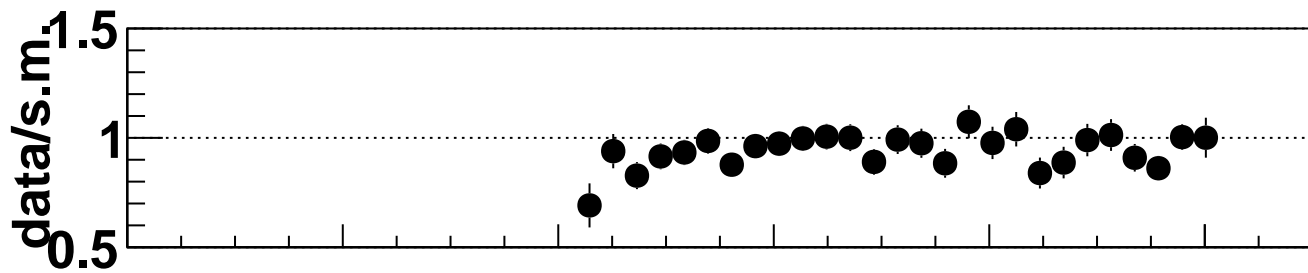
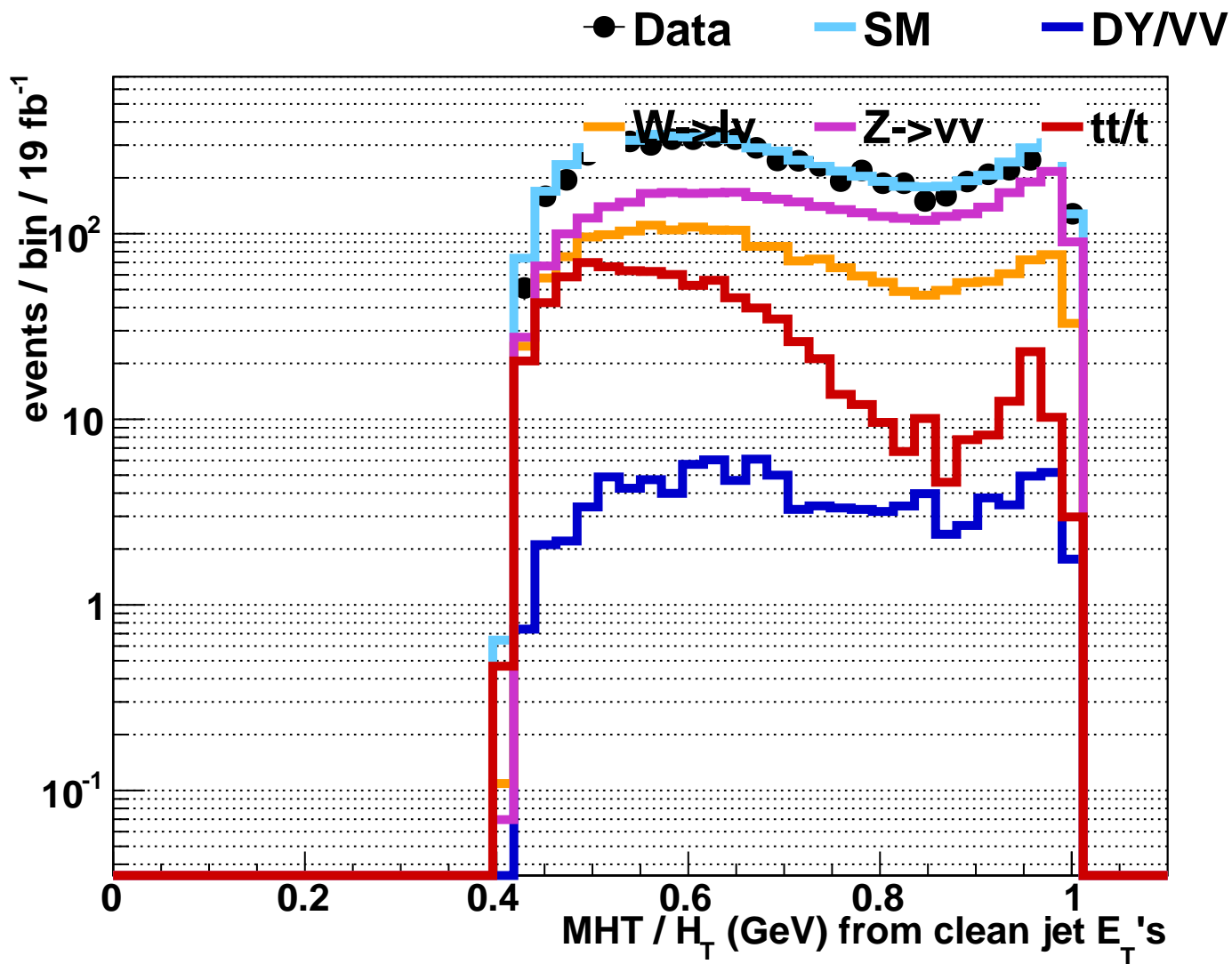
	Data	SM	DY/VV	W->lv	Z->vv
r:	8744352	2.3977(9)e+6	1.716(2)e+5	9.628(7)e+5	2.281(1)e+5
s:	7450225	1.1536(5)e+6	6.828(7)e+4	3.506(3)e+5	8.863(6)e+4
t:	7446364	1.1516(5)e+6	6.818(7)e+4	3.503(3)e+5	8.862(6)e+4
u:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
v:	7433356	1.1426(5)e+6	6.751(7)e+4	3.477(3)e+5	8.859(6)e+4
w:	6960603	1.1139(5)e+6	6.586(7)e+4	3.413(3)e+5	8.741(5)e+4
x:	6936664	9.505(4)e+5	4.973(7)e+4	2.522(2)e+5	8.739(5)e+4
y:	6905535	9.427(4)e+5	4.895(6)e+4	2.473(2)e+5	8.736(5)e+4
z:	6880817	7.843(4)e+5	3.433(6)e+4	1.572(2)e+5	8.735(5)e+4
A:	6879619	7.838(4)e+5	3.430(6)e+4	1.571(2)e+5	8.734(5)e+4
B:	6879103	7.837(4)e+5	3.429(6)e+4	1.570(2)e+5	8.733(5)e+4
C:	1312306	2.351(2)e+5	9.29(3)e+3	6.33(1)e+4	4.425(4)e+4
D:	460848	1.404(1)e+5	4.80(2)e+3	4.752(9)e+4	3.748(4)e+4
E:	431473	1.399(1)e+5	4.78(2)e+3	4.737(9)e+4	3.737(4)e+4
F:	6313	6.64(2)e+3	102(3)	1.98(2)e+3	3.71(1)e+3
G:	6313	-	-	-	-
H:	6297	-	-	-	-
[jetSumPlots1]					

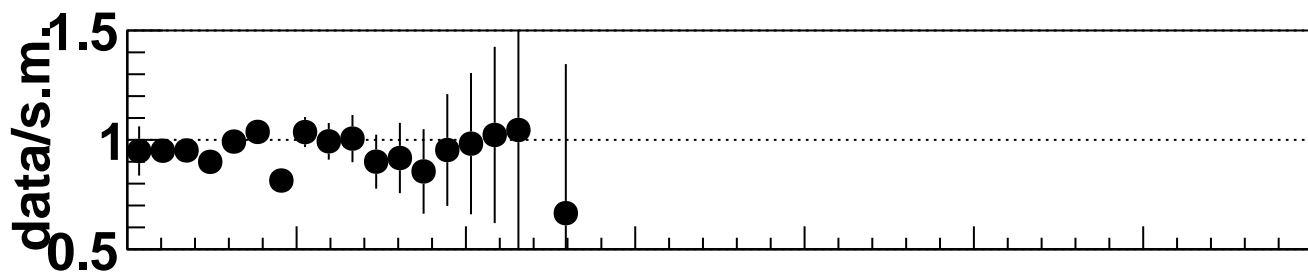
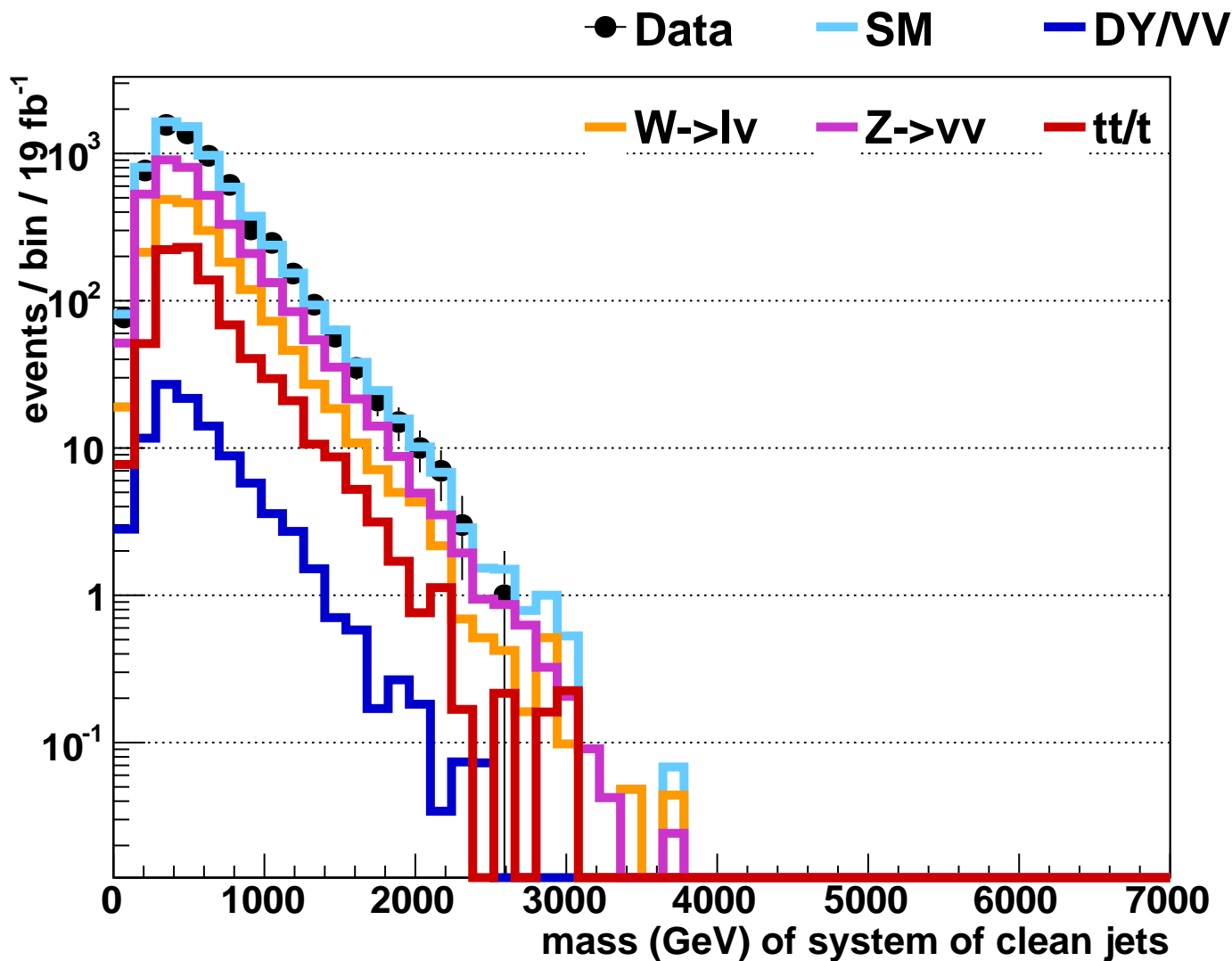




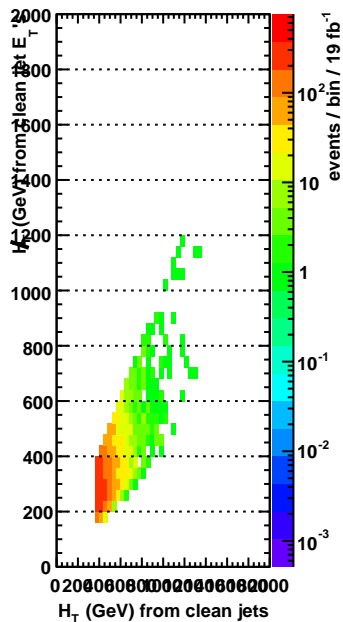




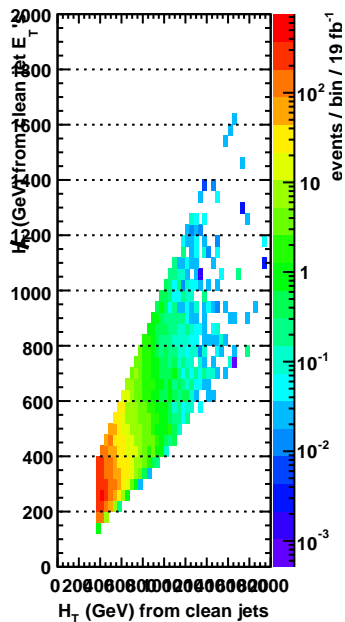




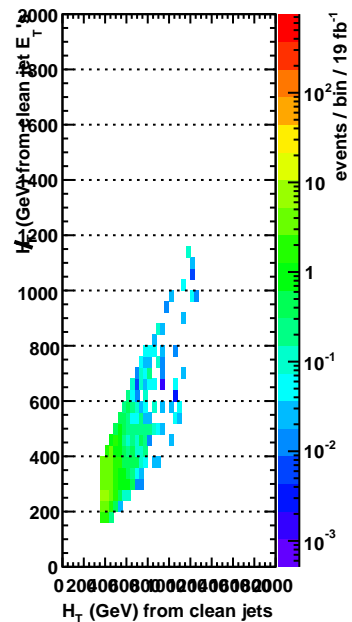
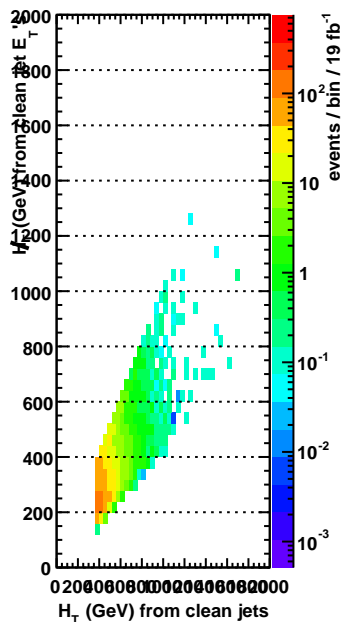
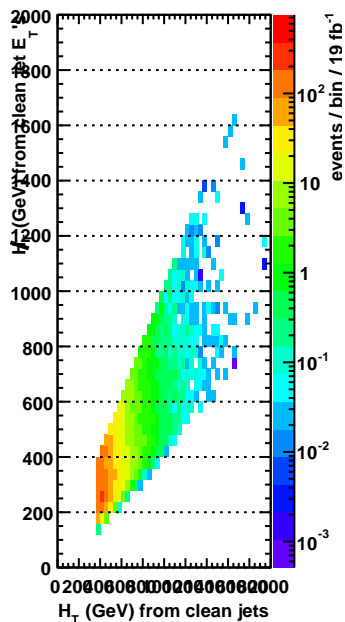
Data



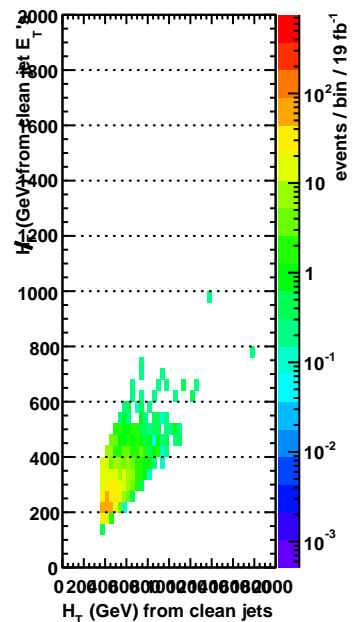
SM

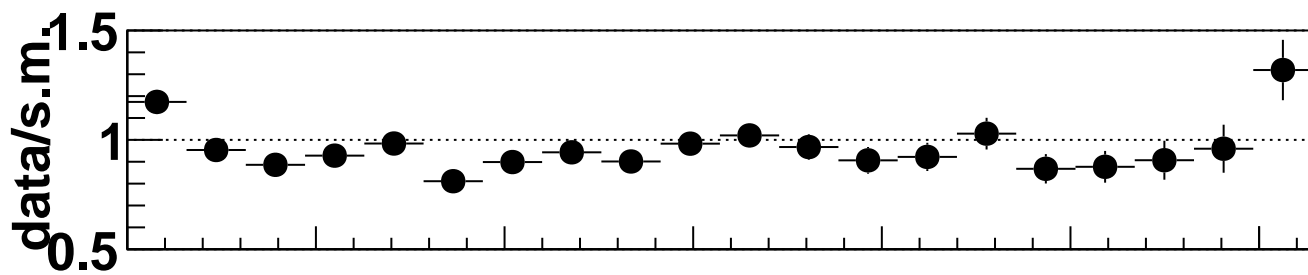
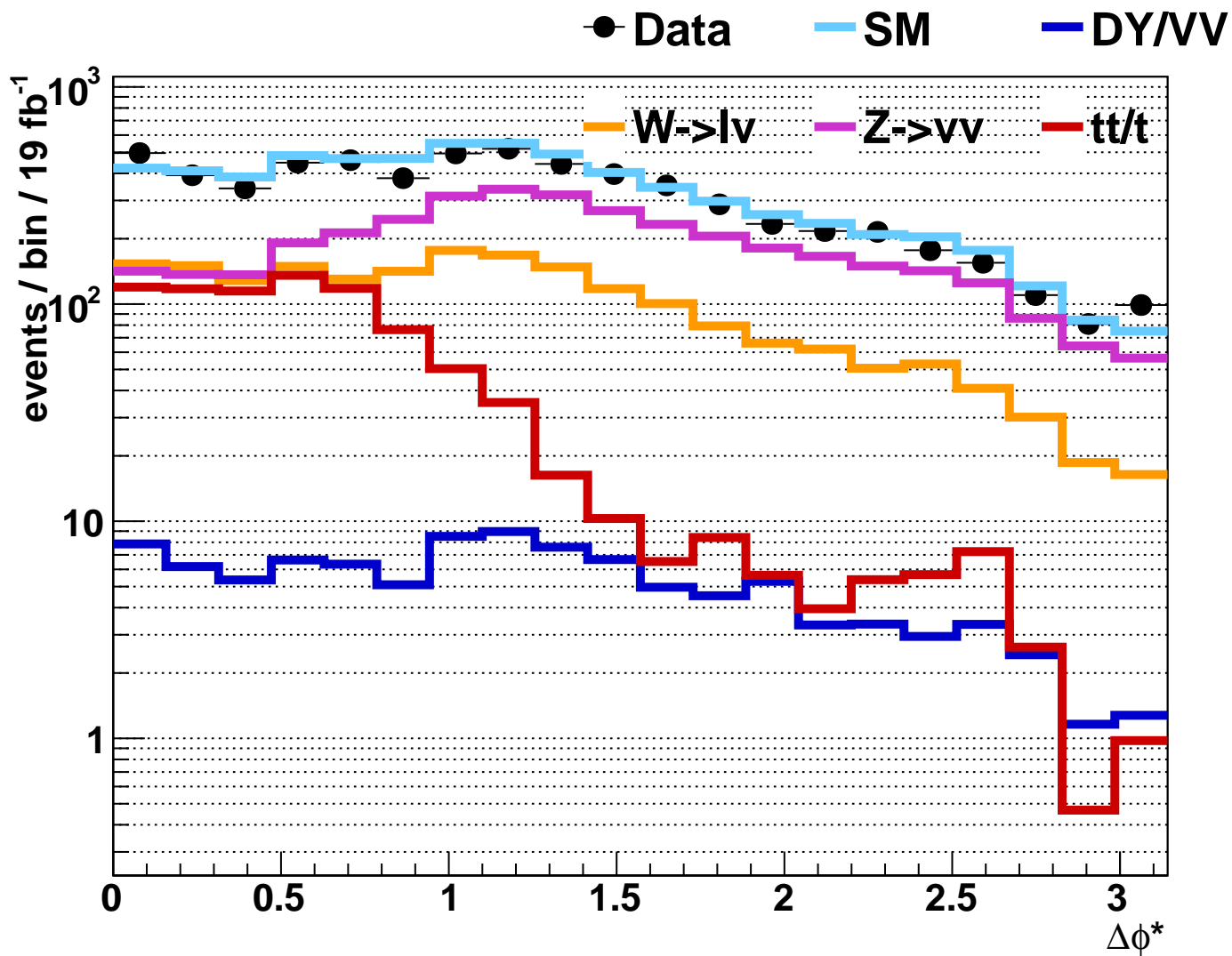


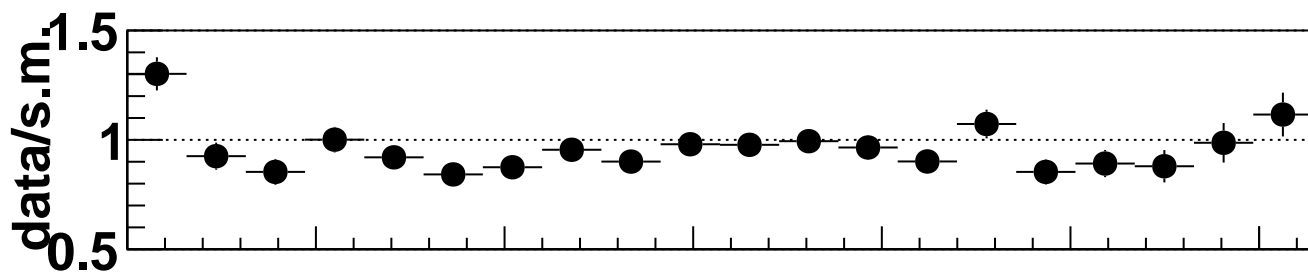
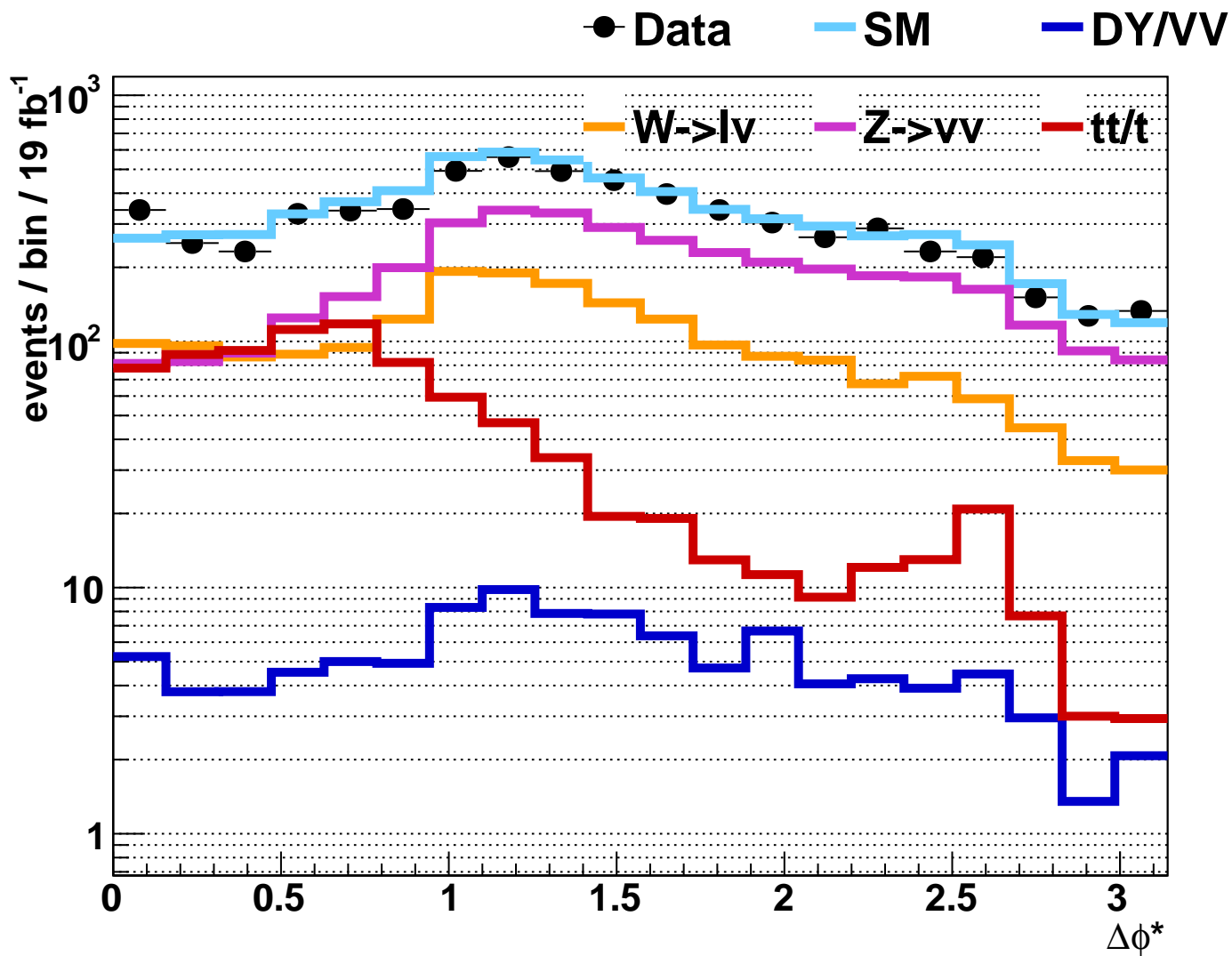
DY/VV

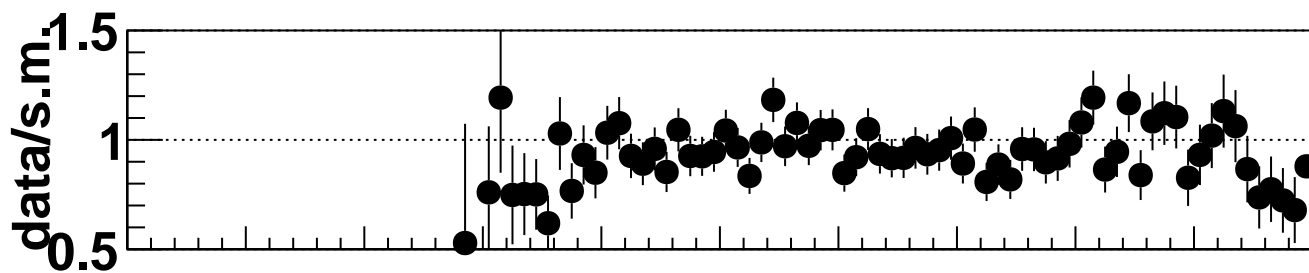
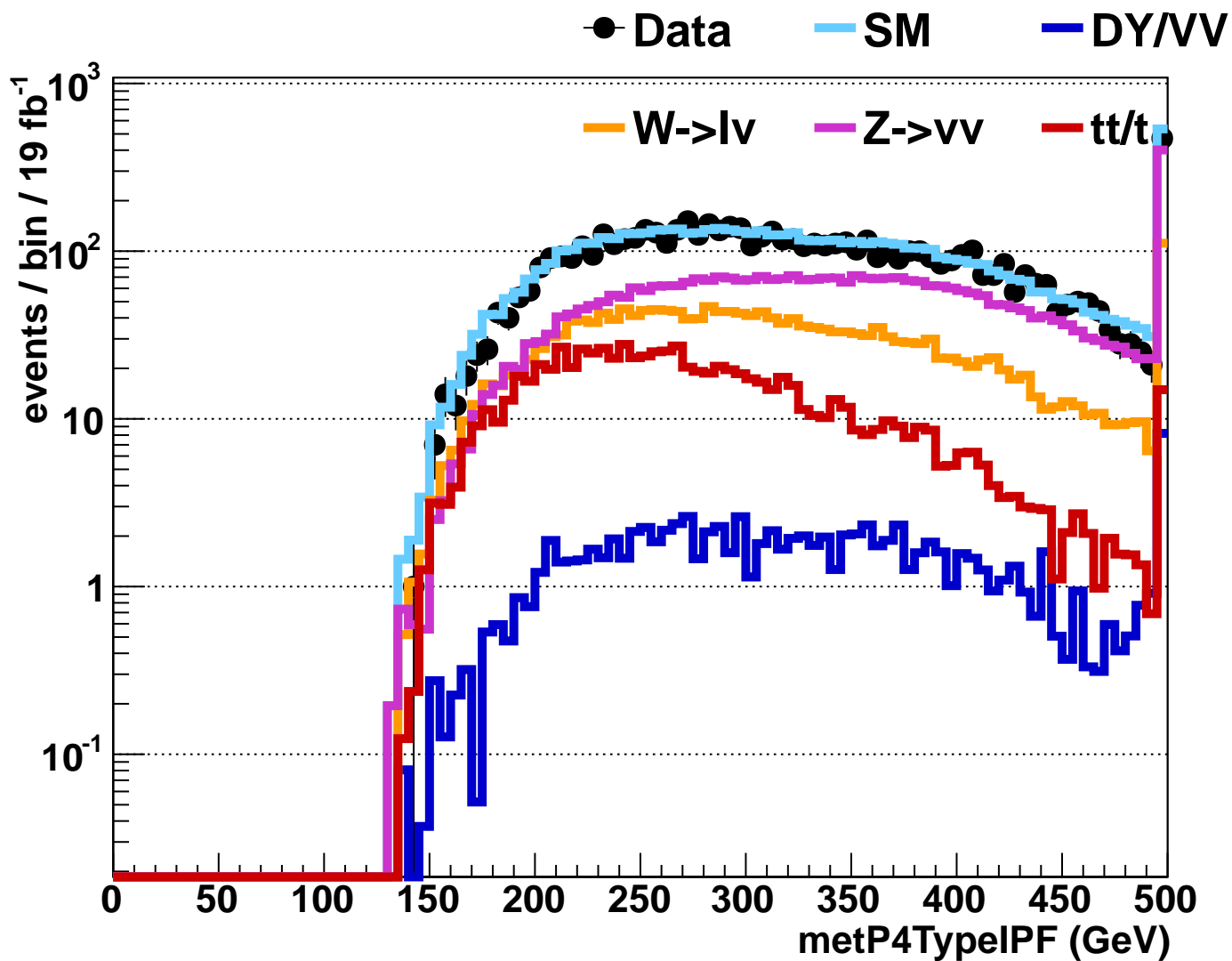
W⁻lvZ \rightarrow vv

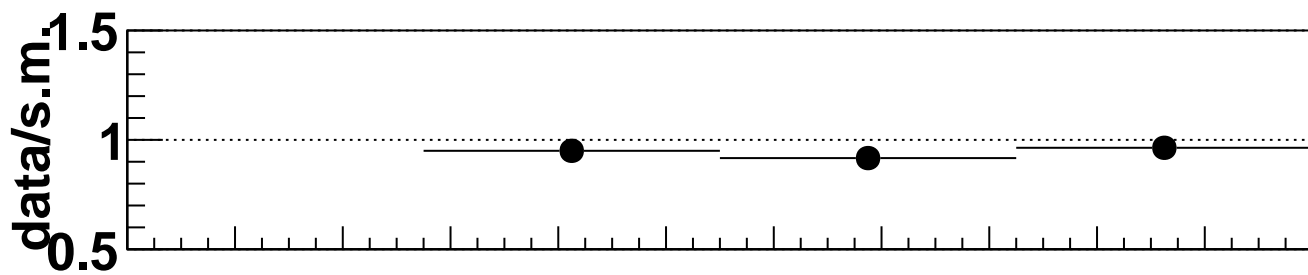
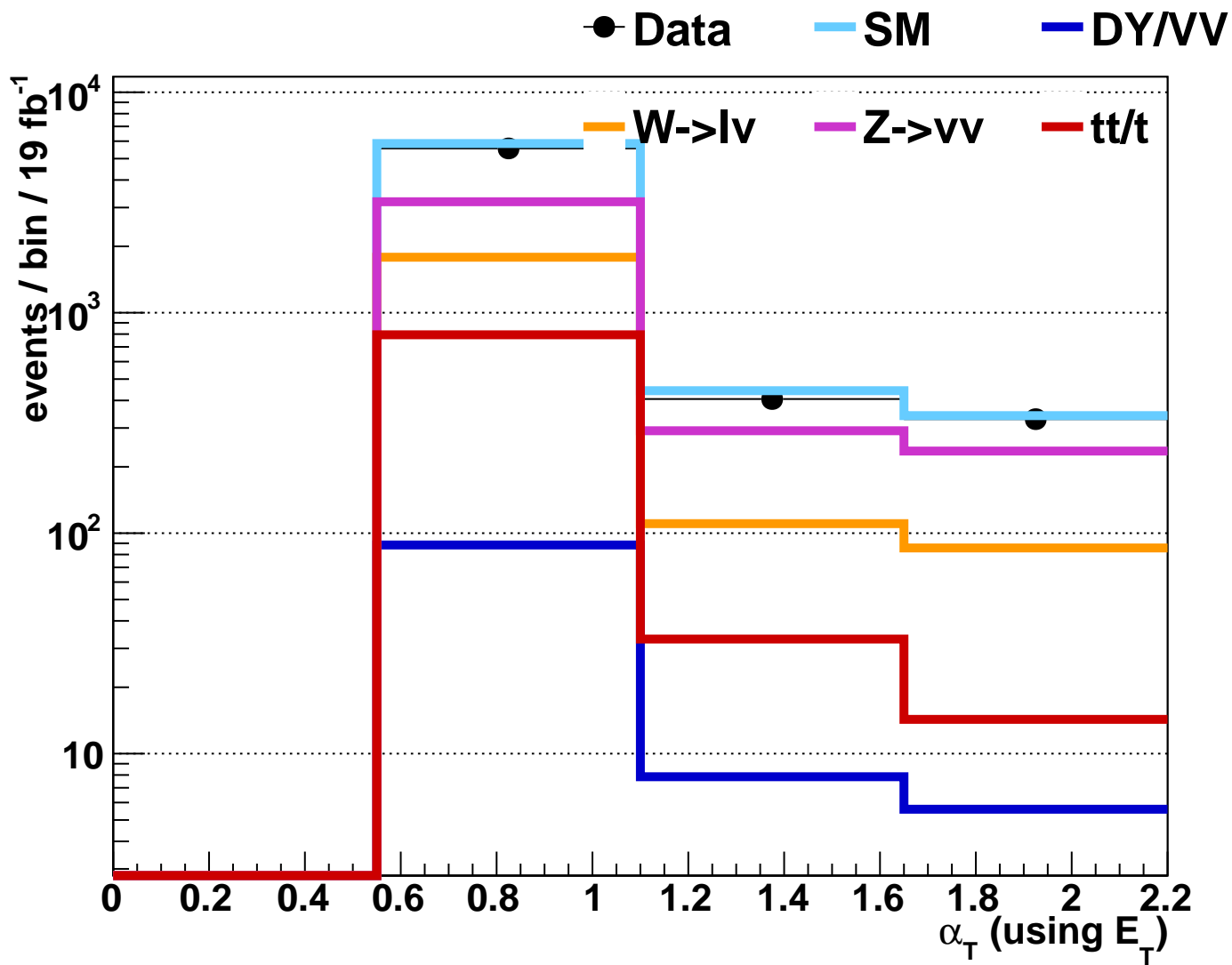
tt/t

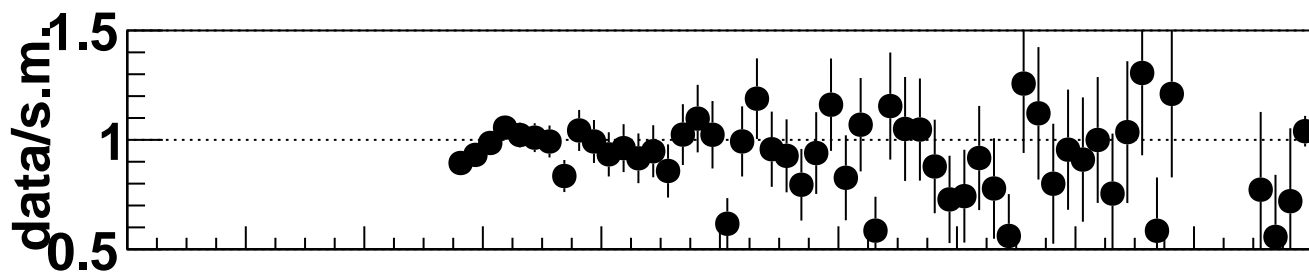
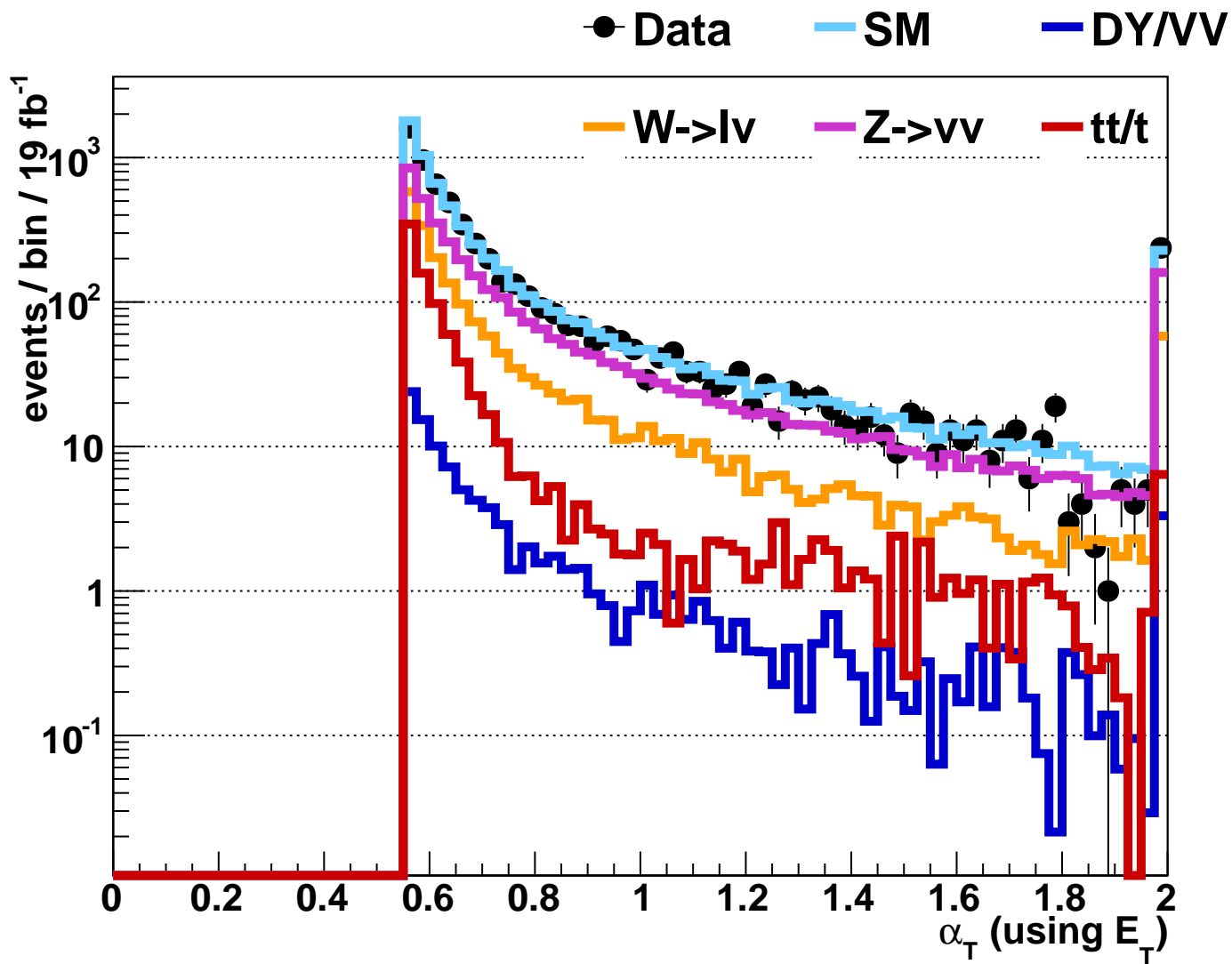


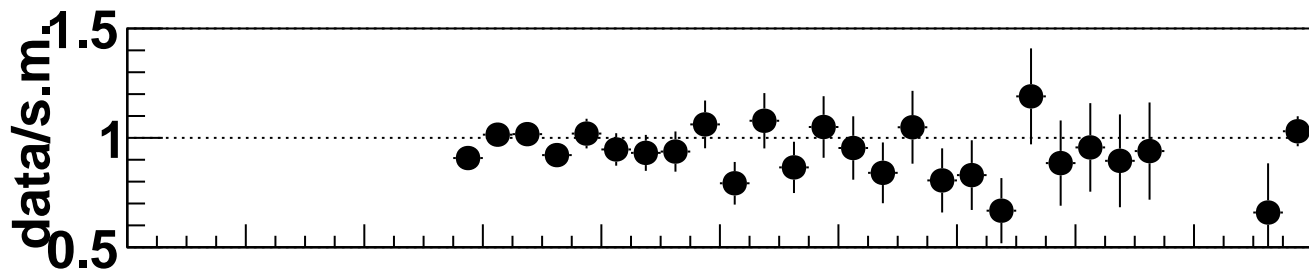
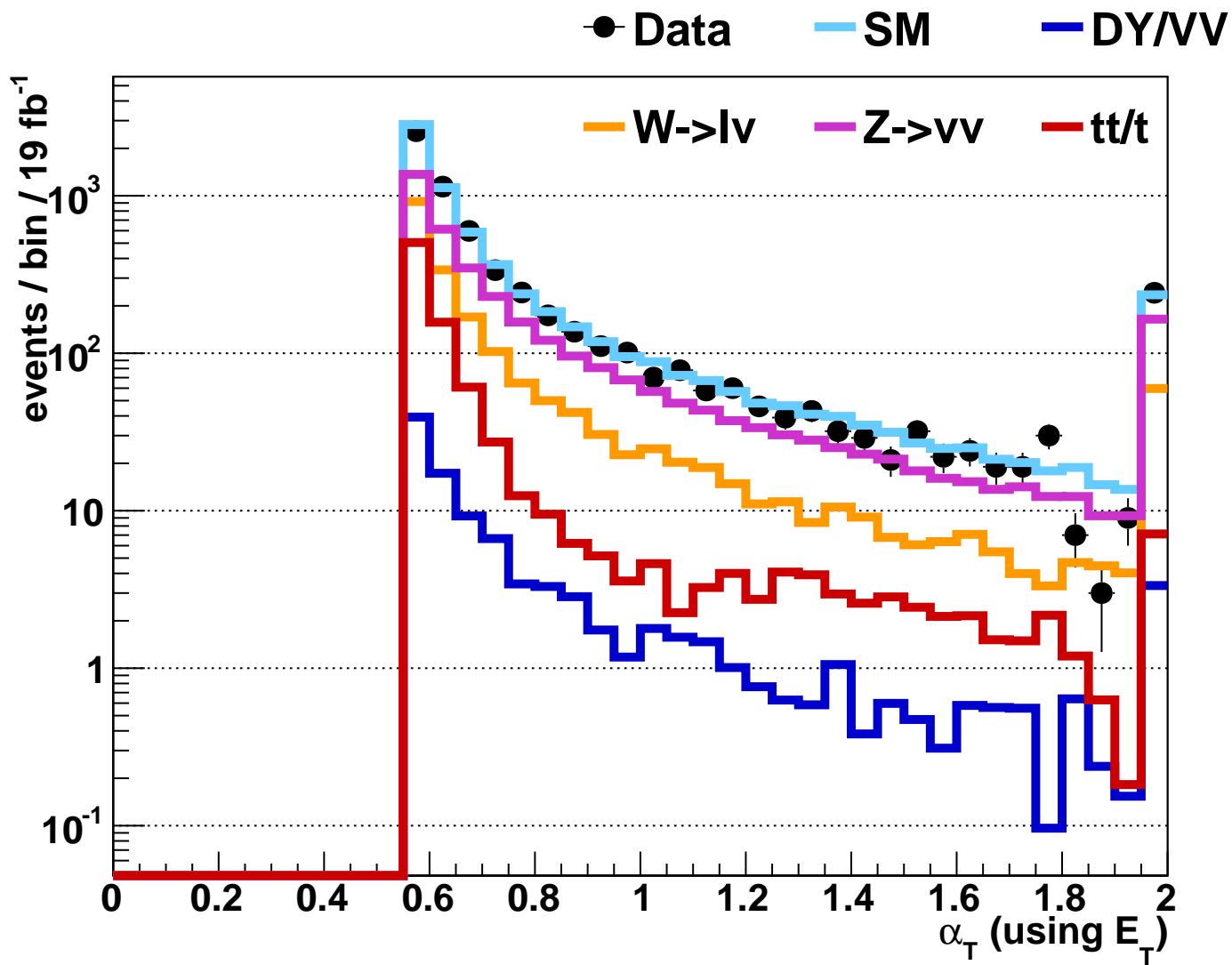


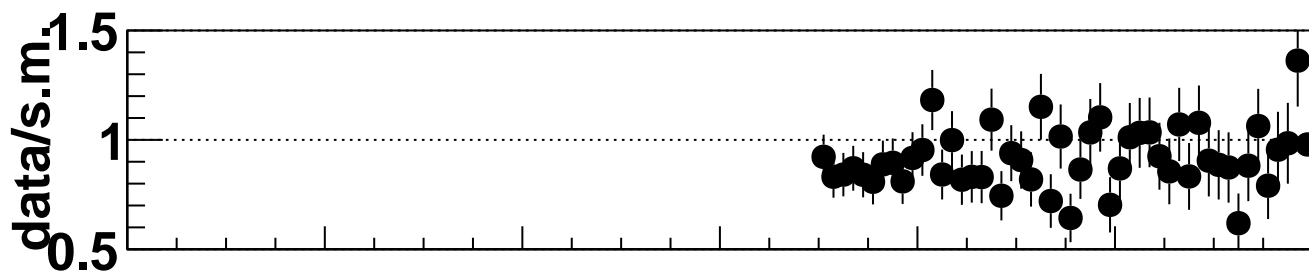
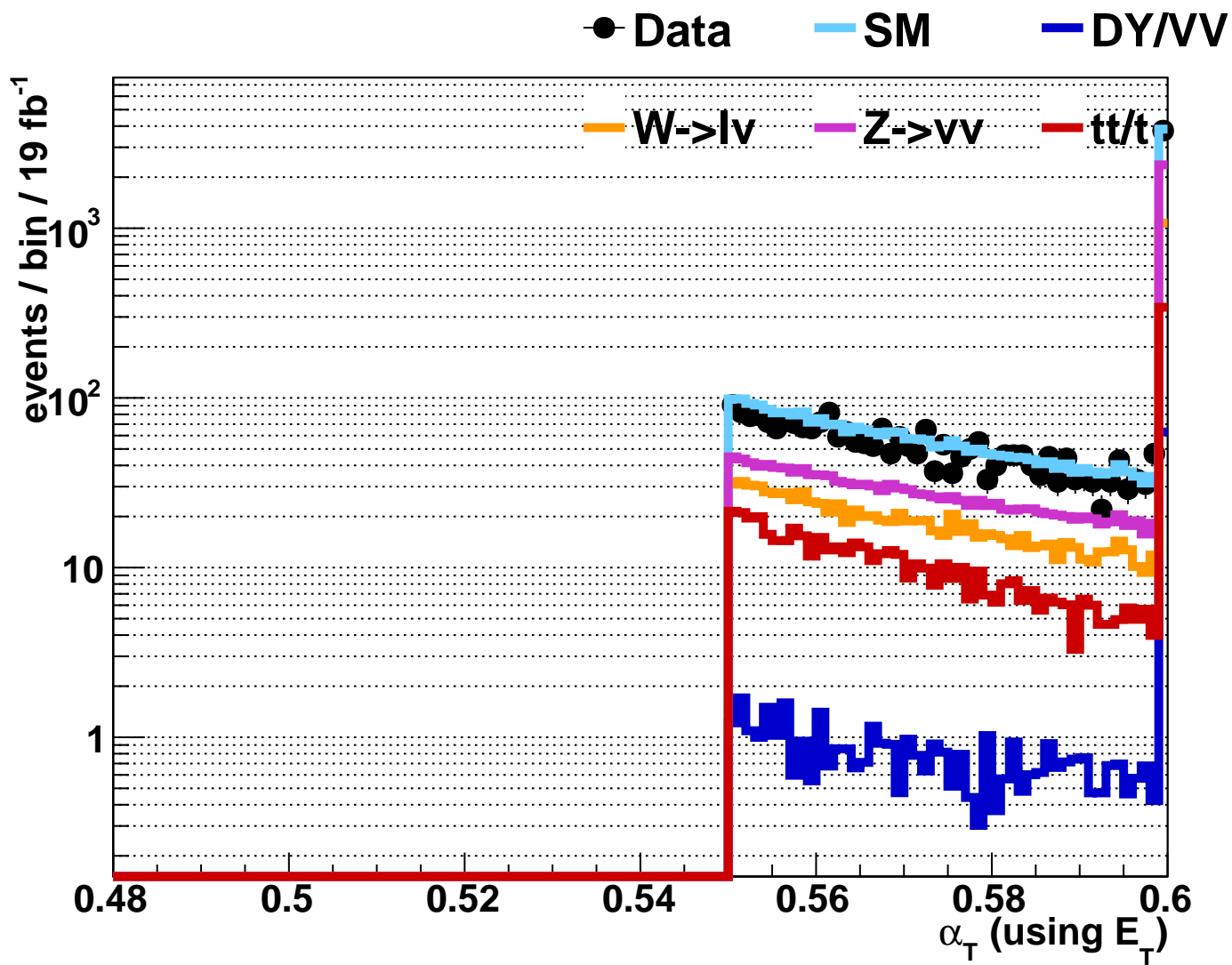


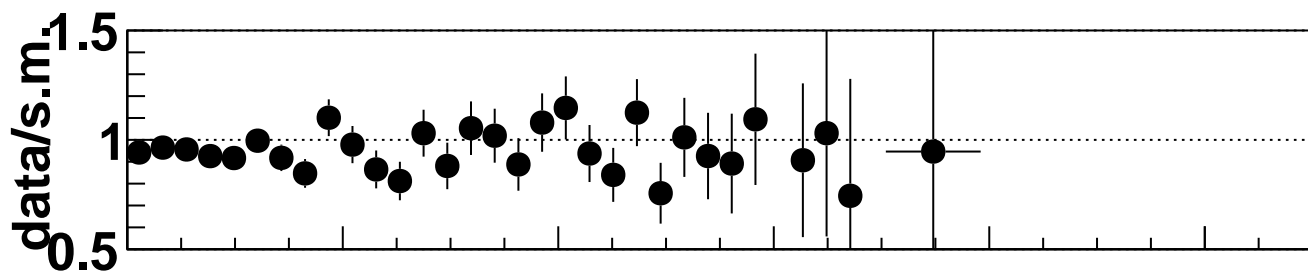
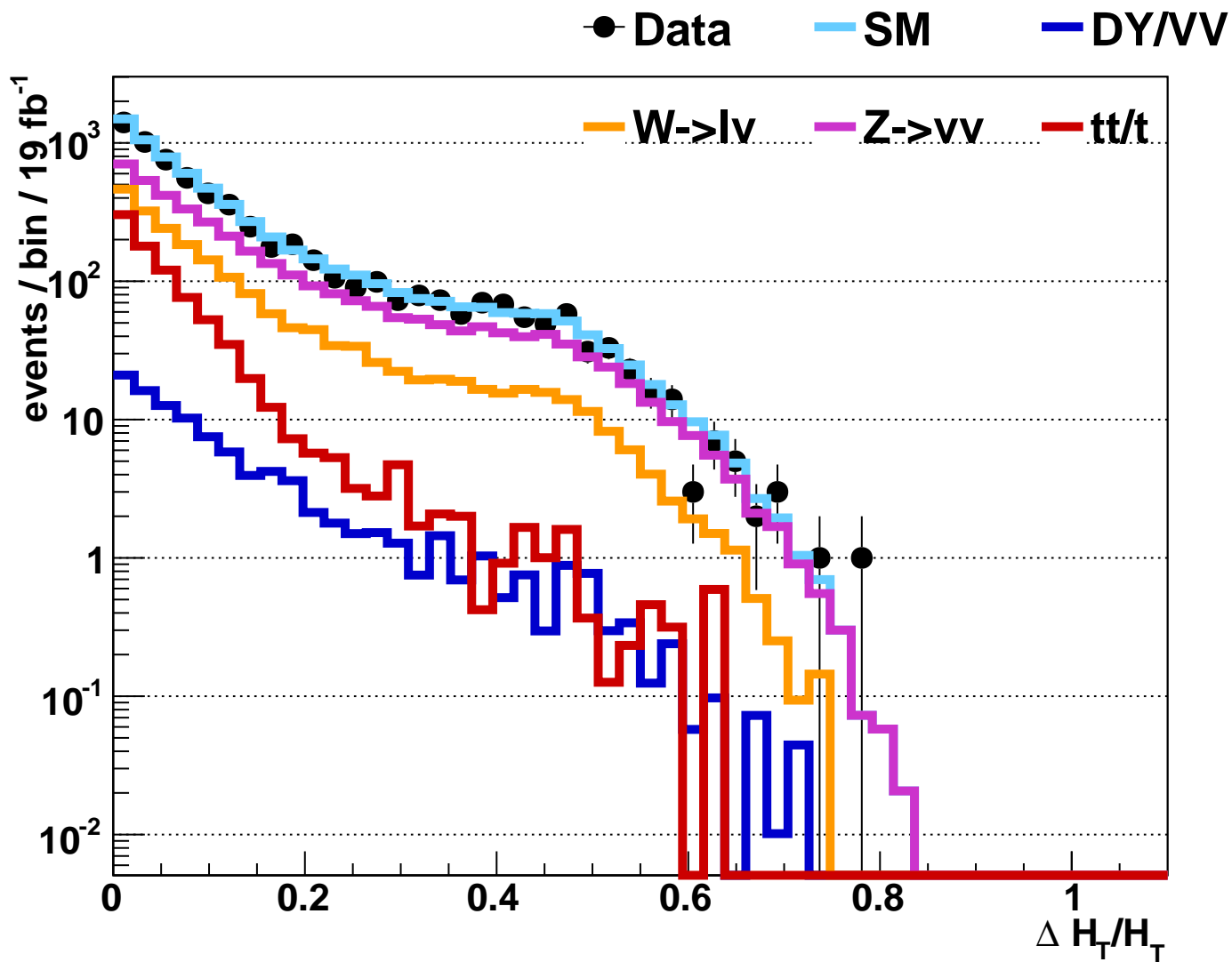


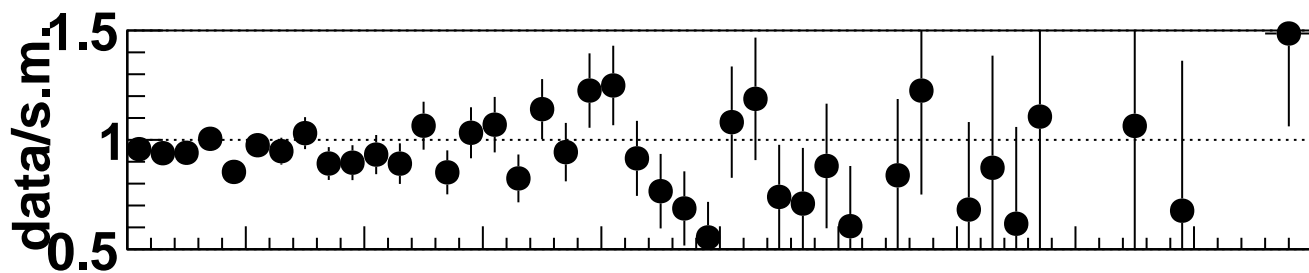
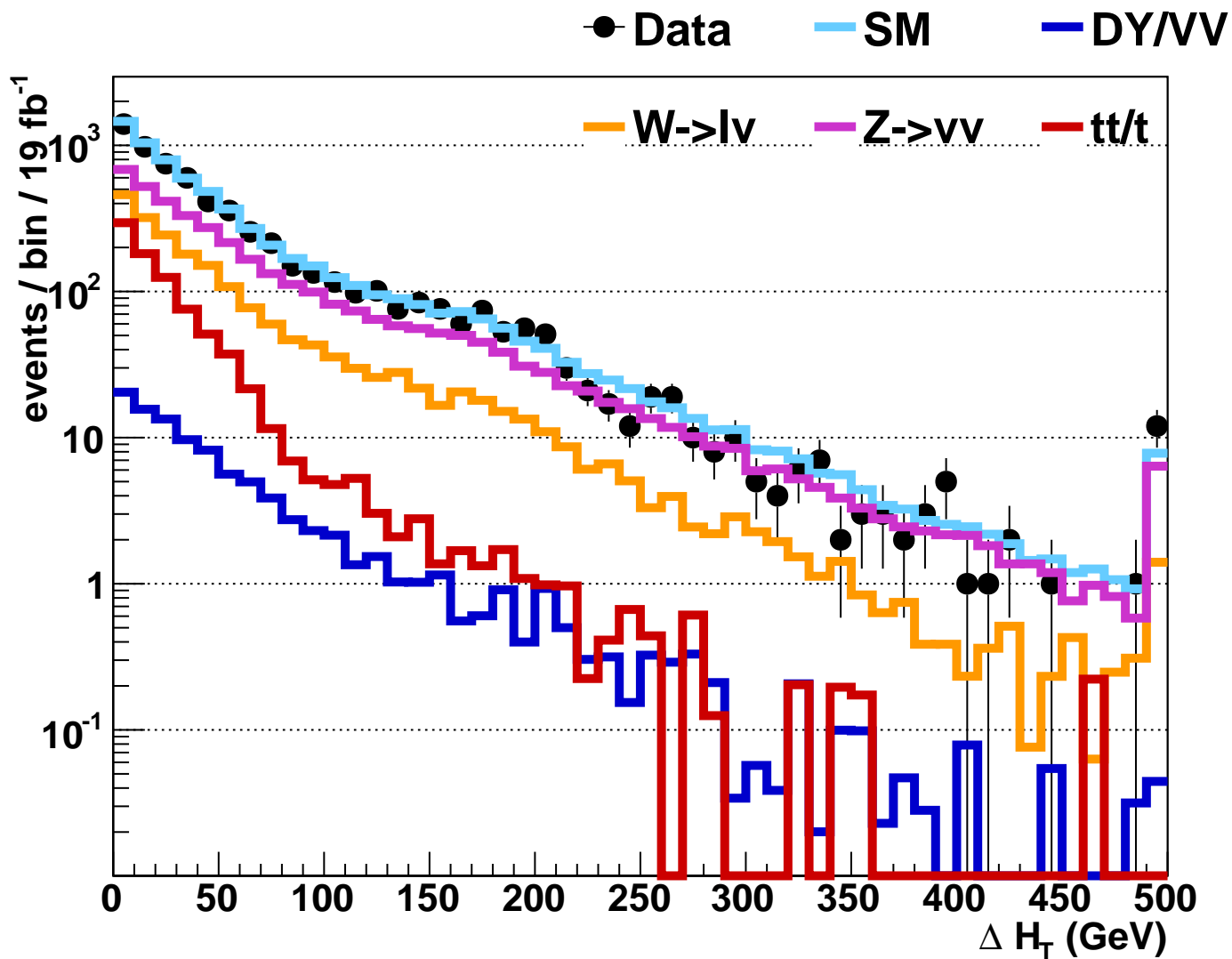




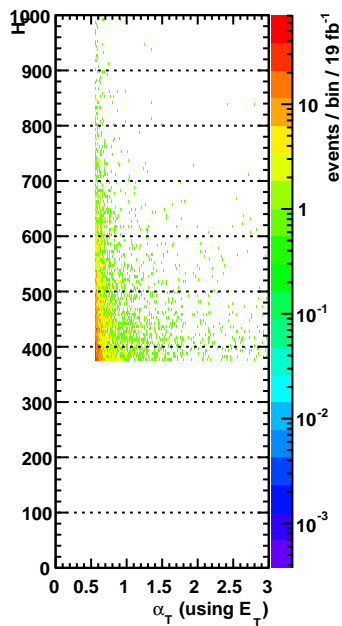




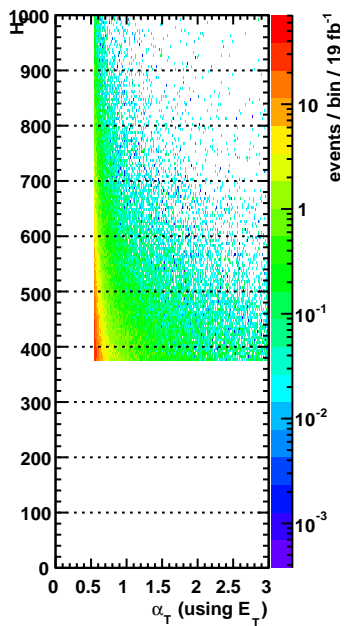




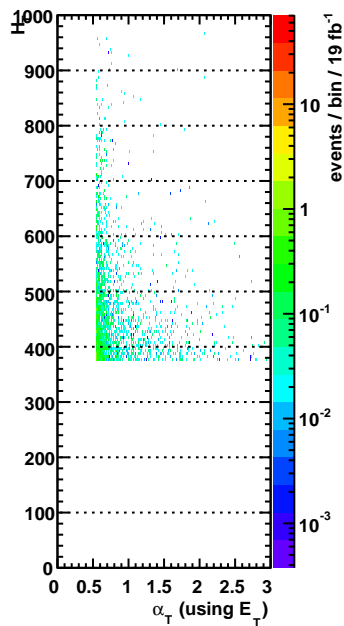
Data



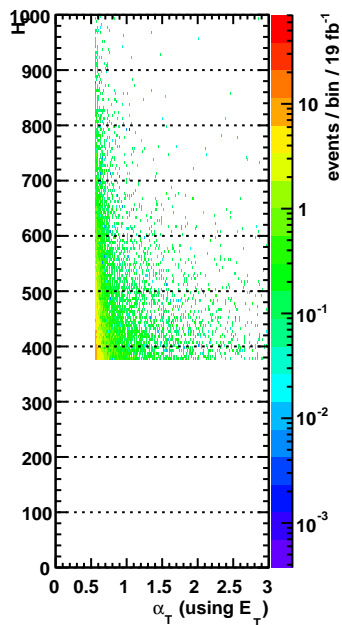
SM



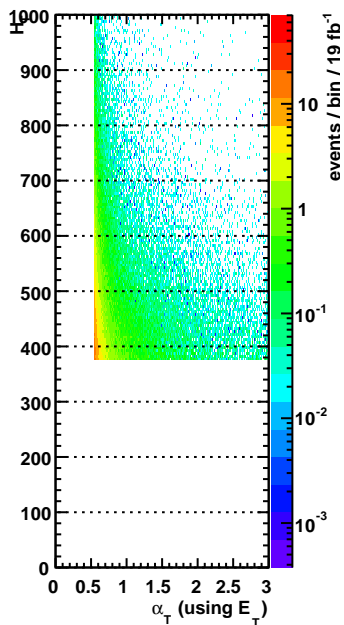
DY/VV



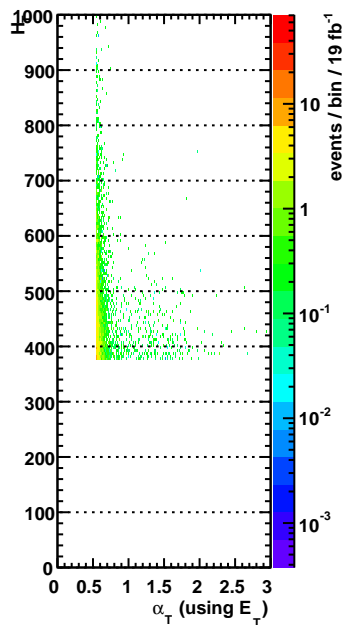
W->lv



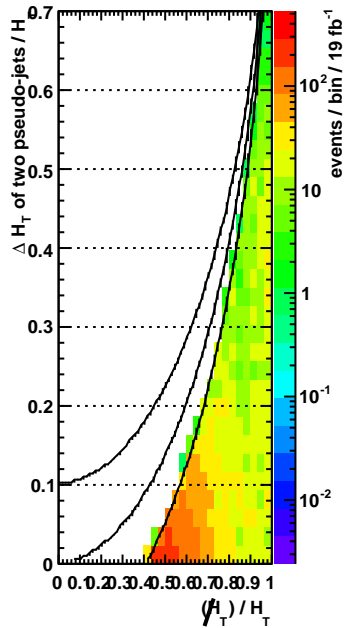
Z->vv



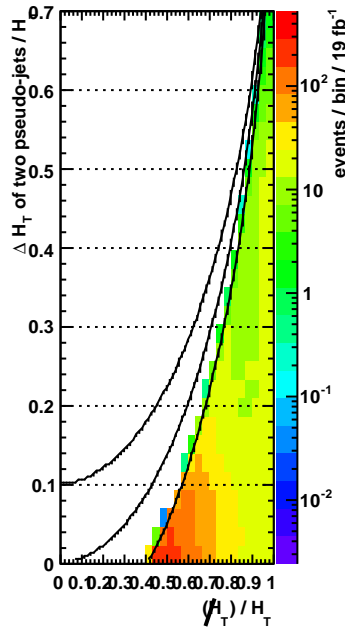
tt/t



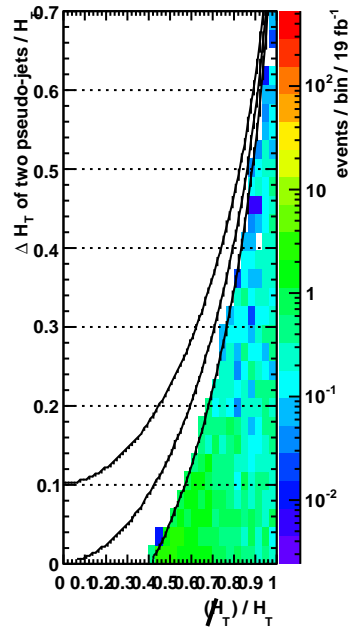
Data



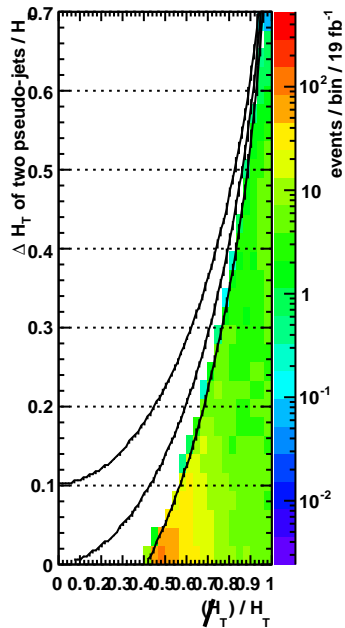
SM



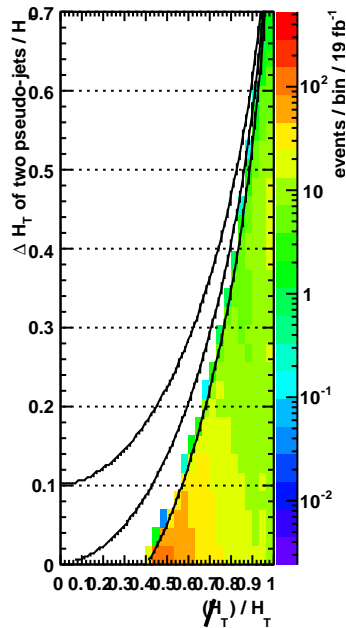
DY/VV



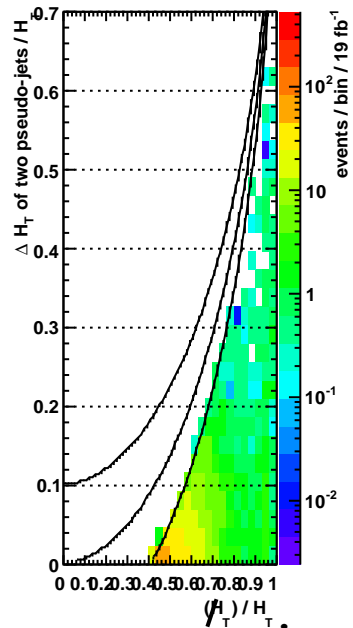
W->lv



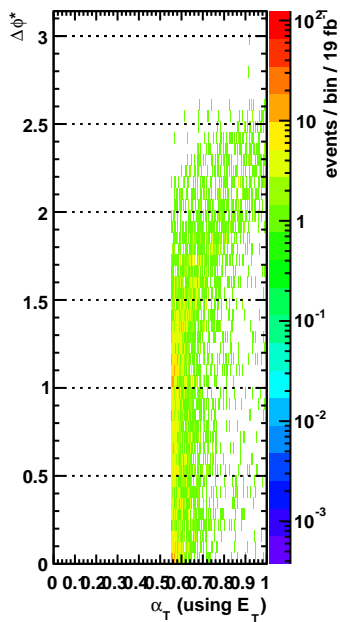
Z->vv



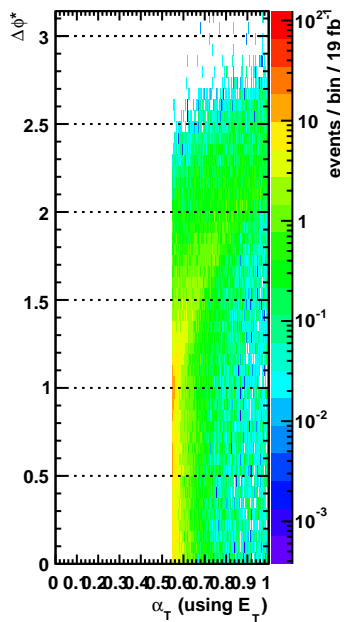
tt/t



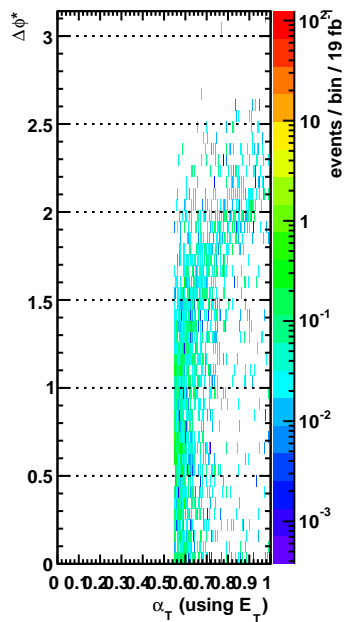
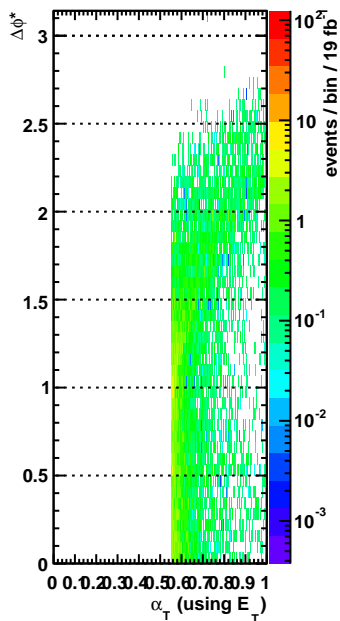
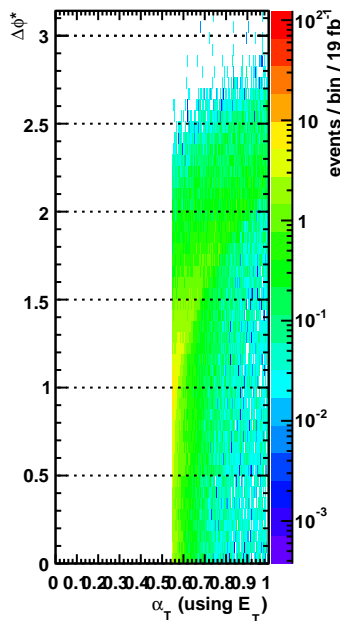
Data



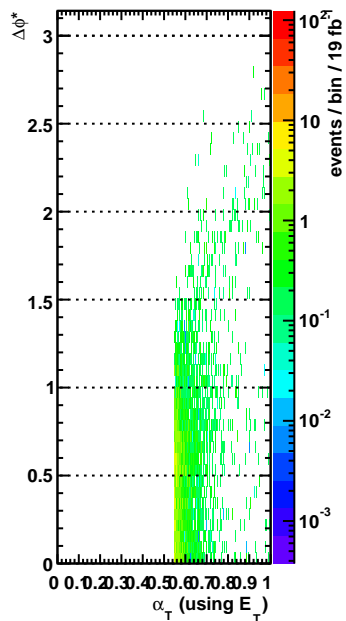
SM

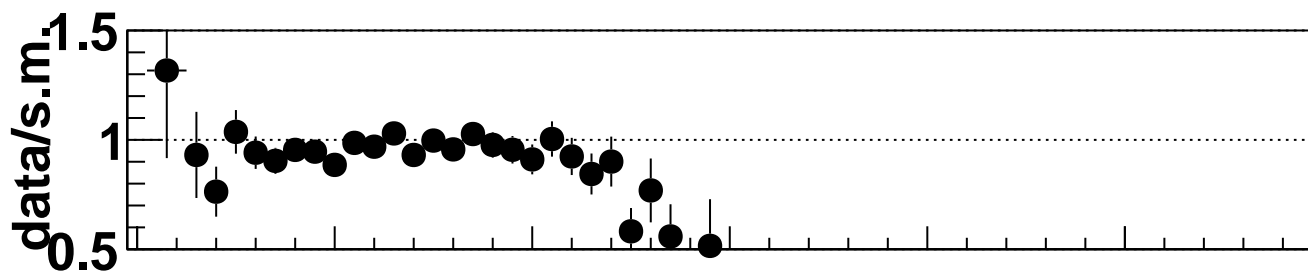
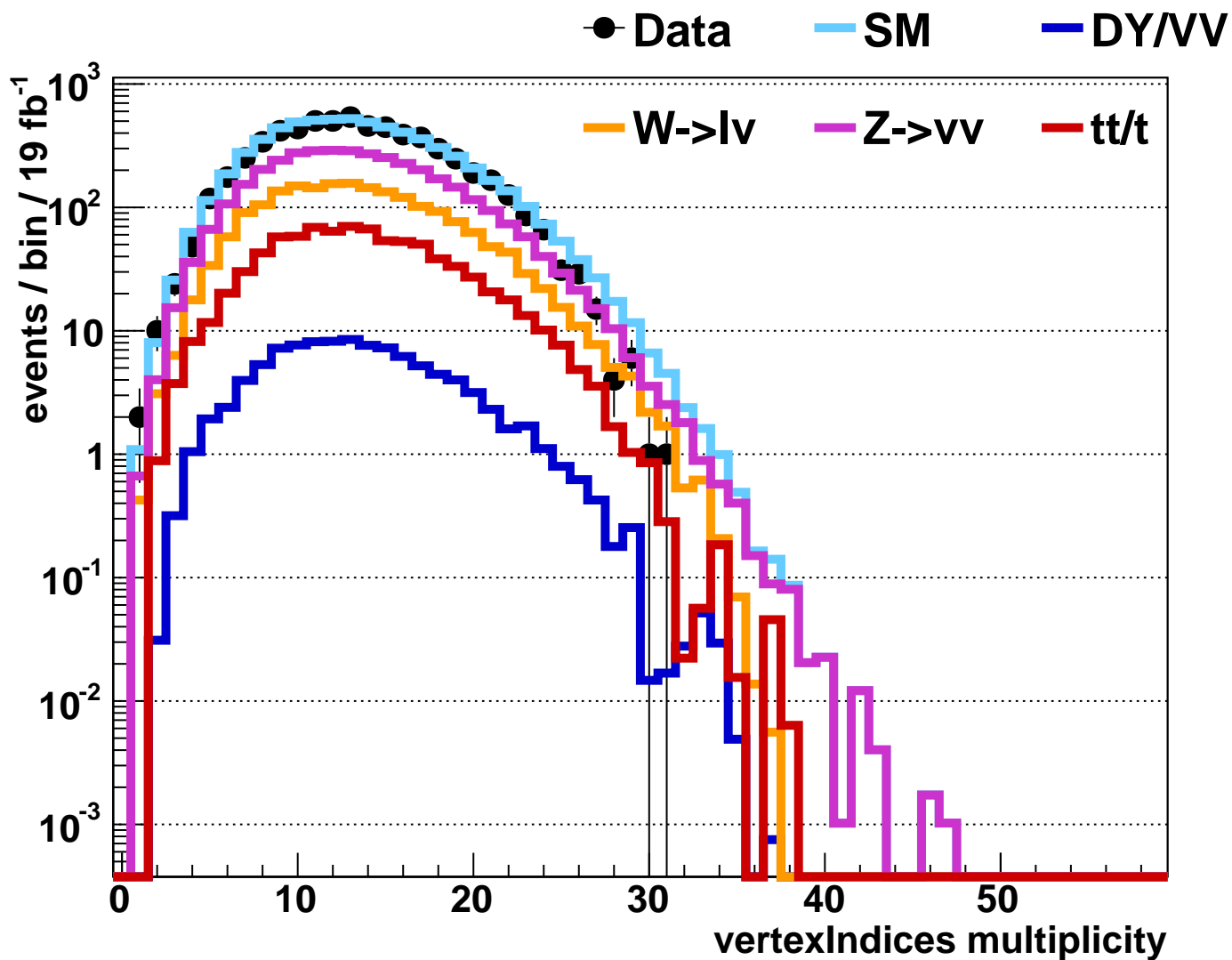


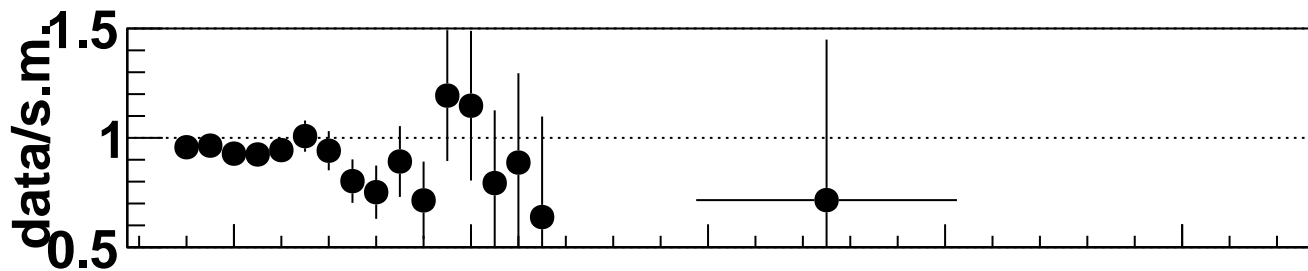
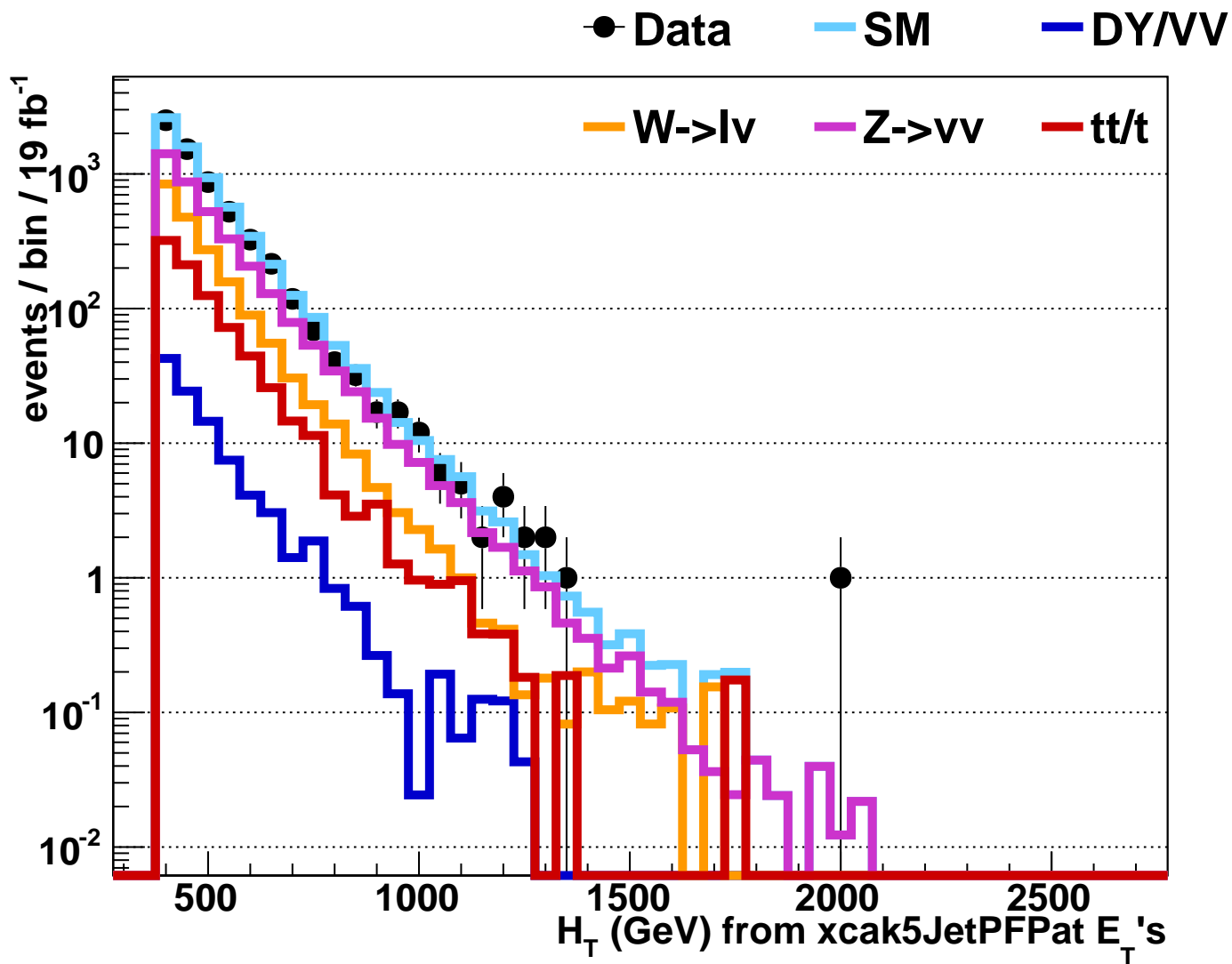
DY/VV

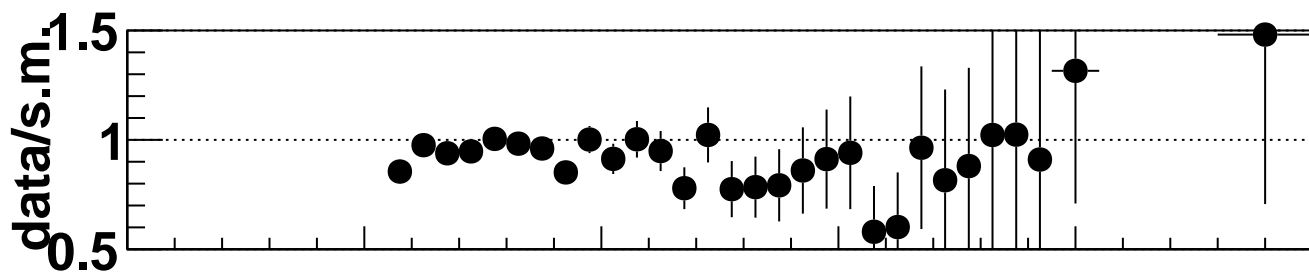
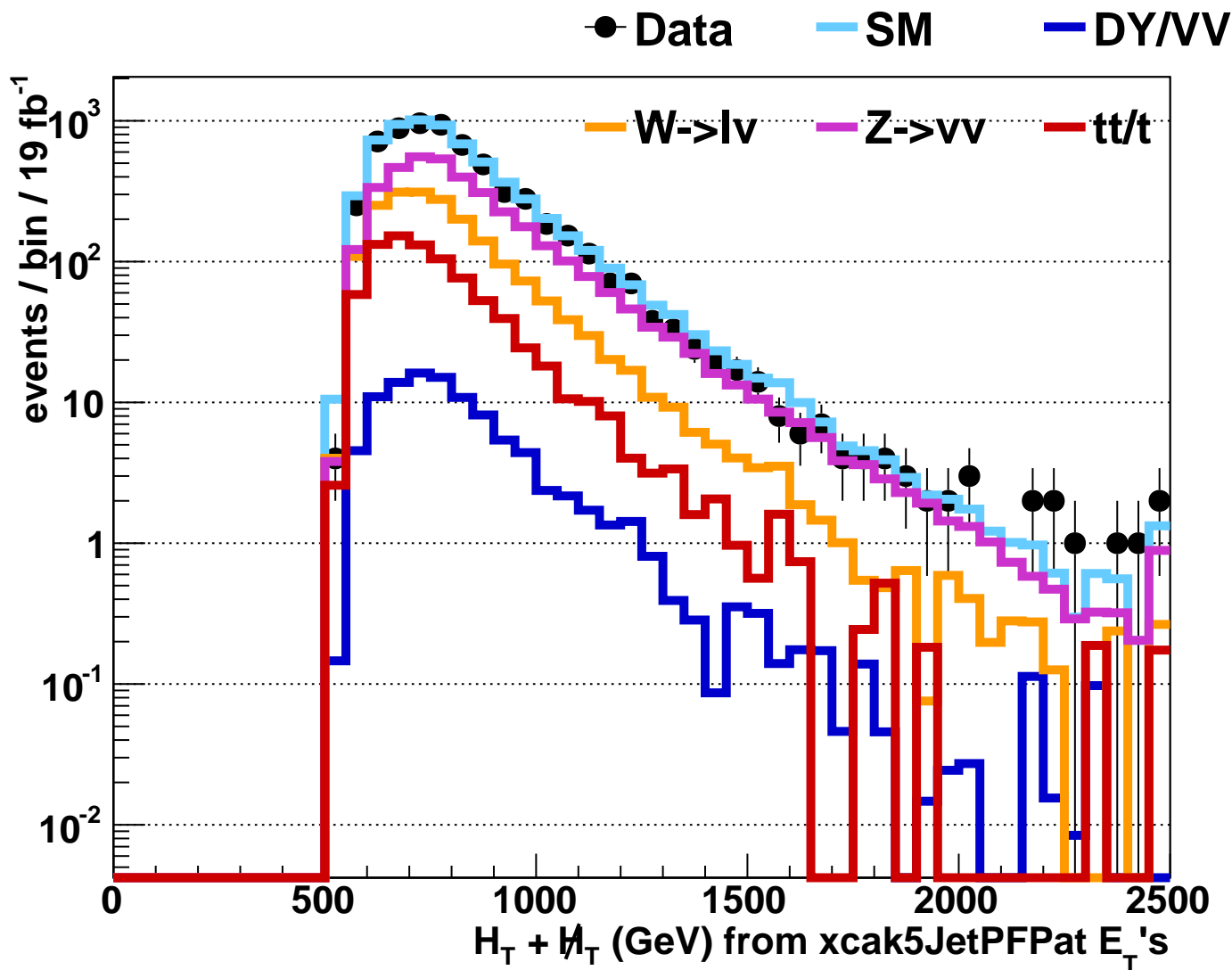
W \rightarrow lvZ \rightarrow vv

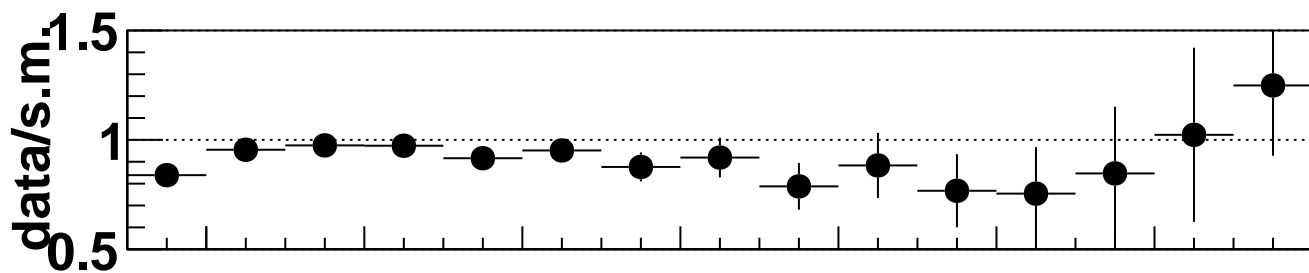
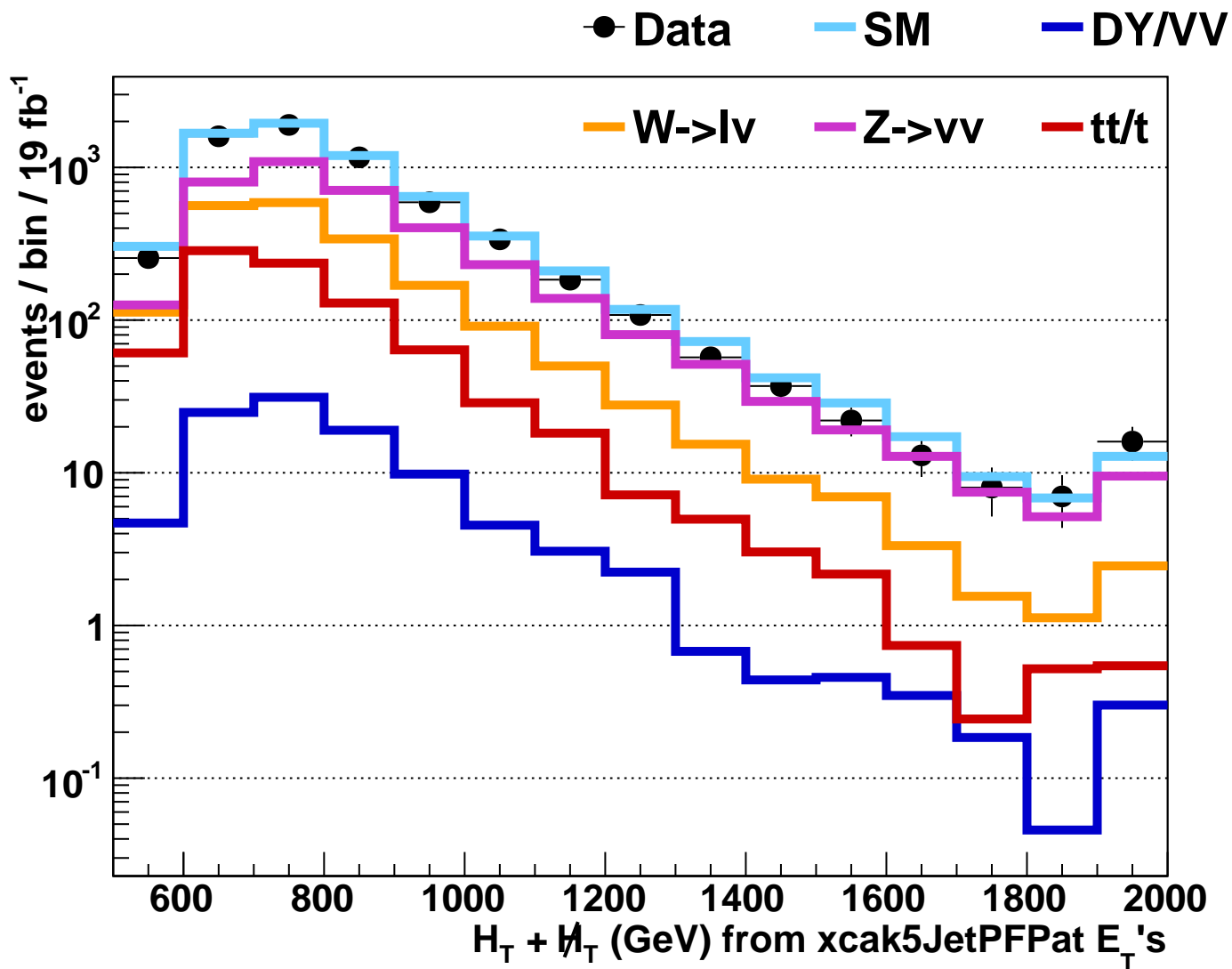
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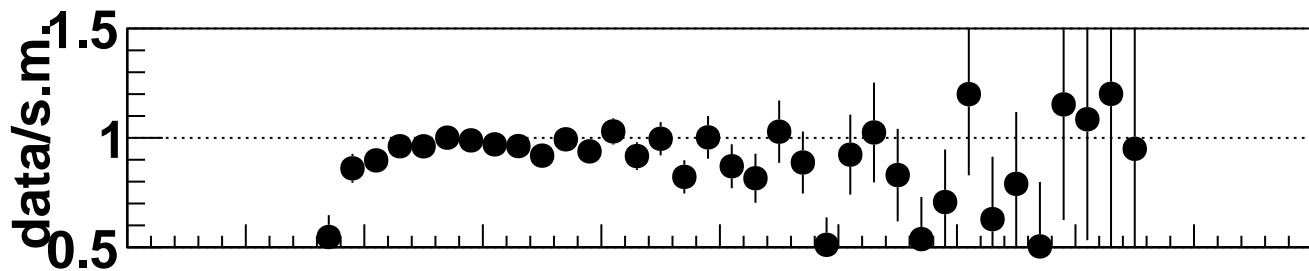
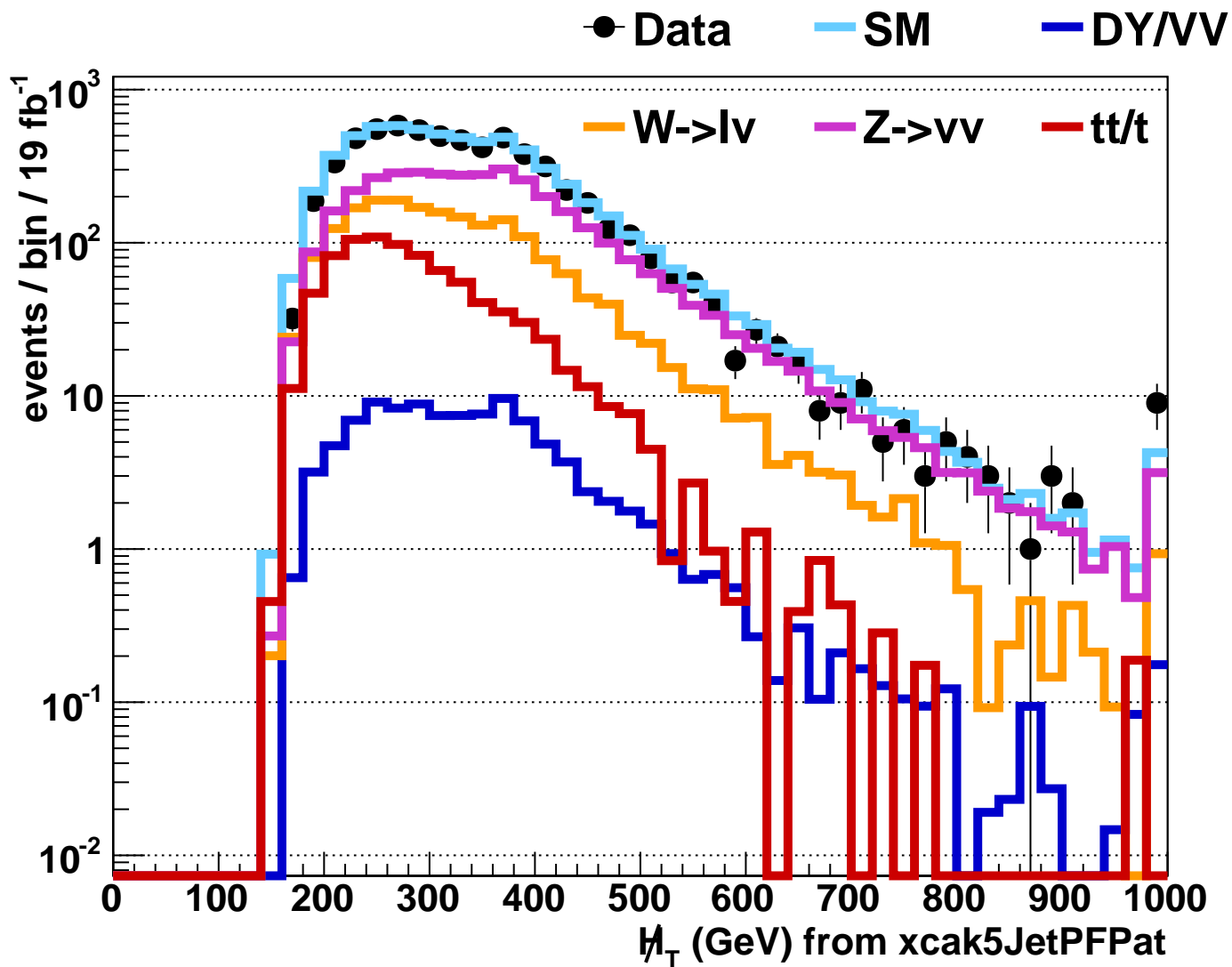


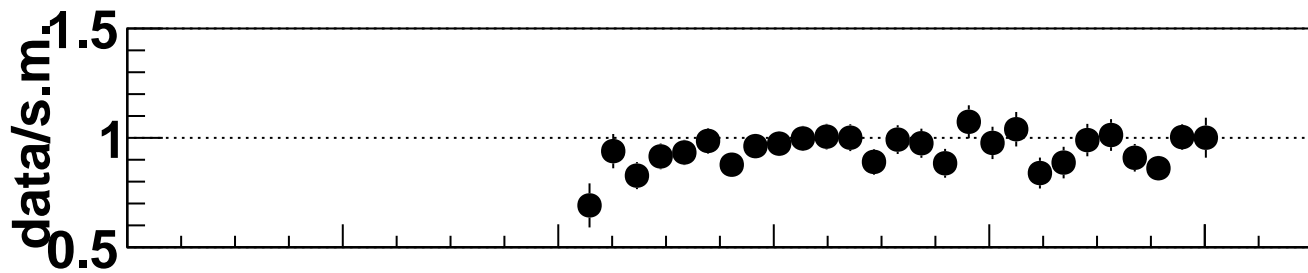
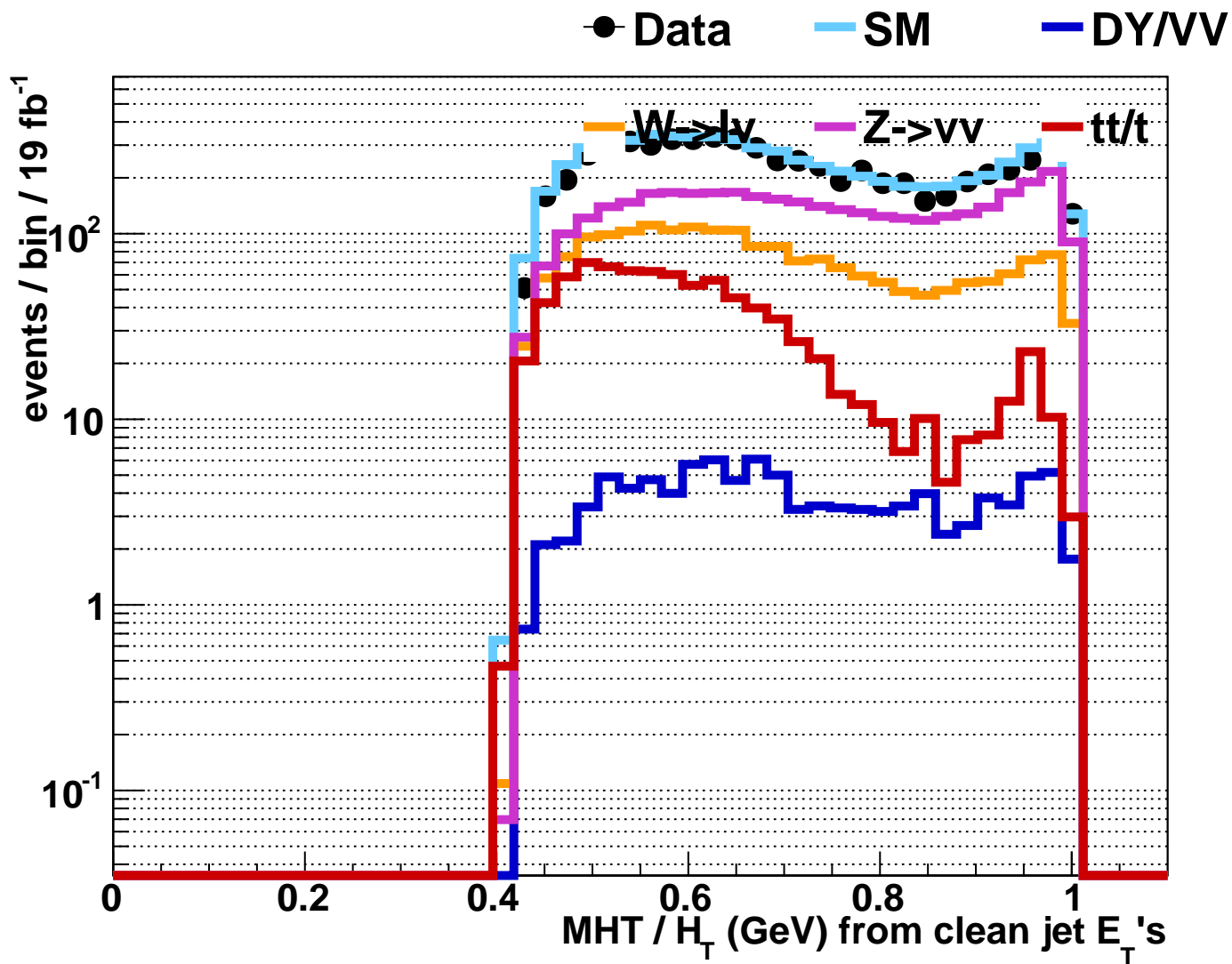


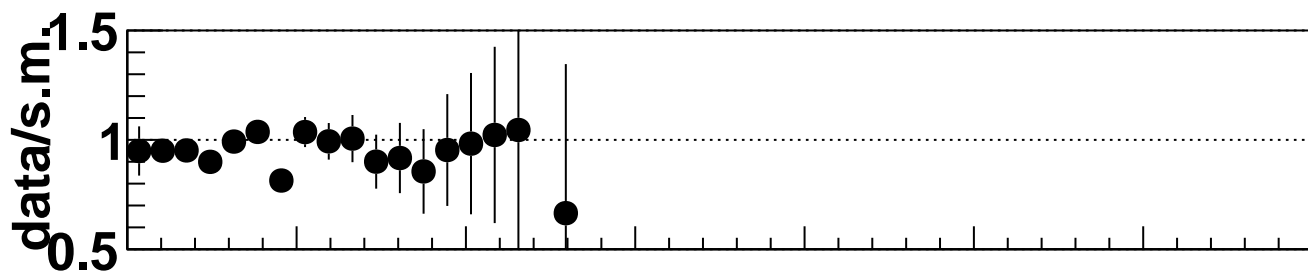
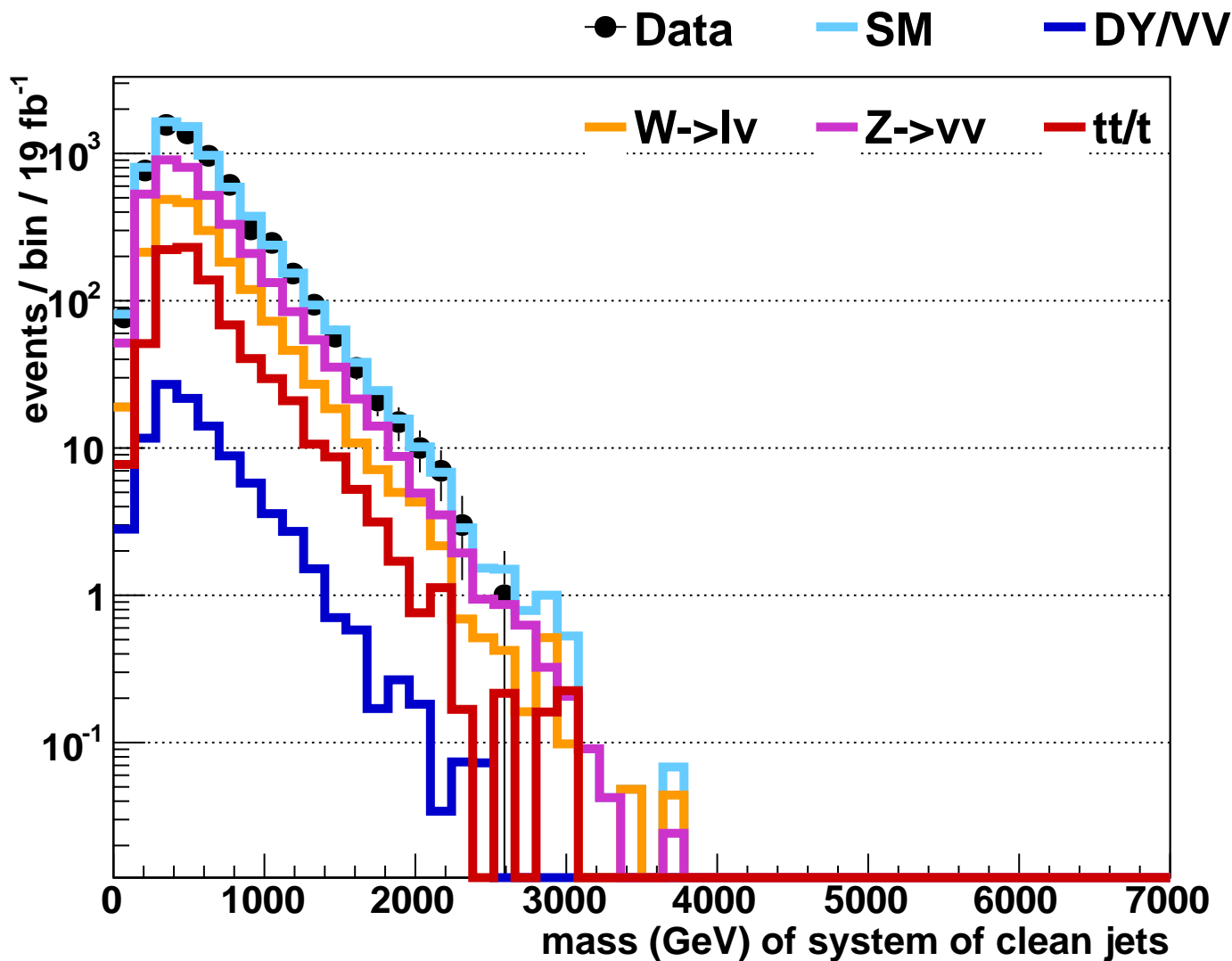




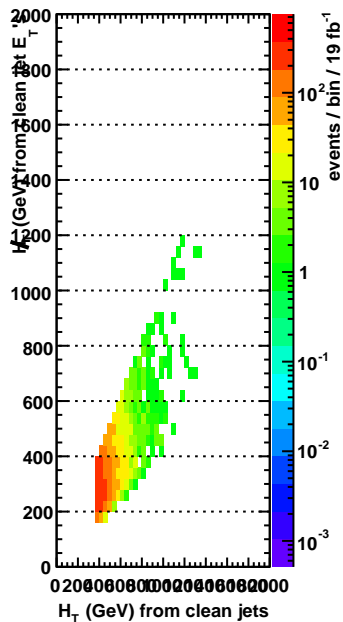




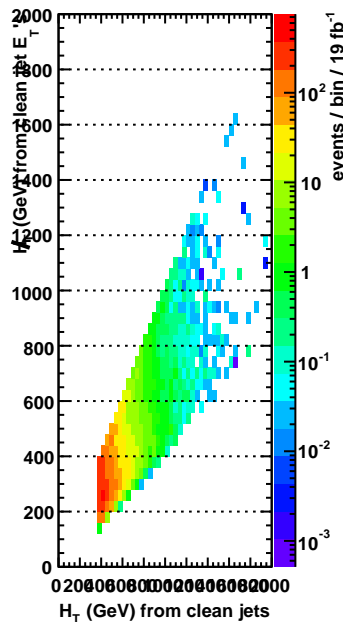




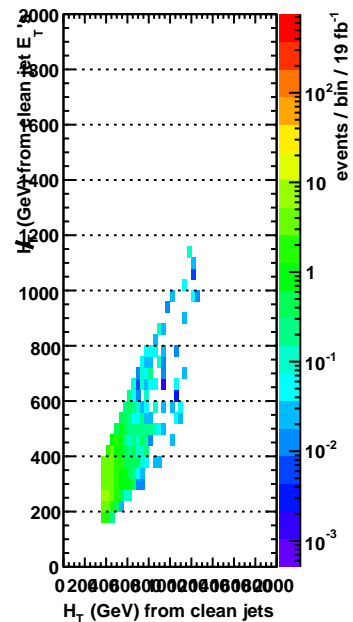
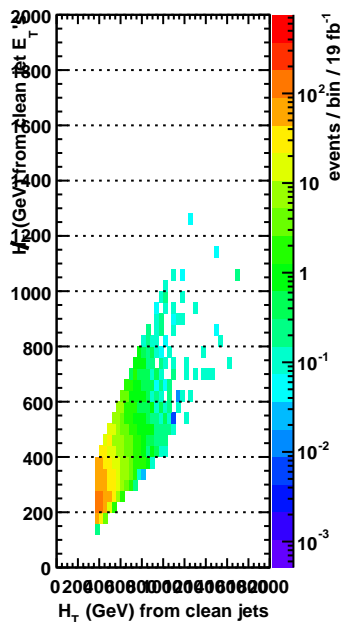
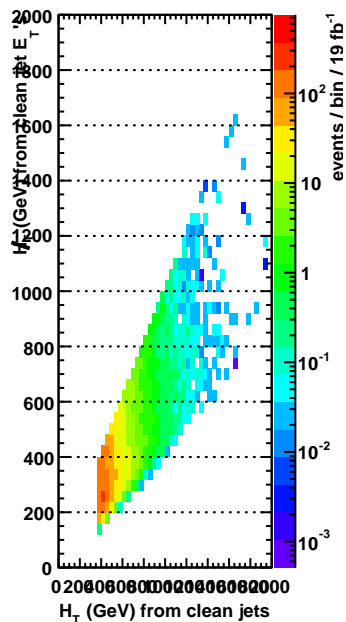
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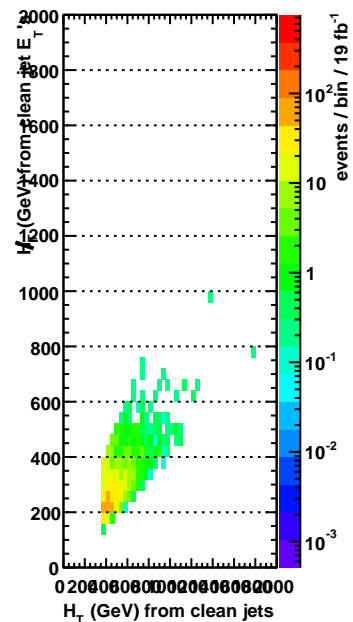
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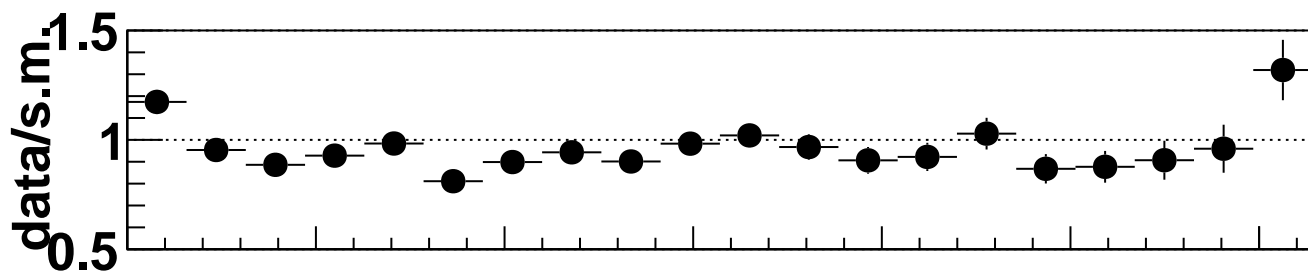
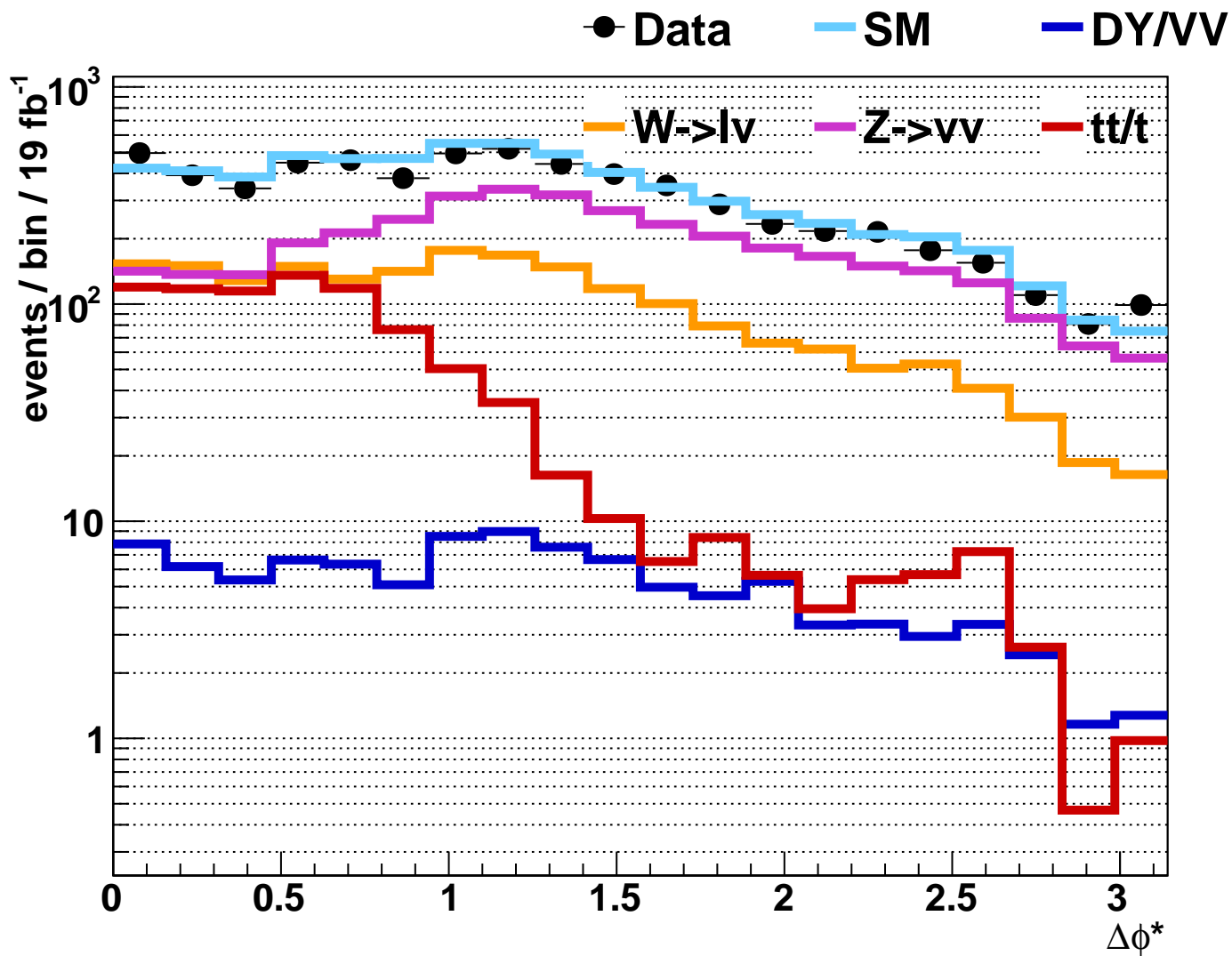


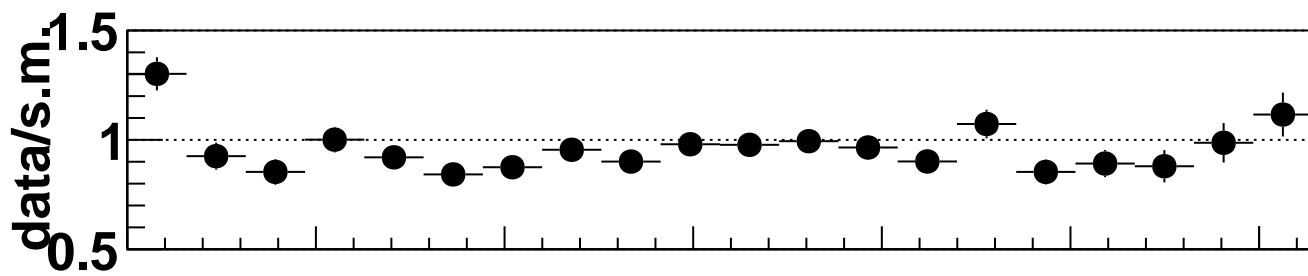
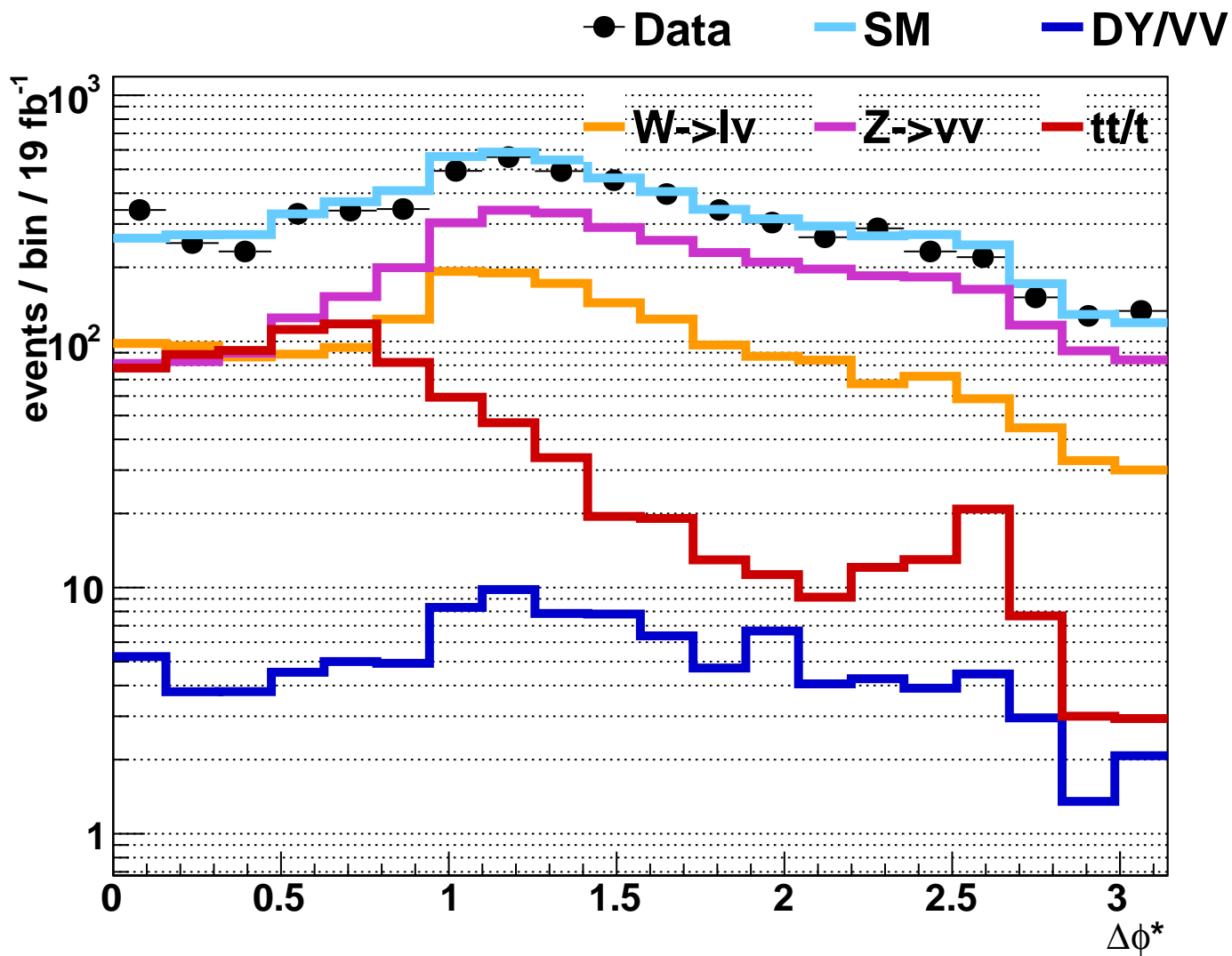
DY/VV

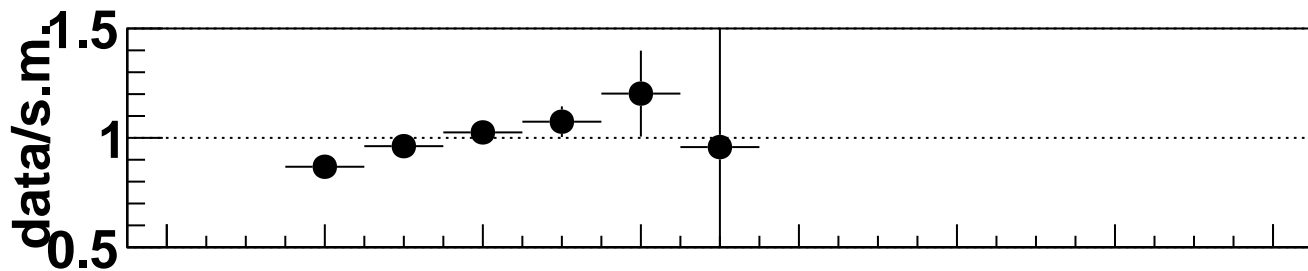
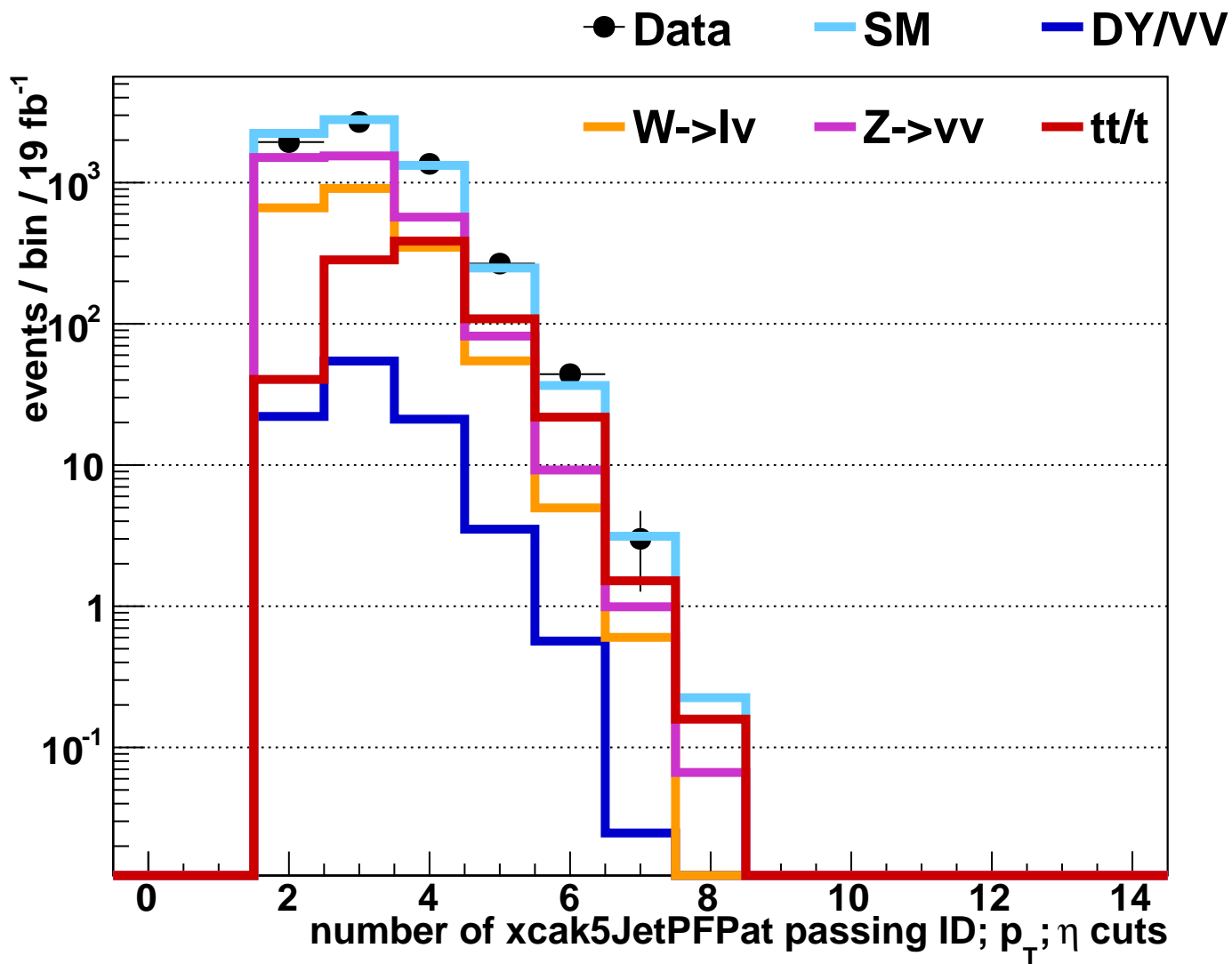
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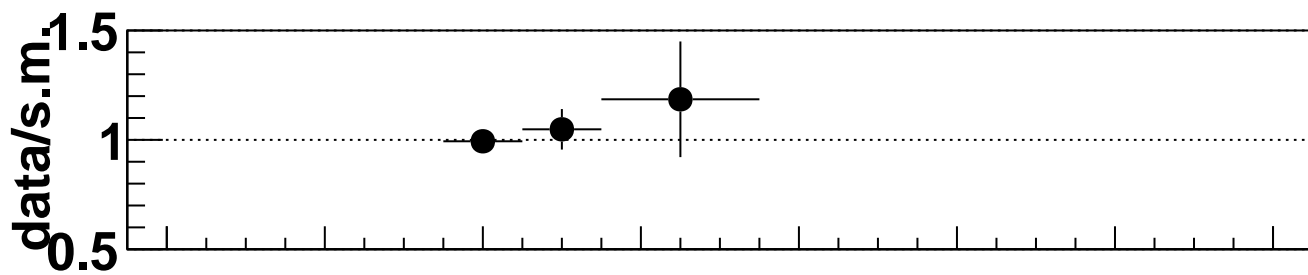
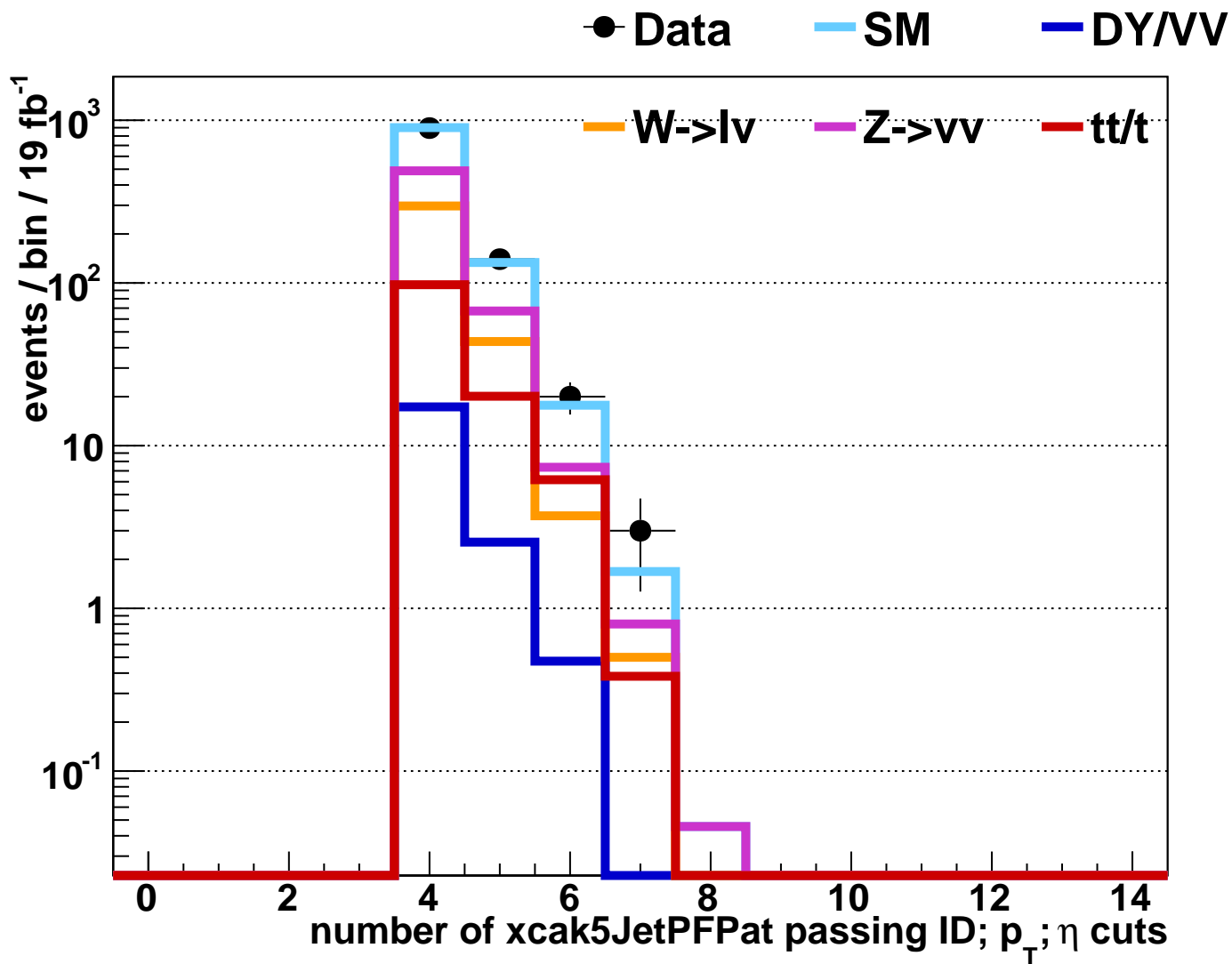
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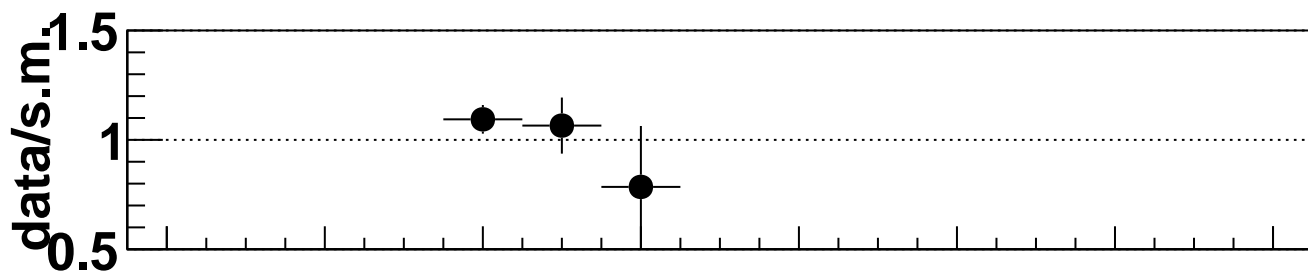
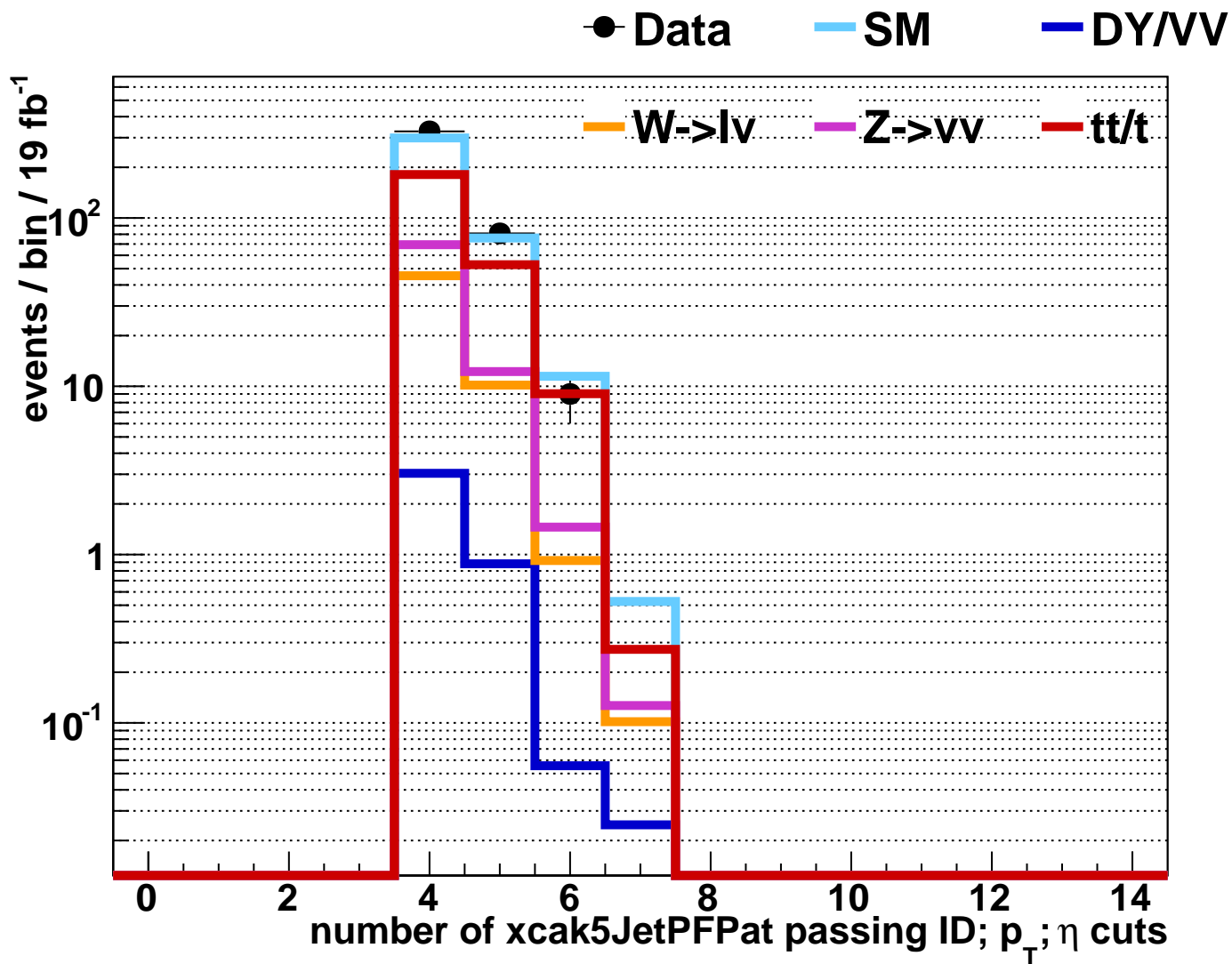


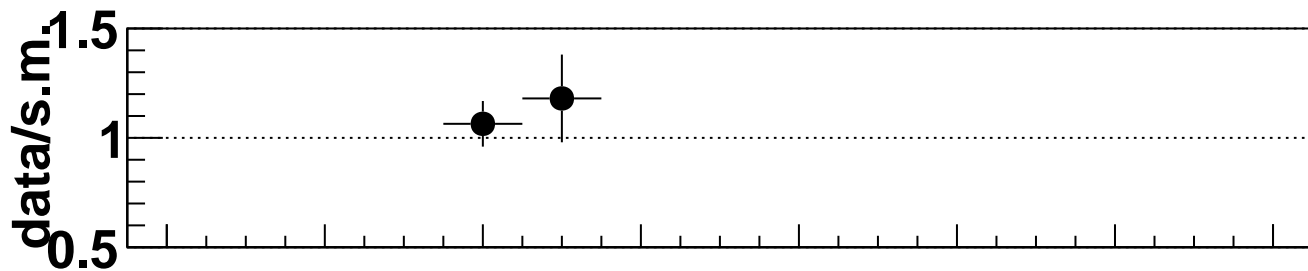
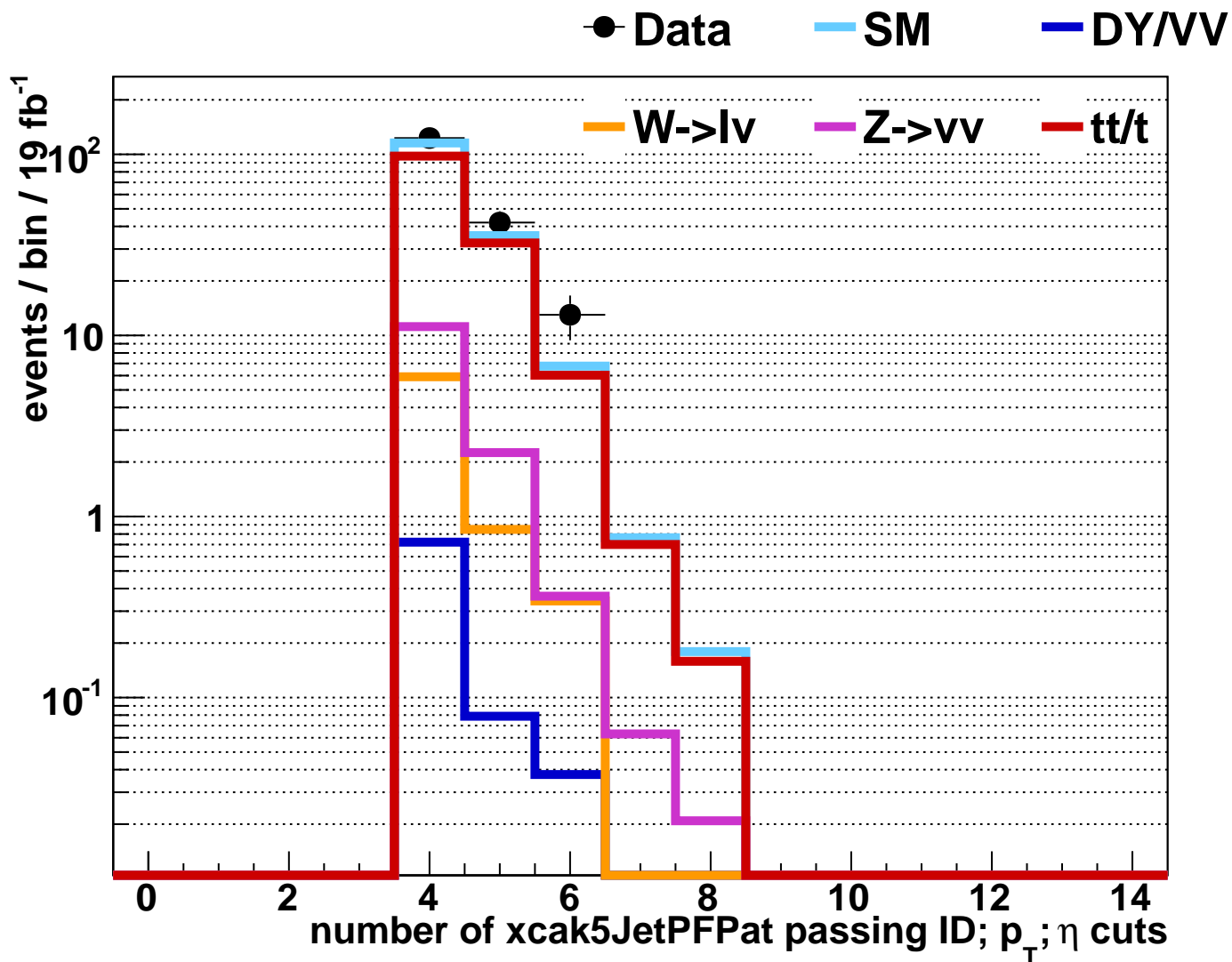


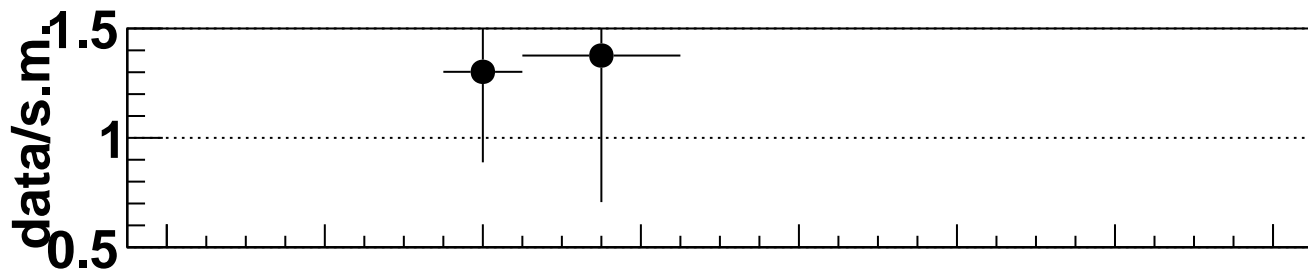
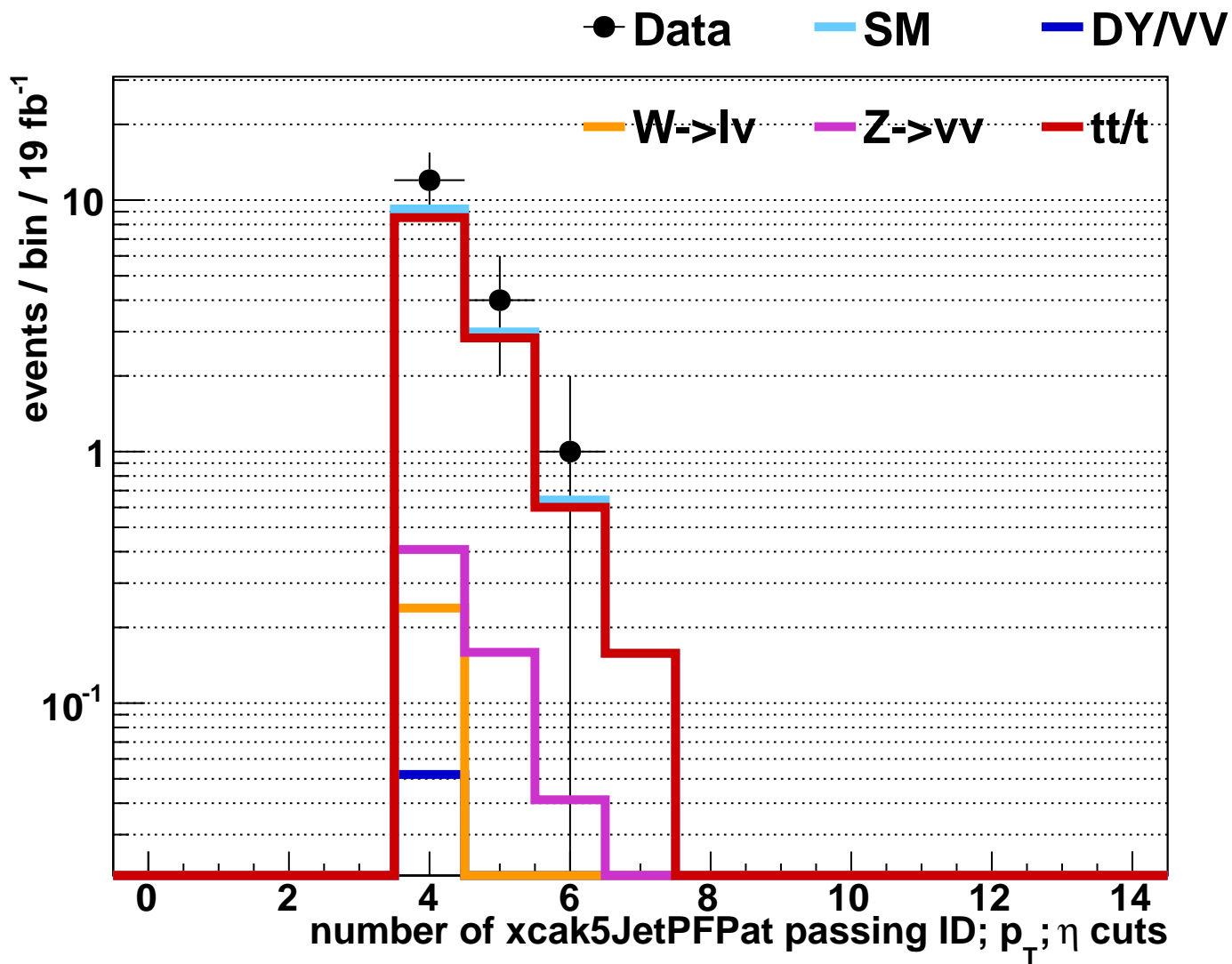


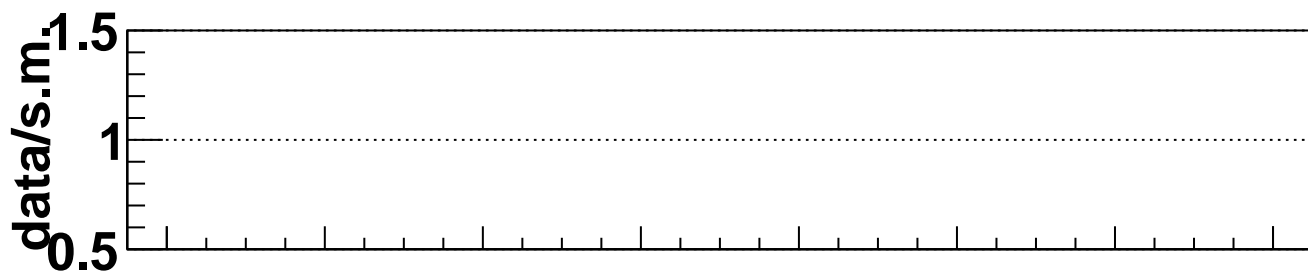
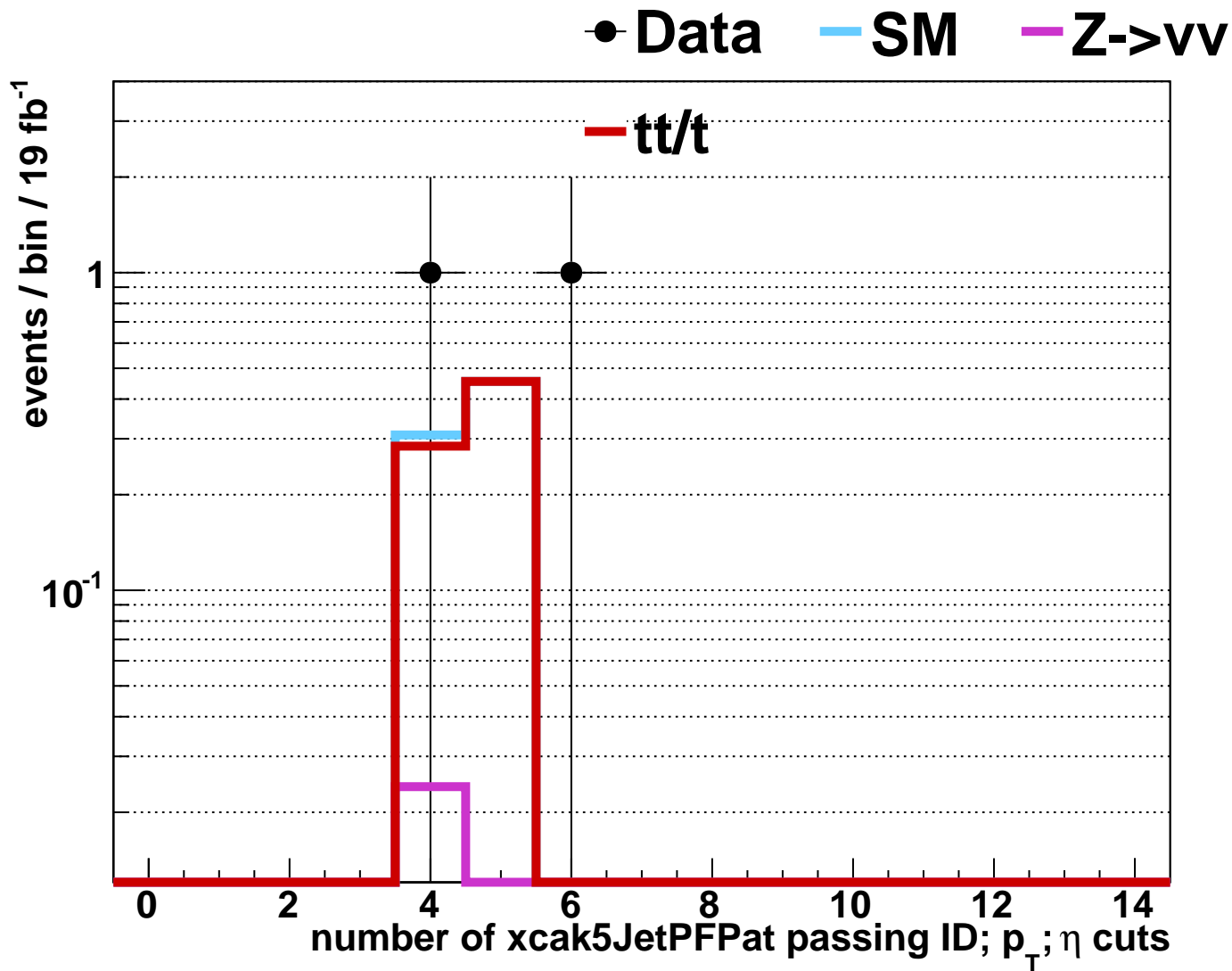


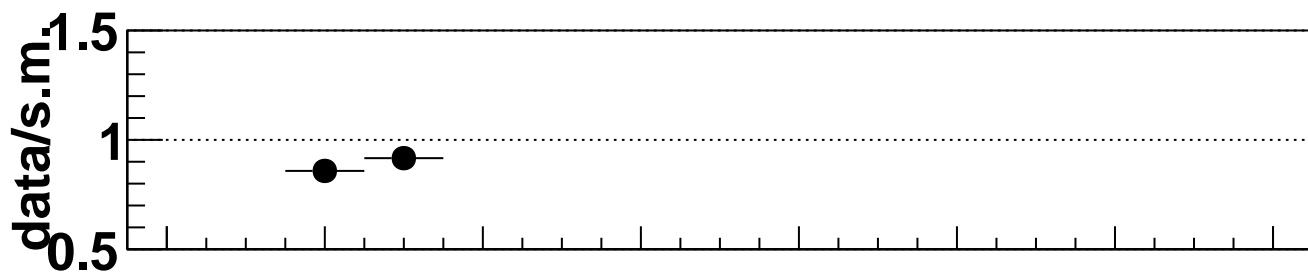
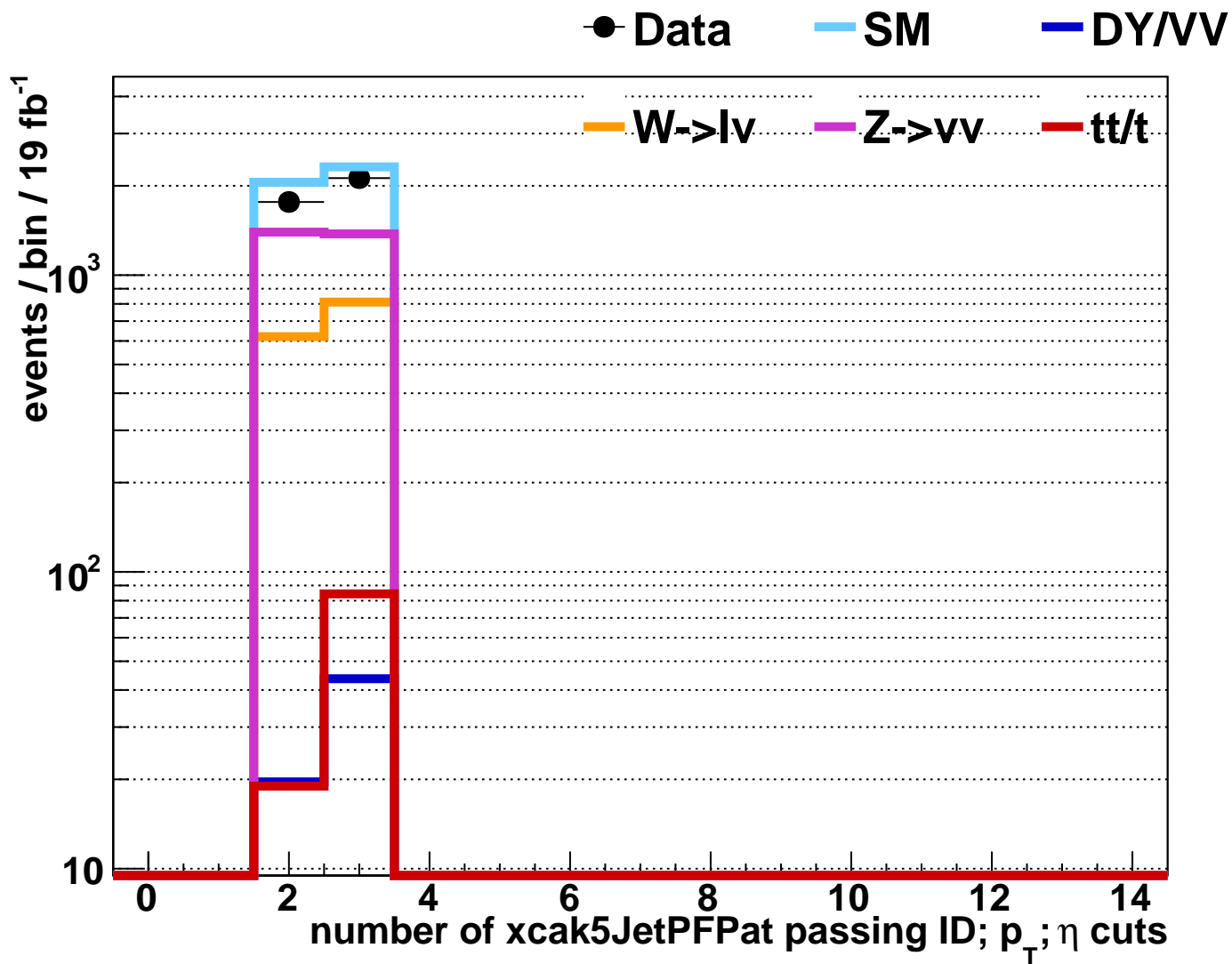


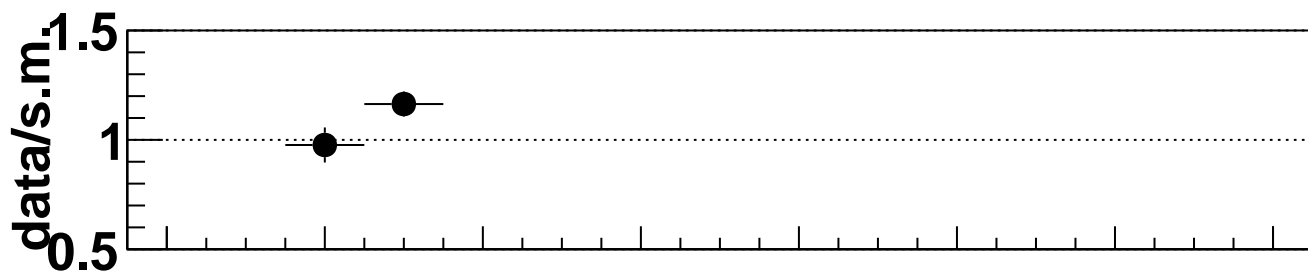
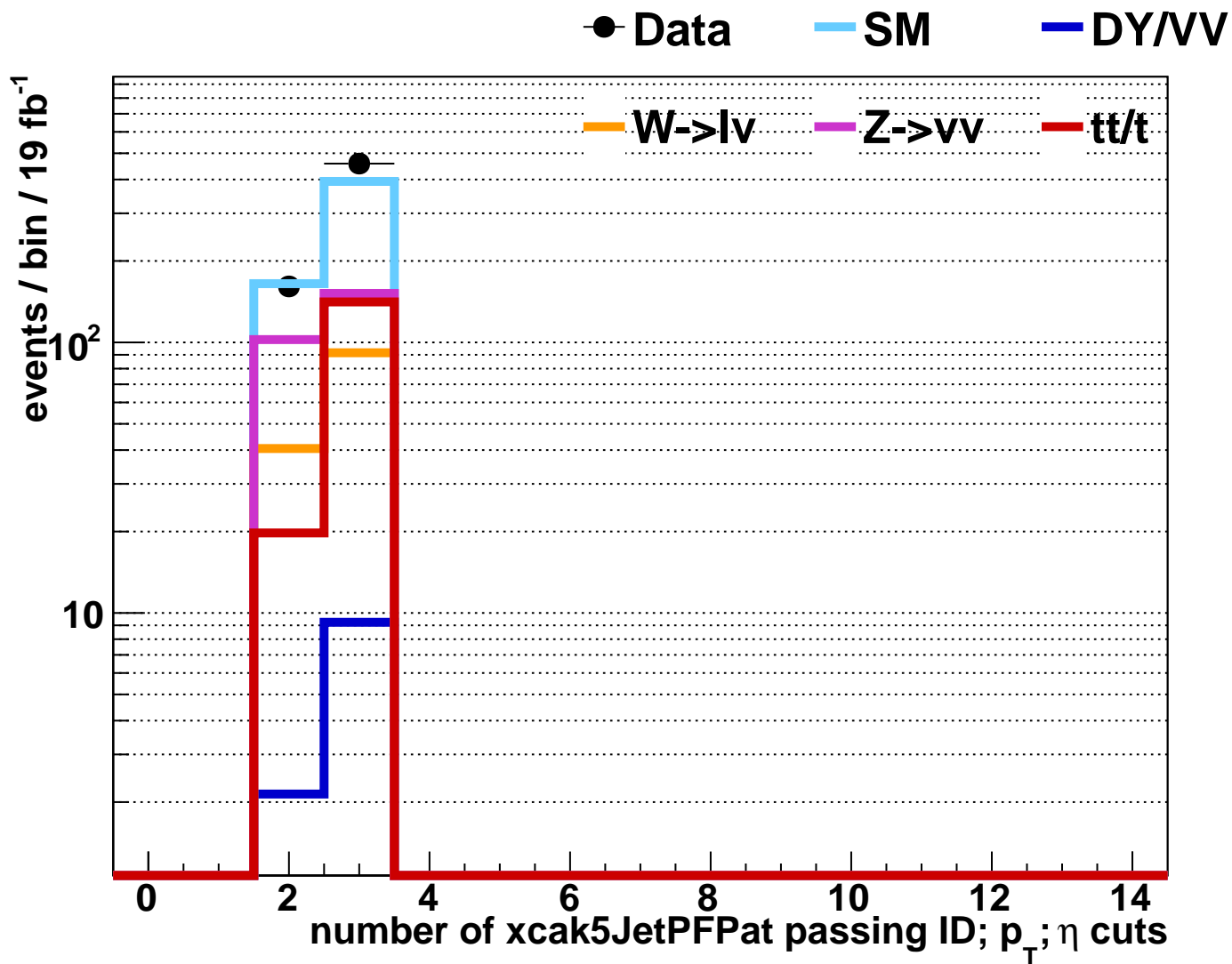


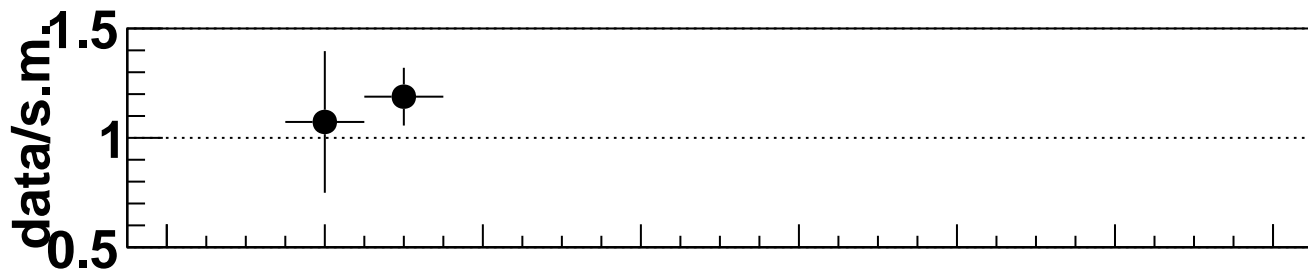
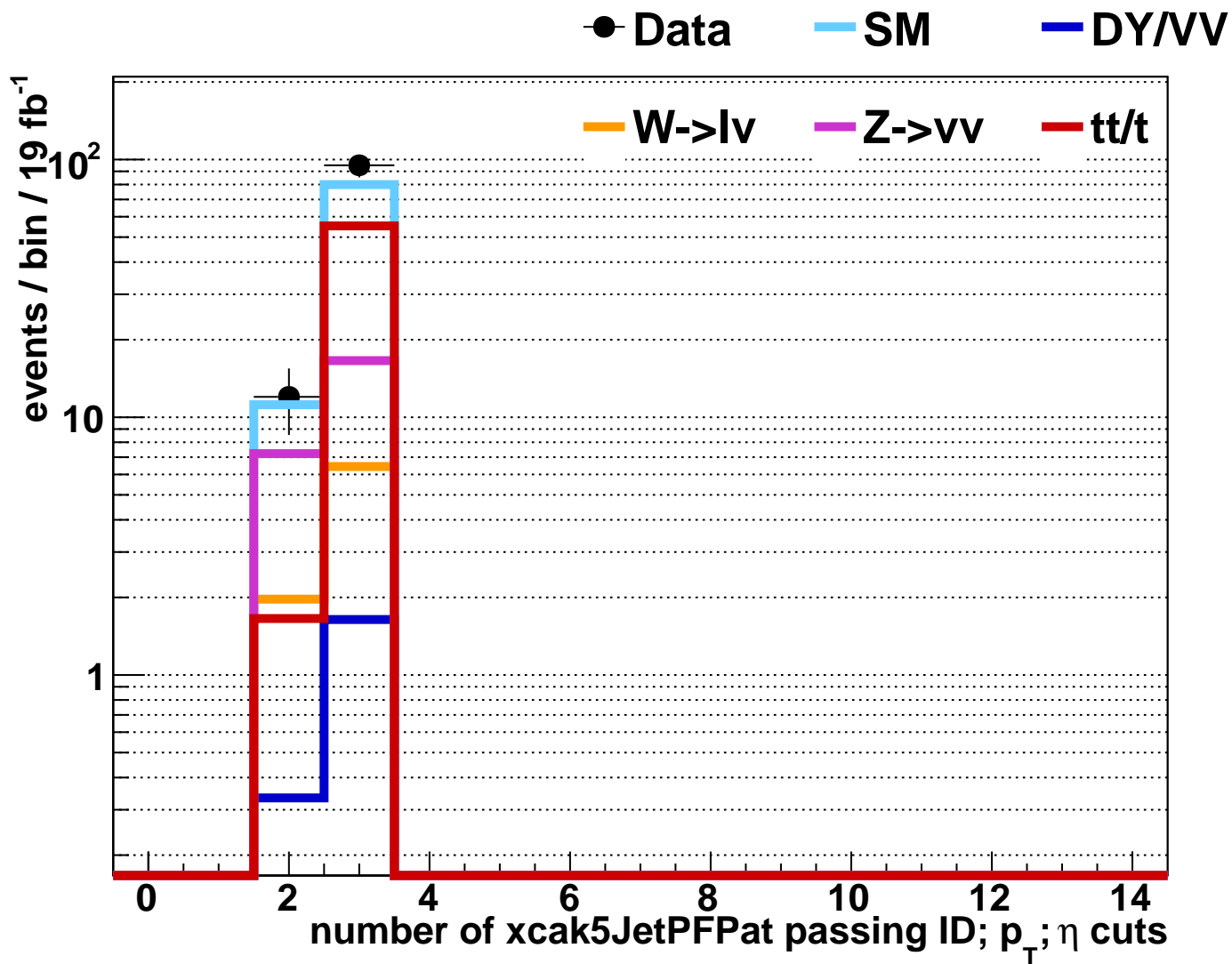


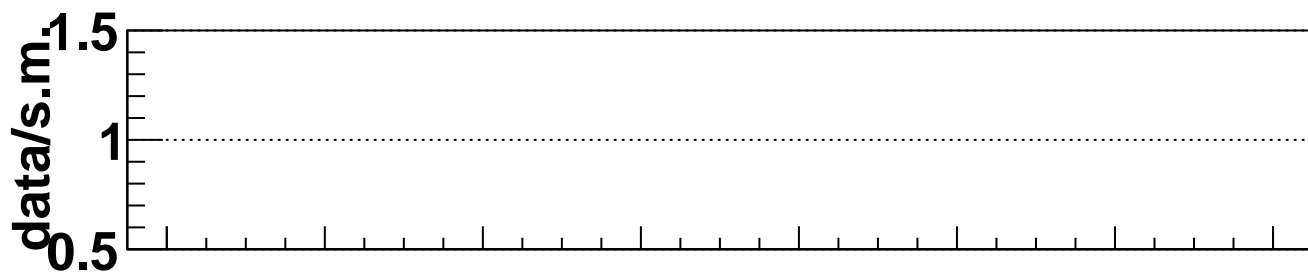
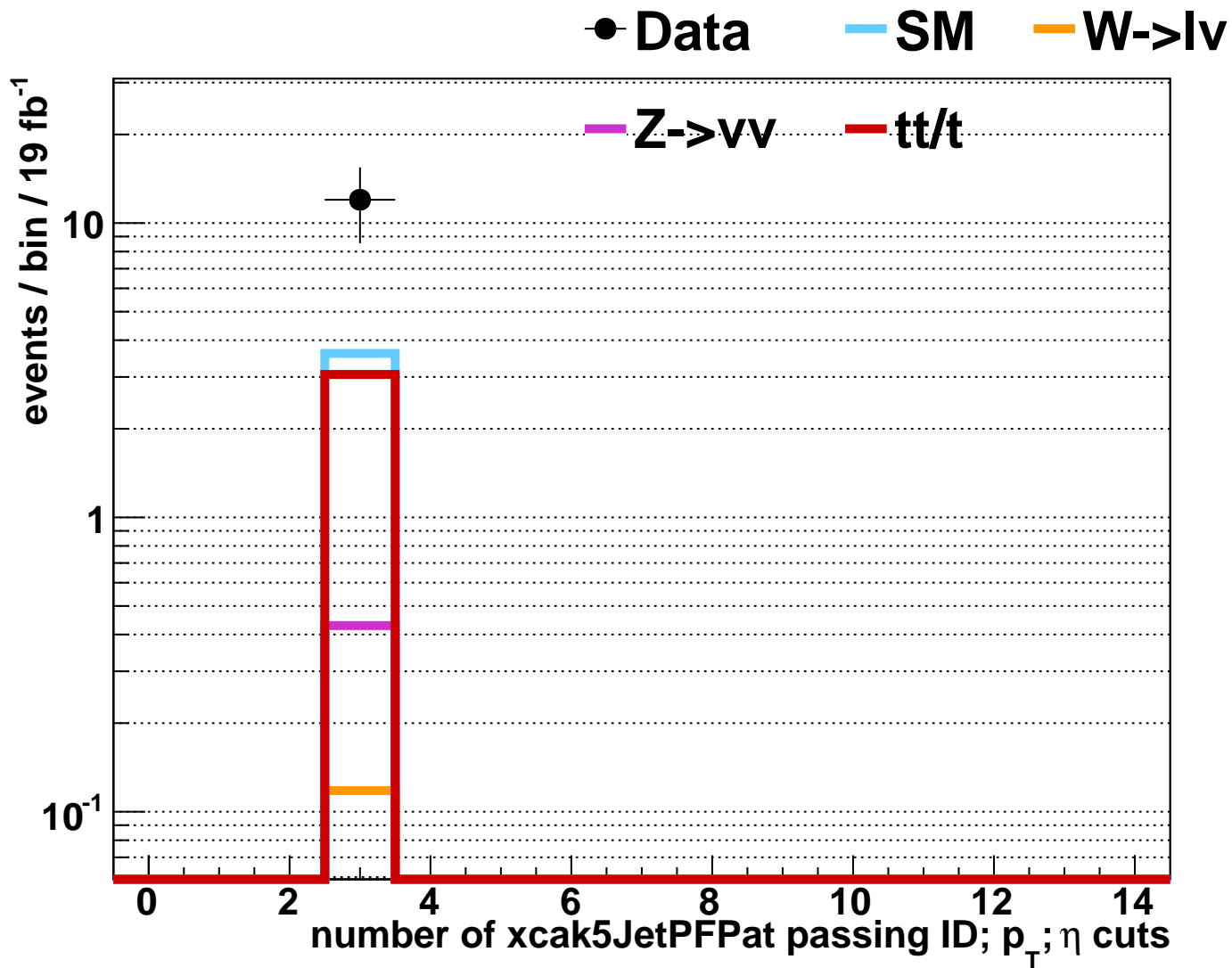


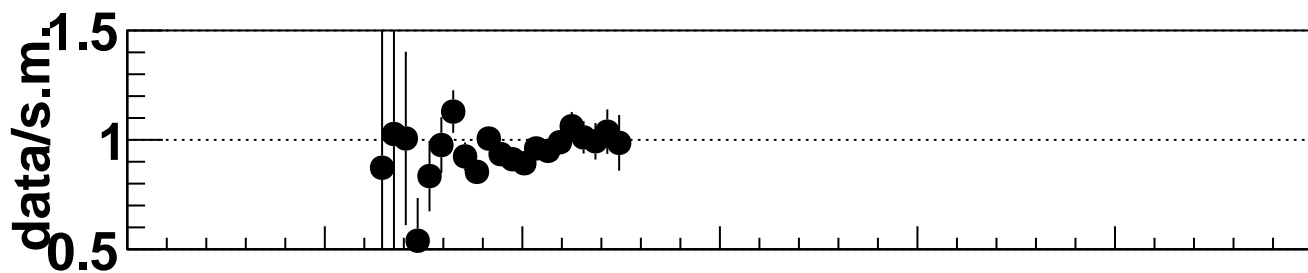
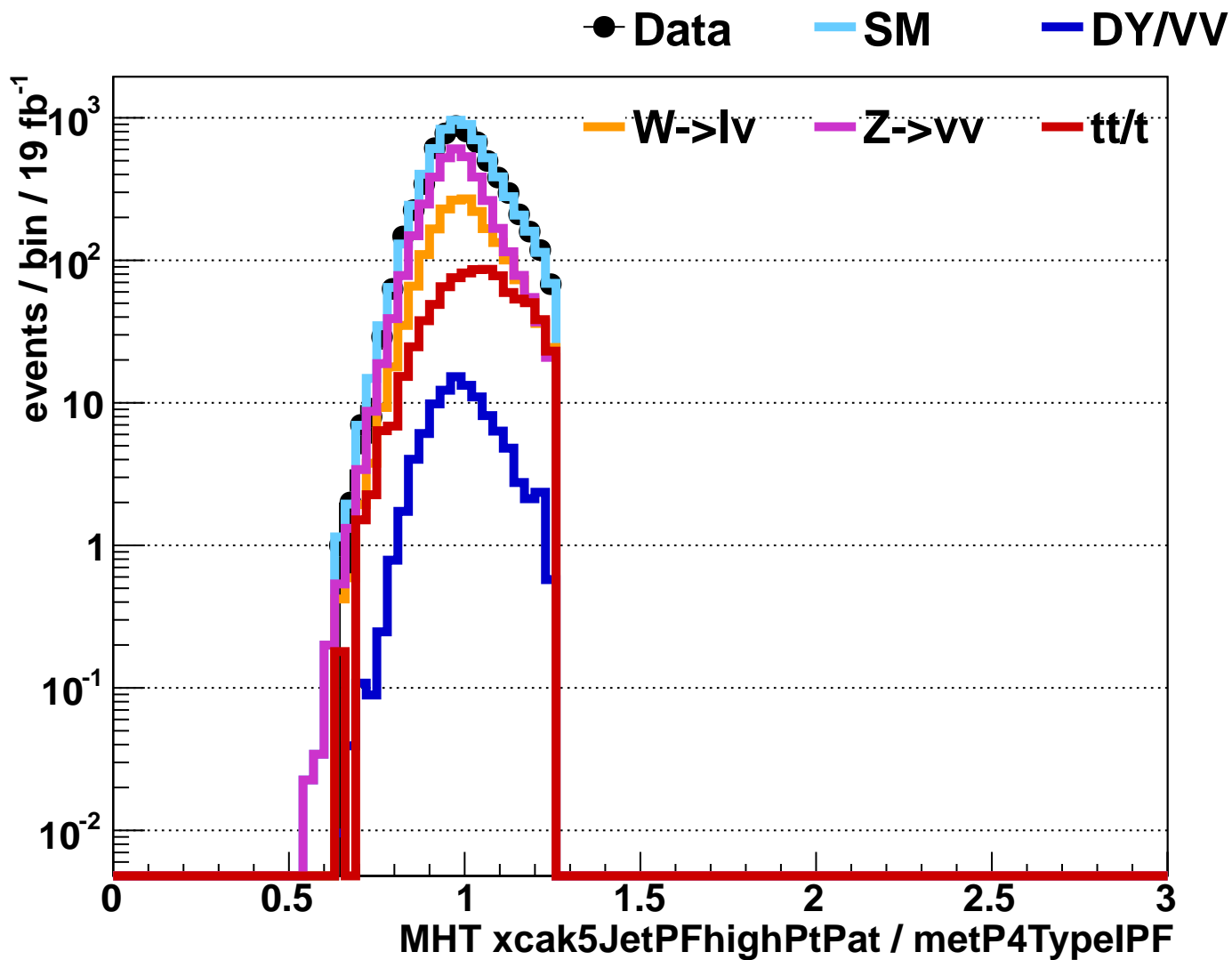


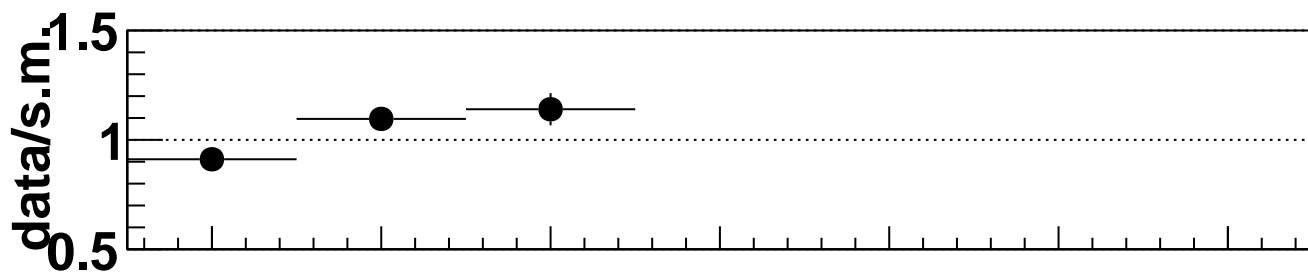
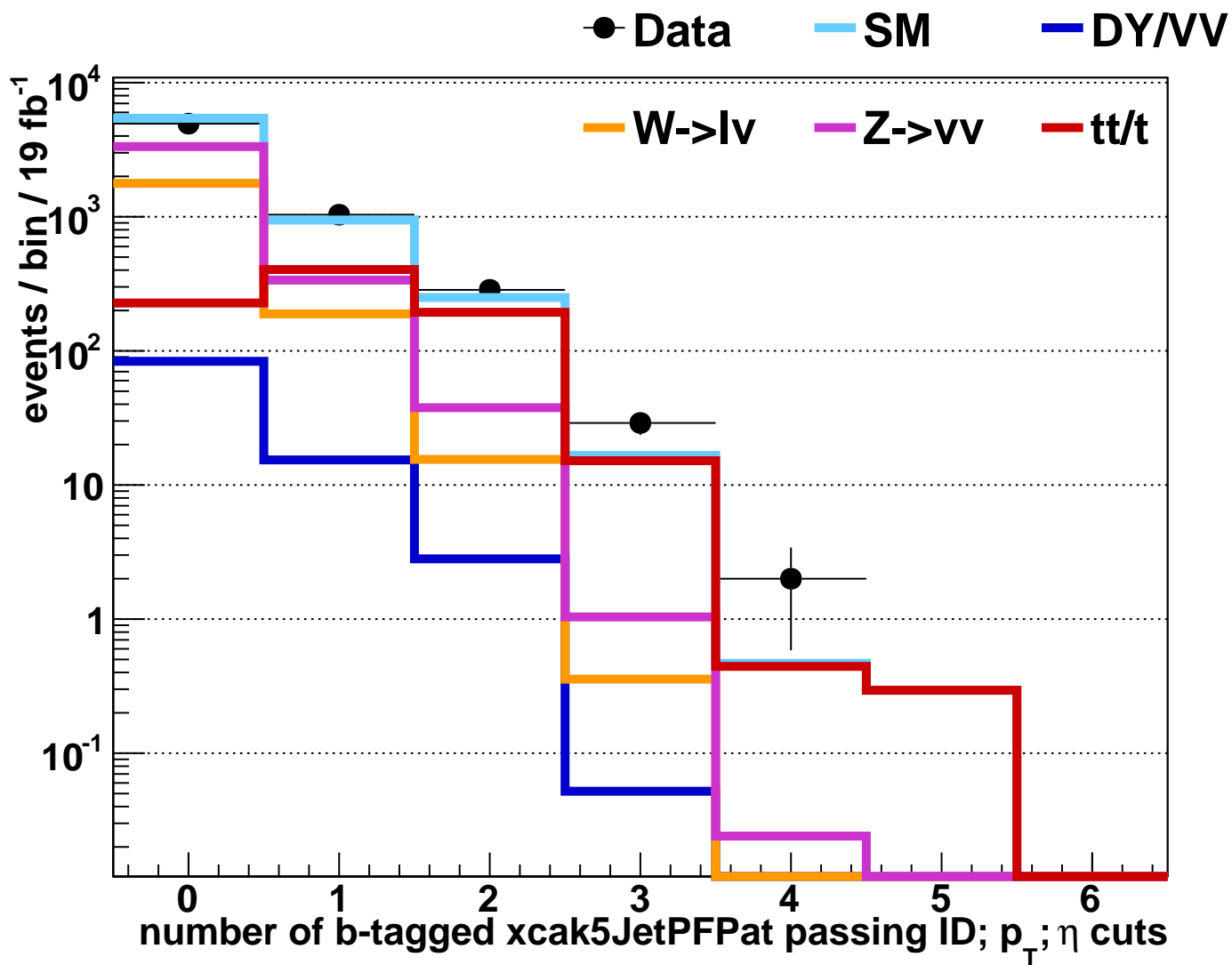


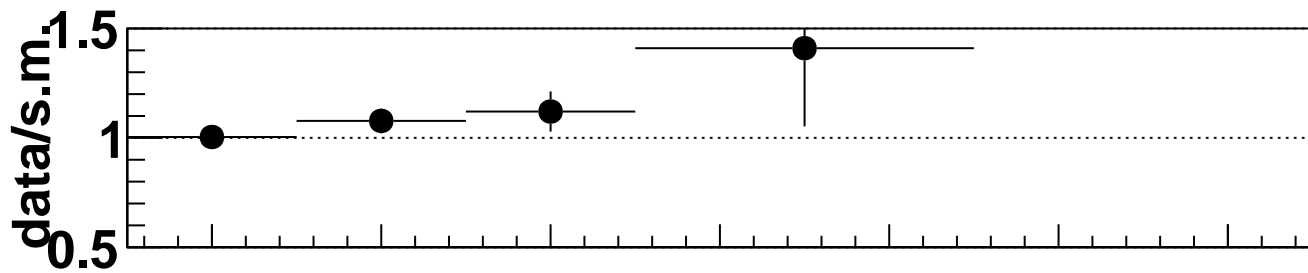
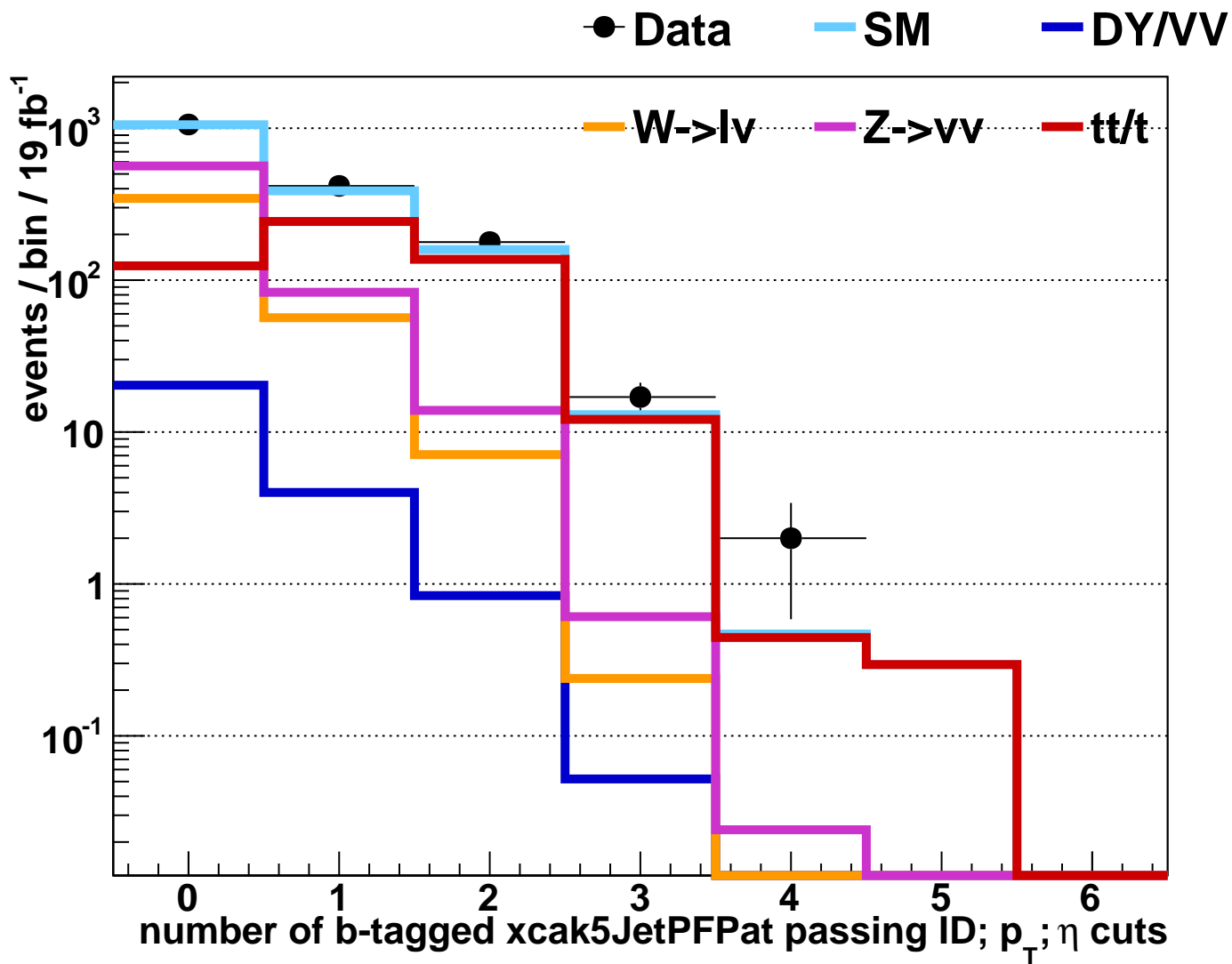


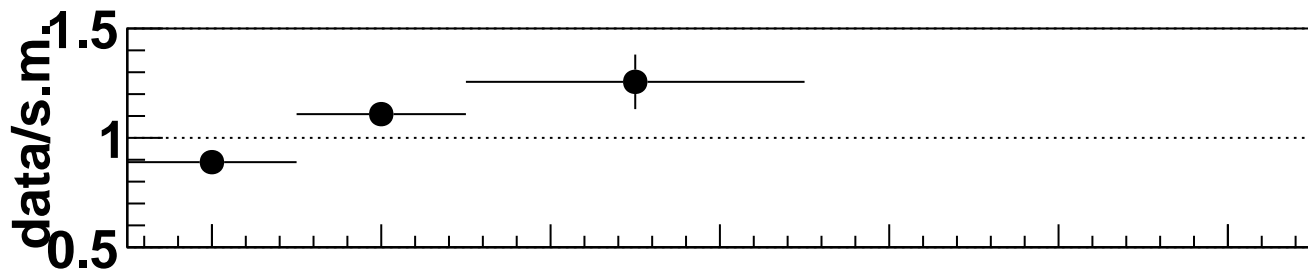
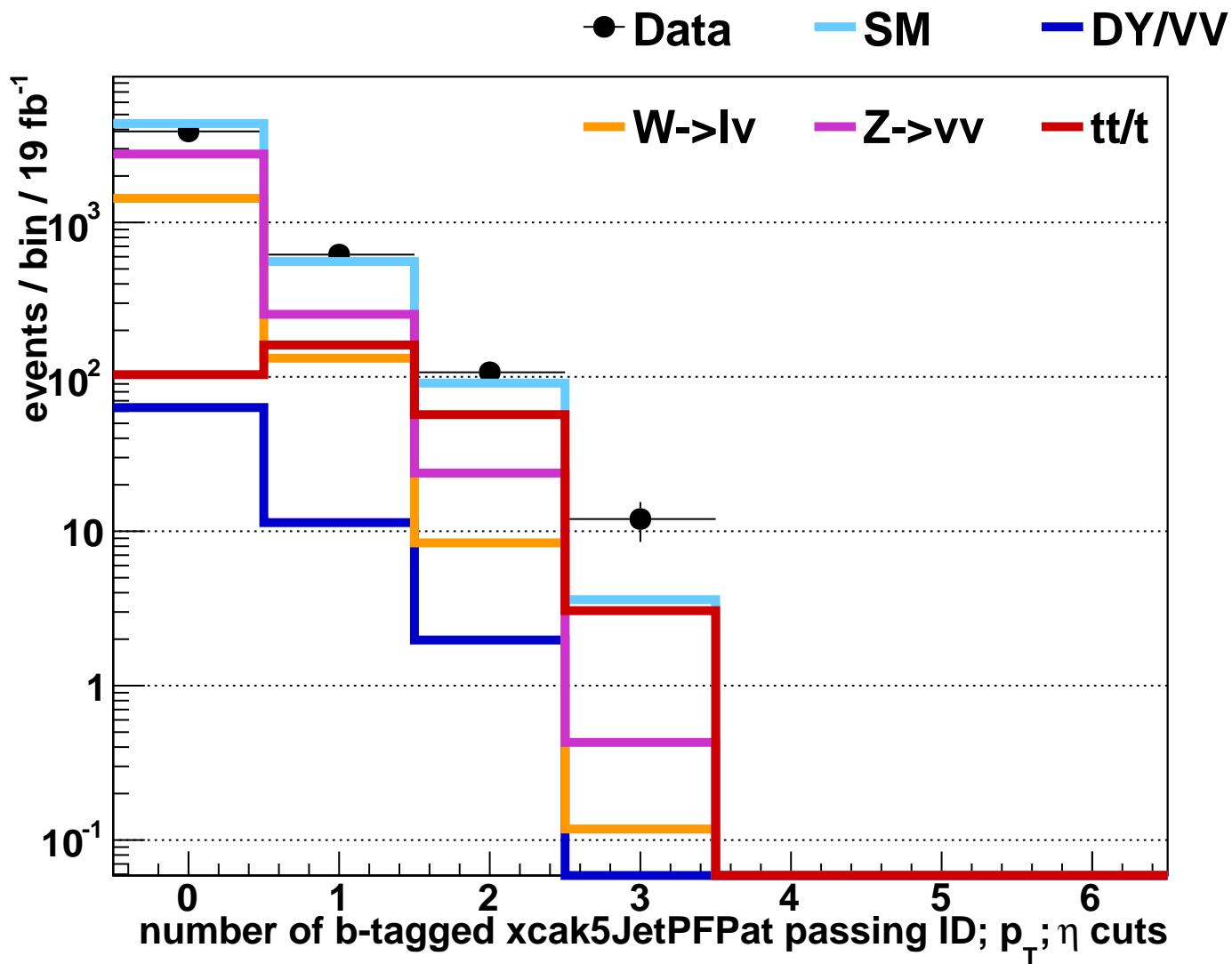




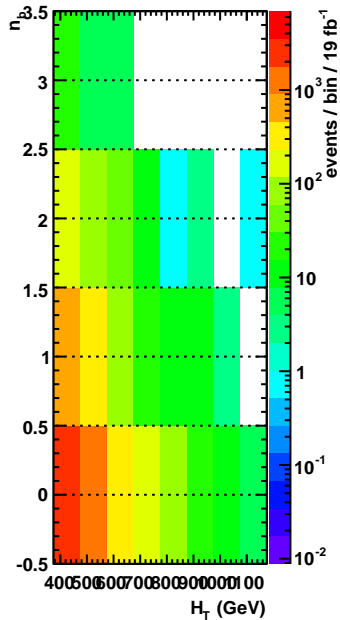




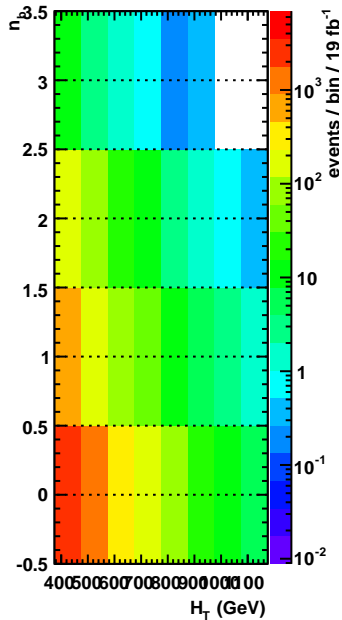




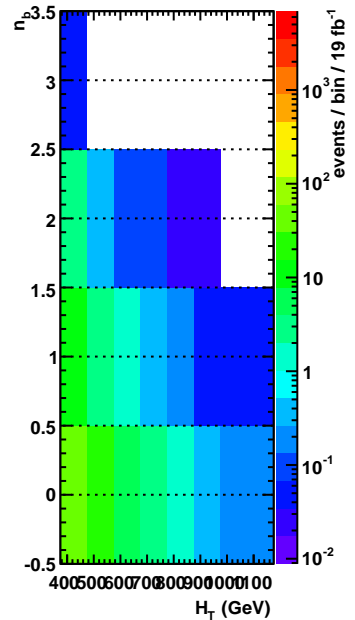
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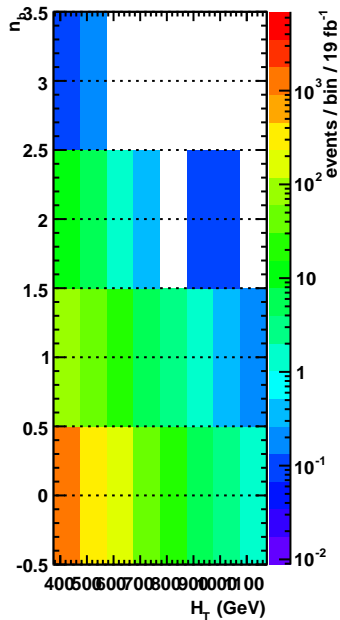
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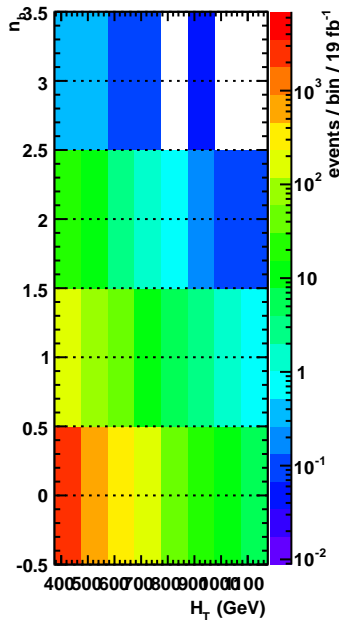
DY/VV



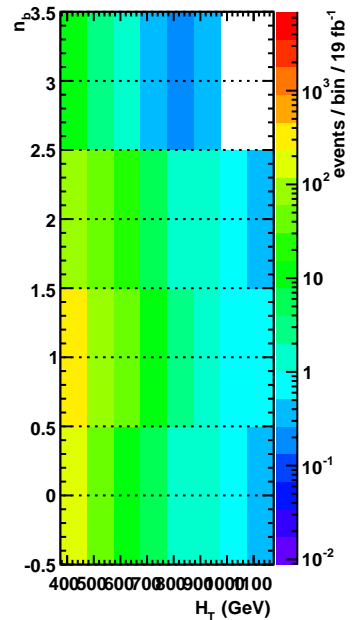
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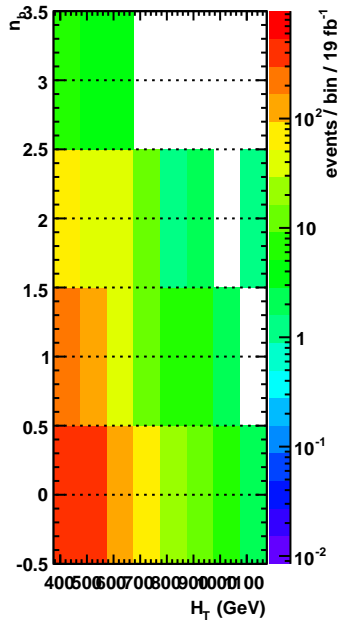
Z->vv



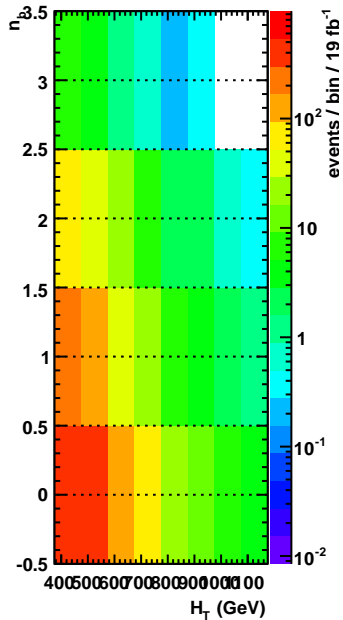
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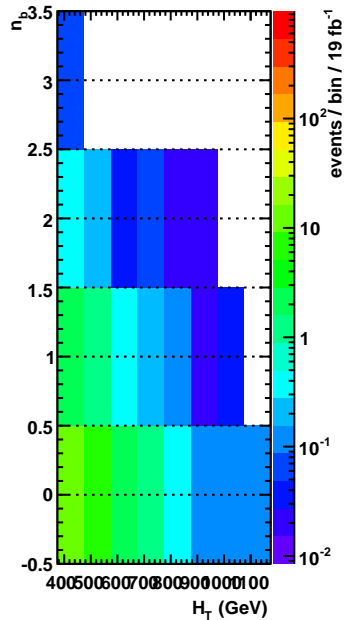
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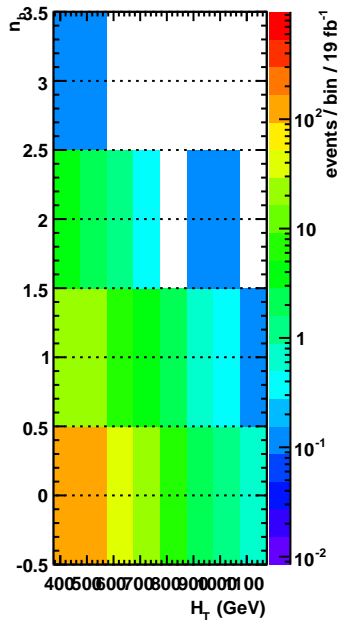
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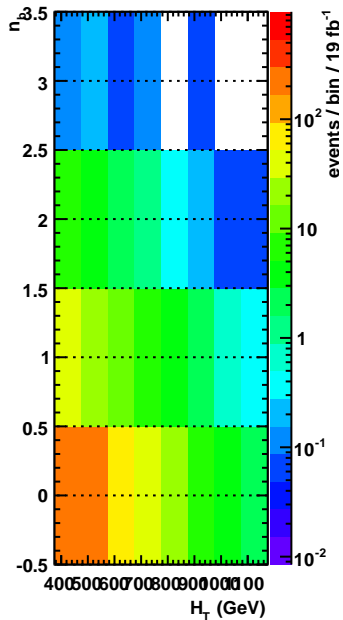
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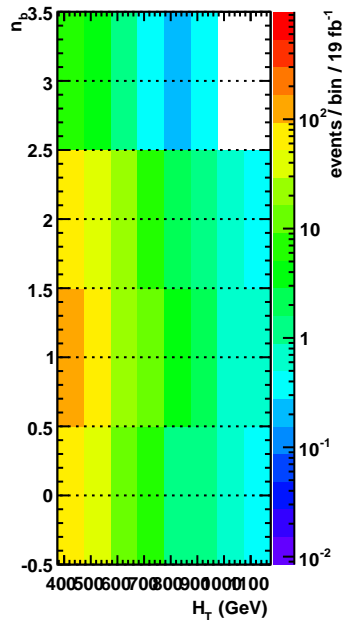
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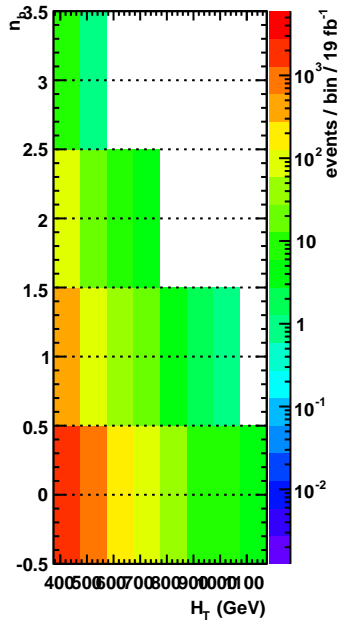
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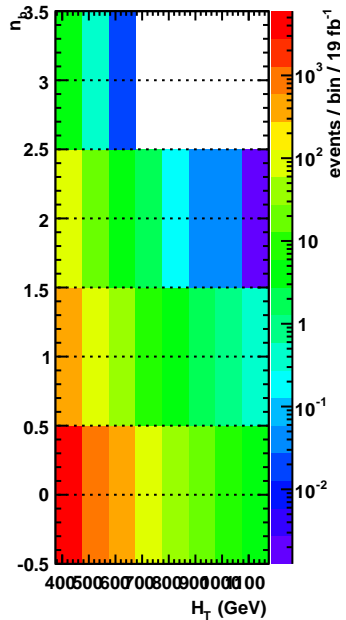
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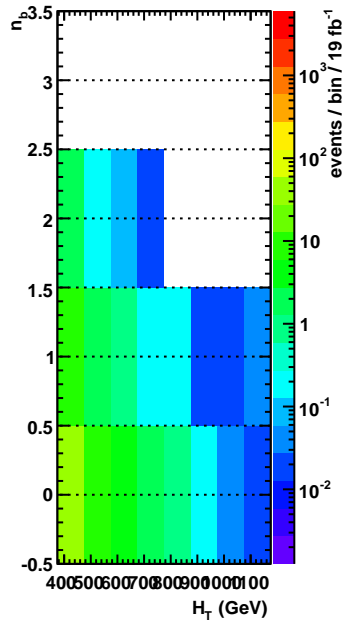
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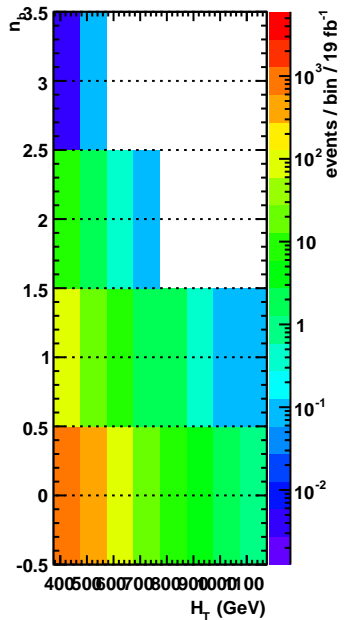
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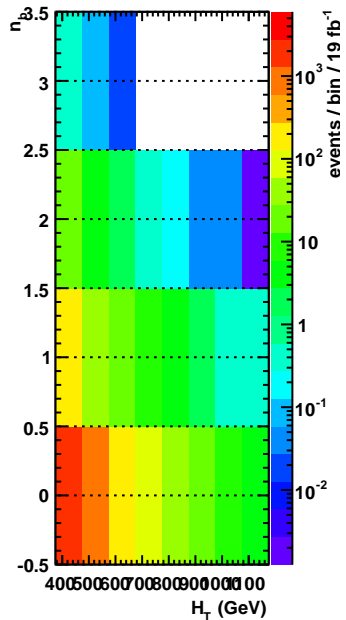
DY/VV



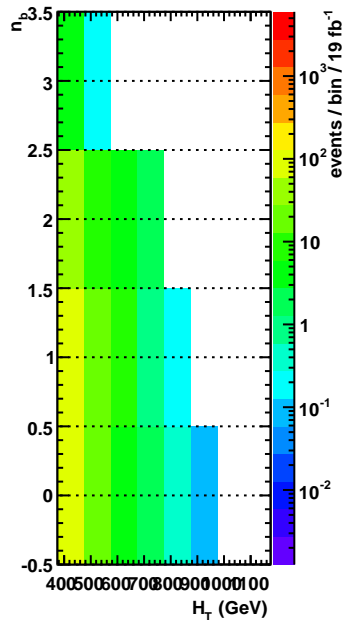
W->lv

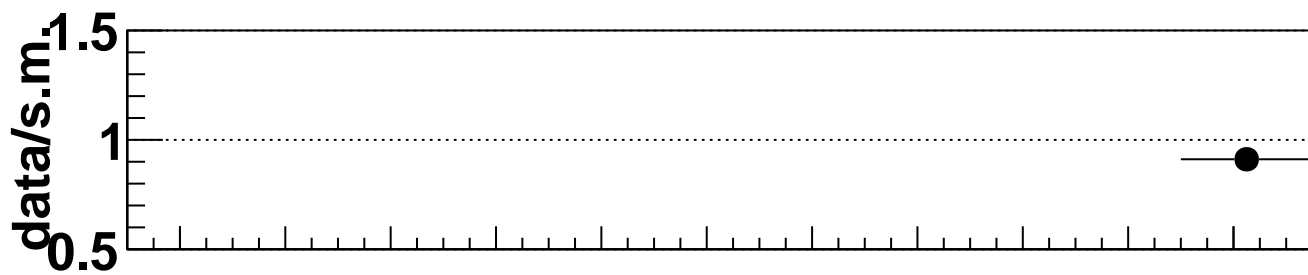
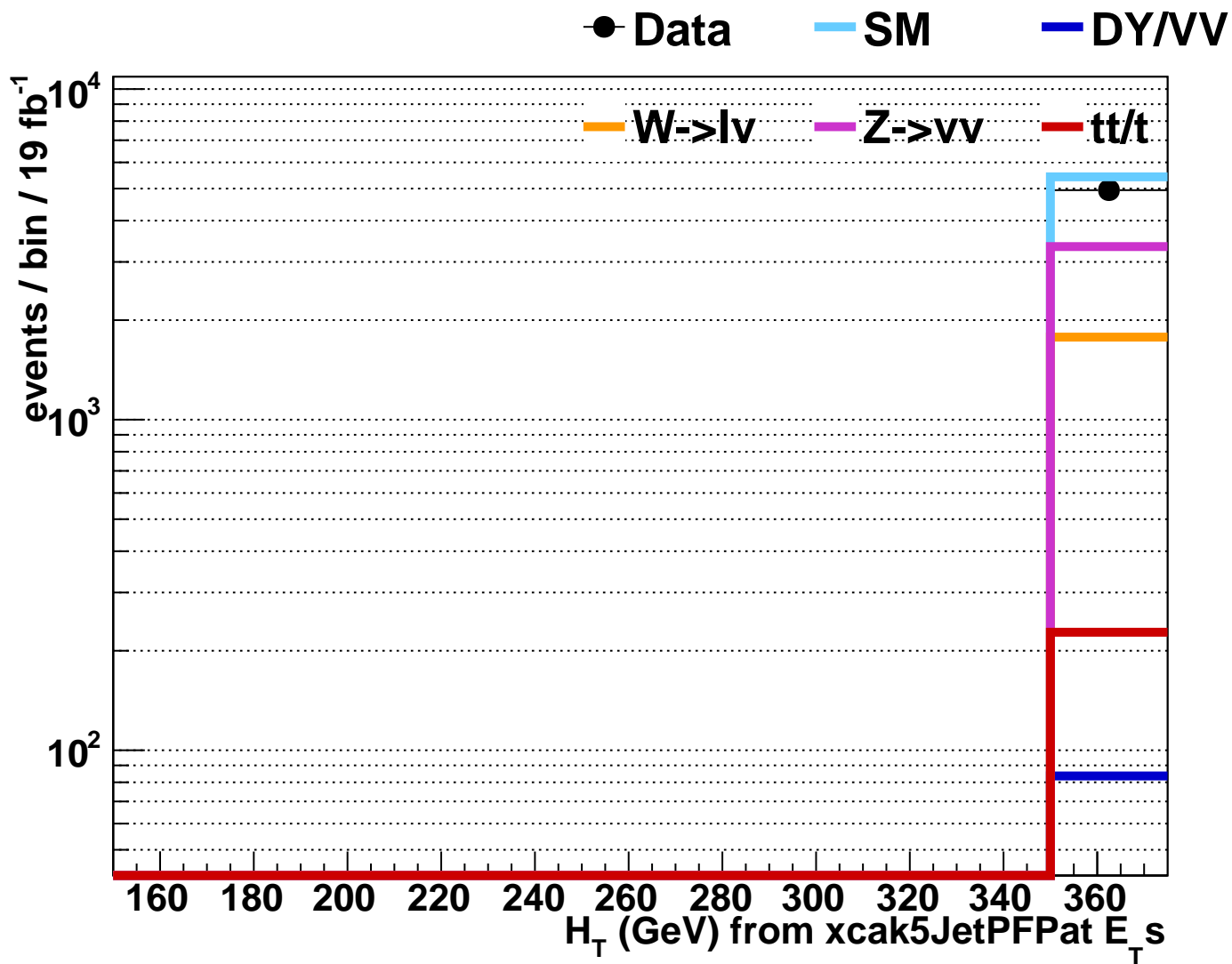


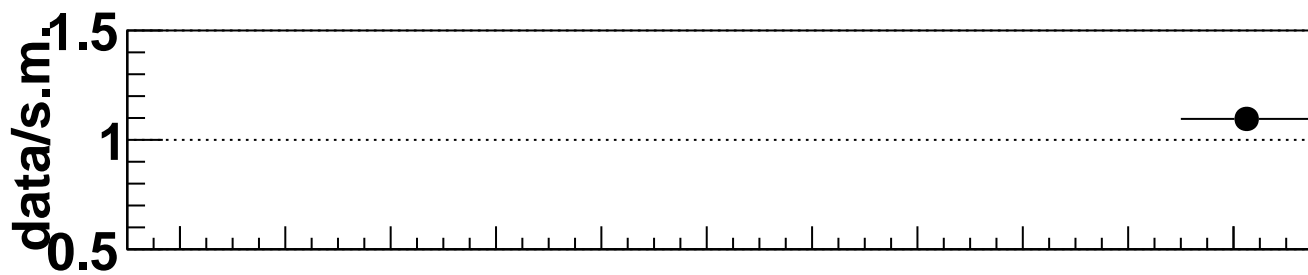
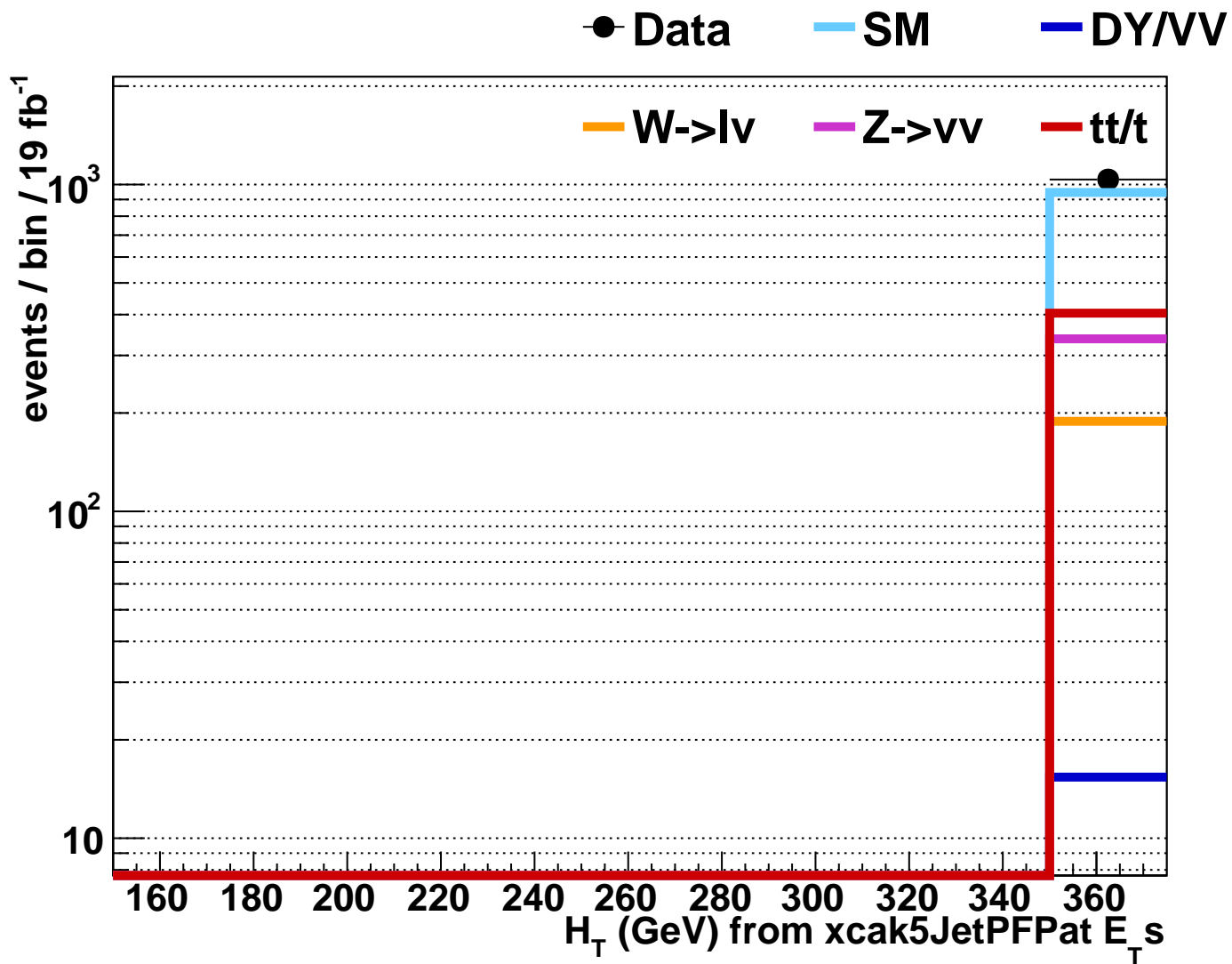
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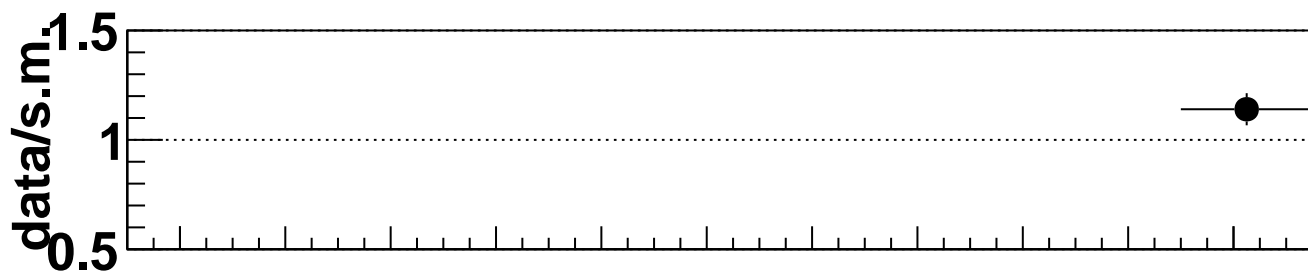
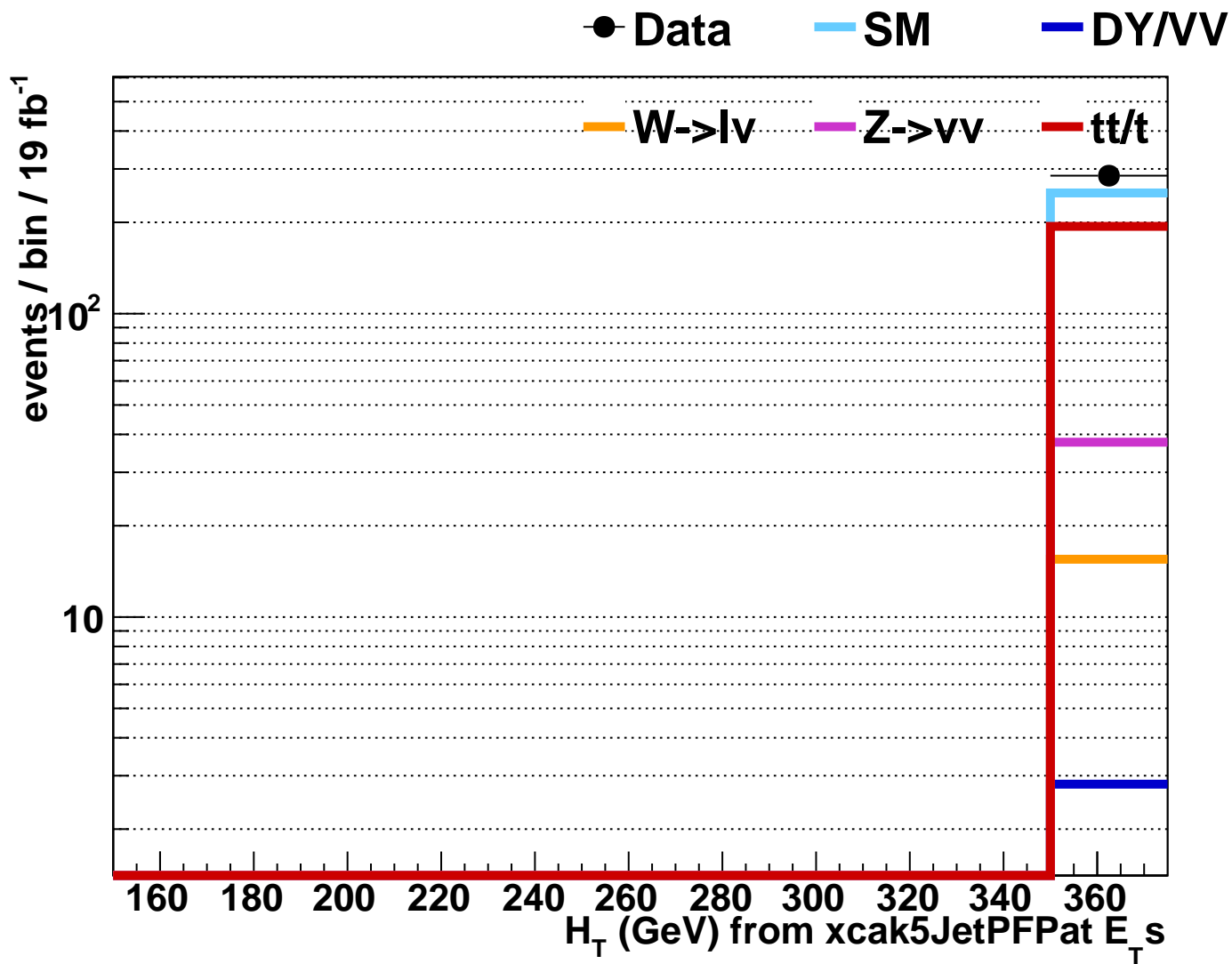


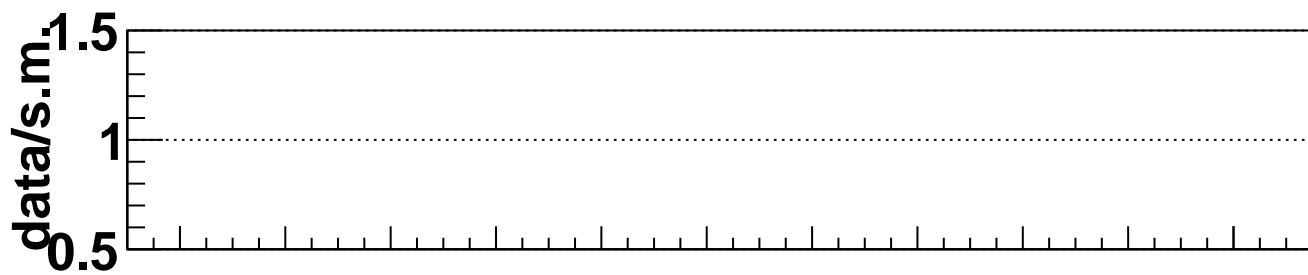
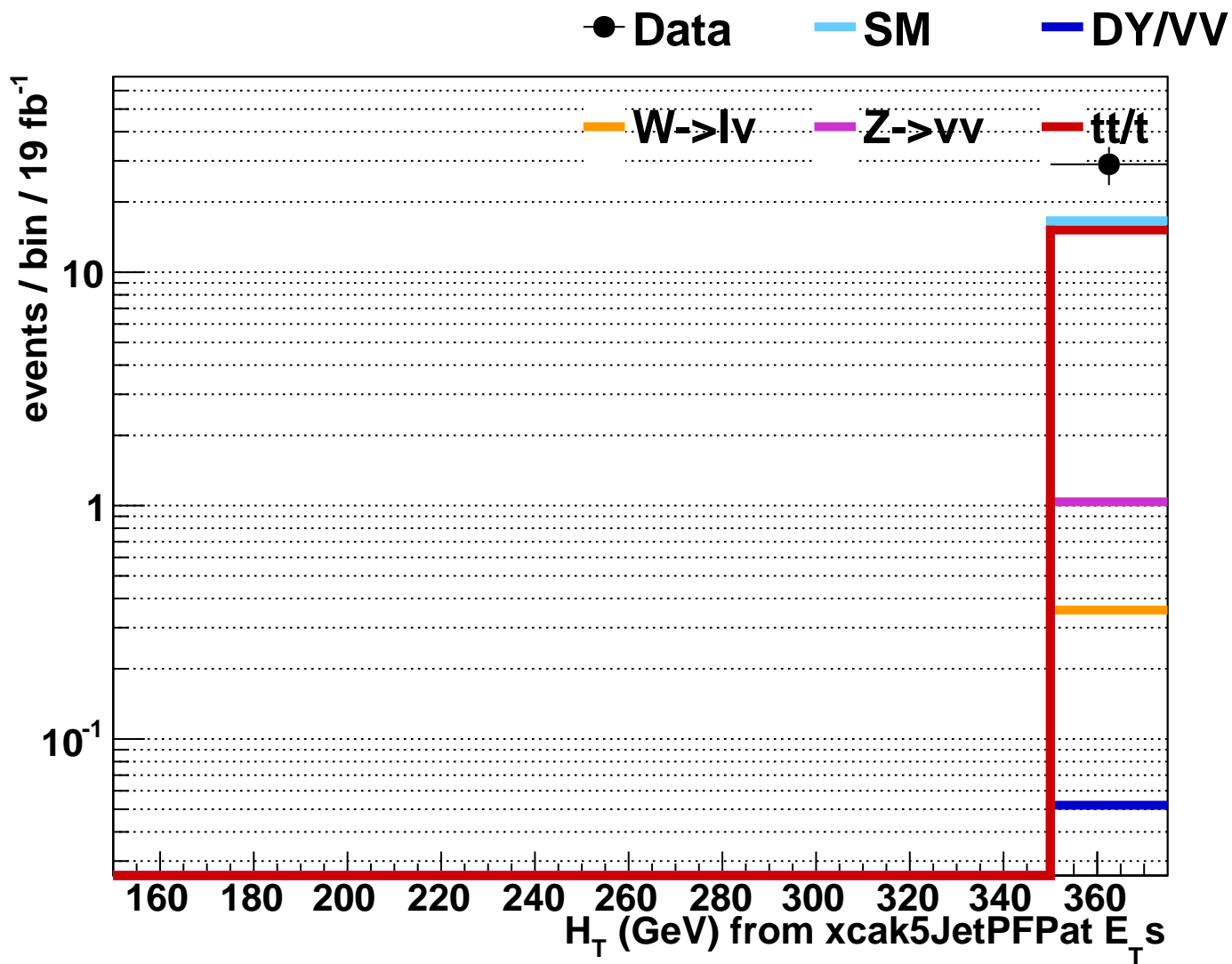
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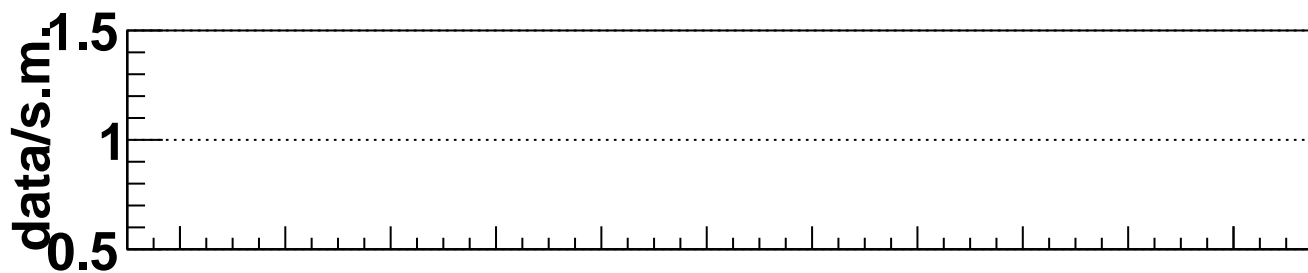
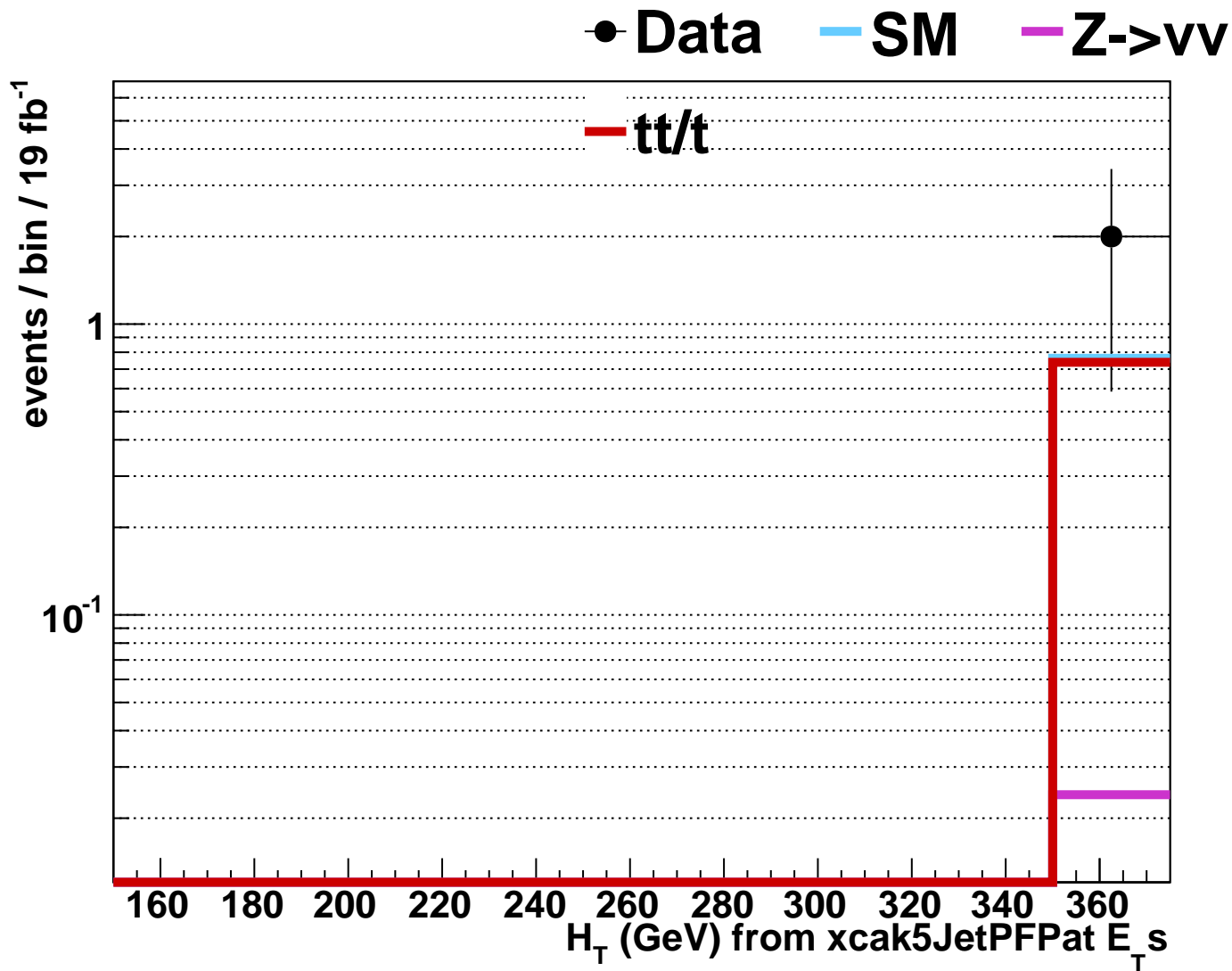


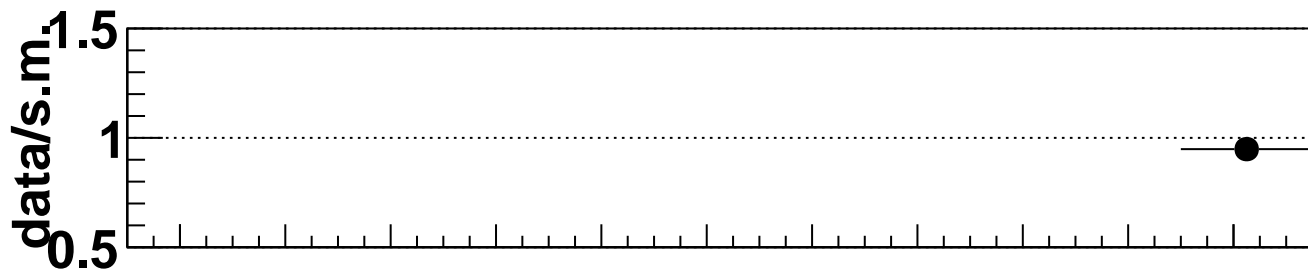
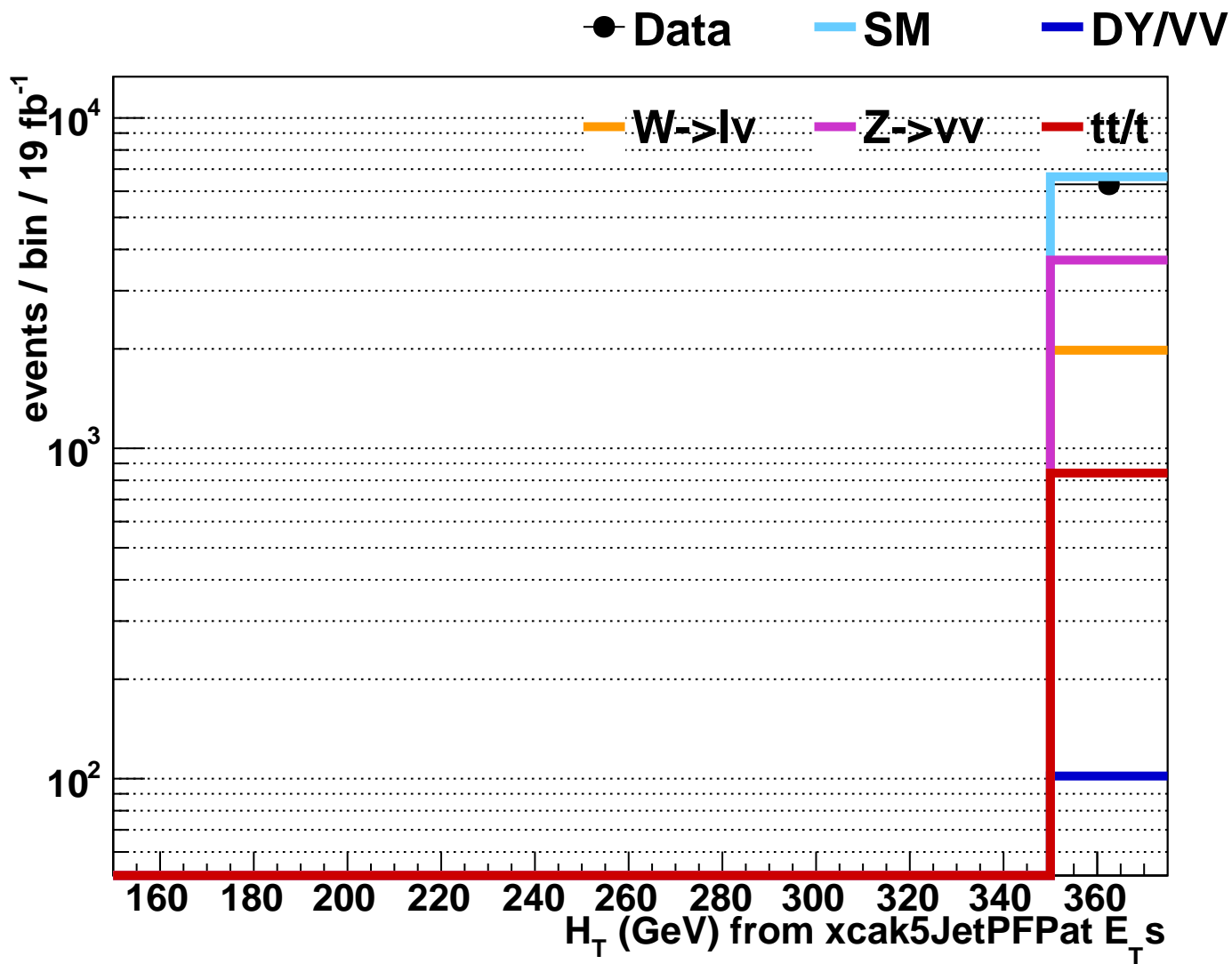


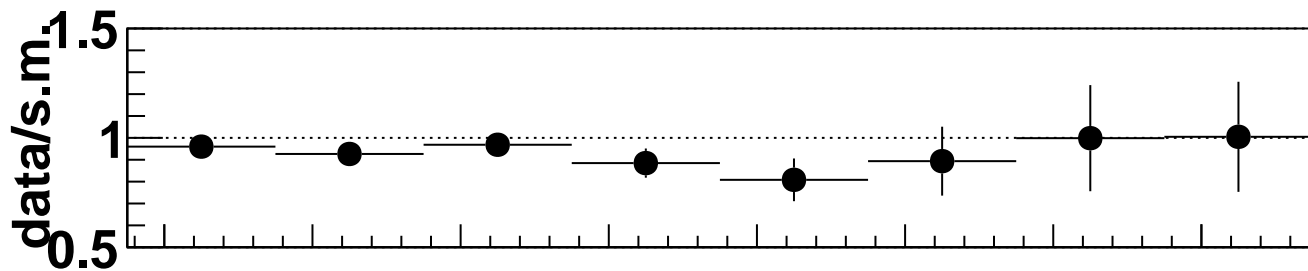
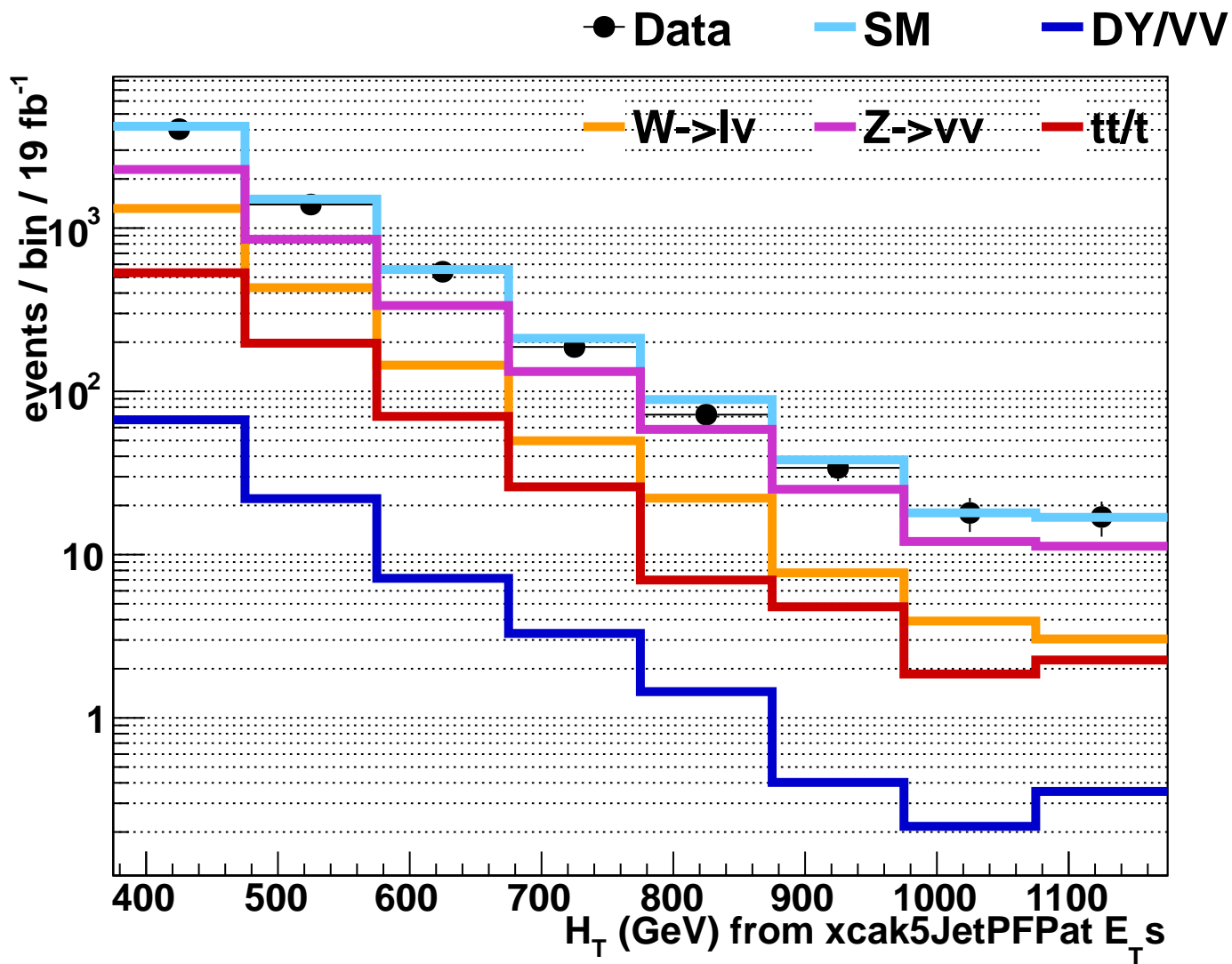


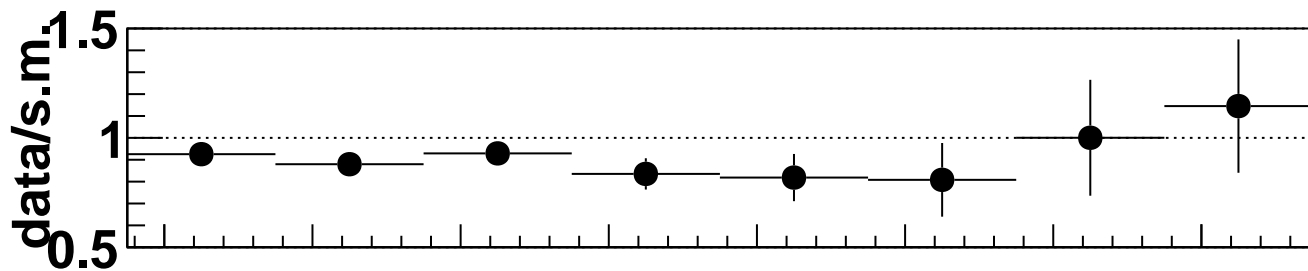
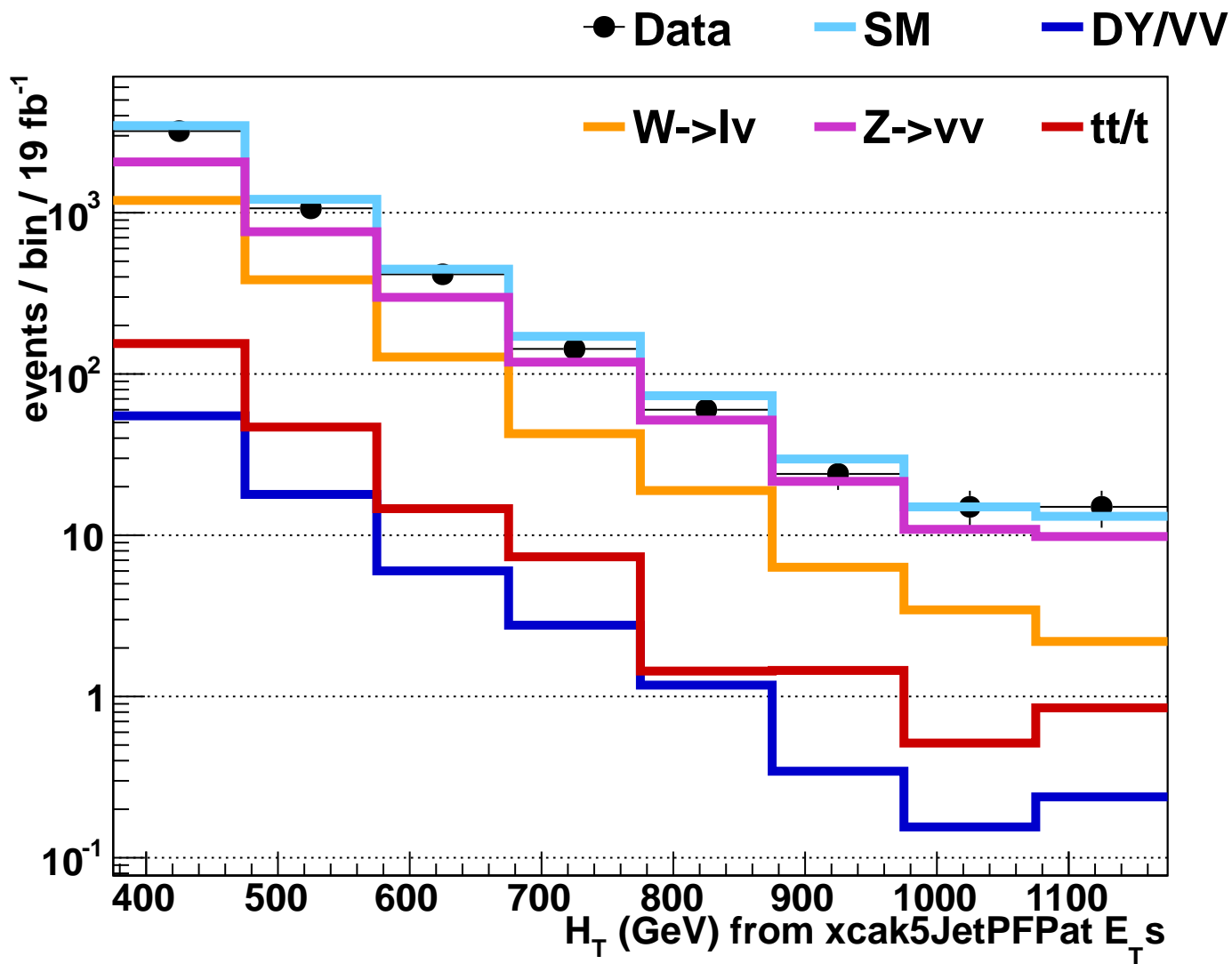


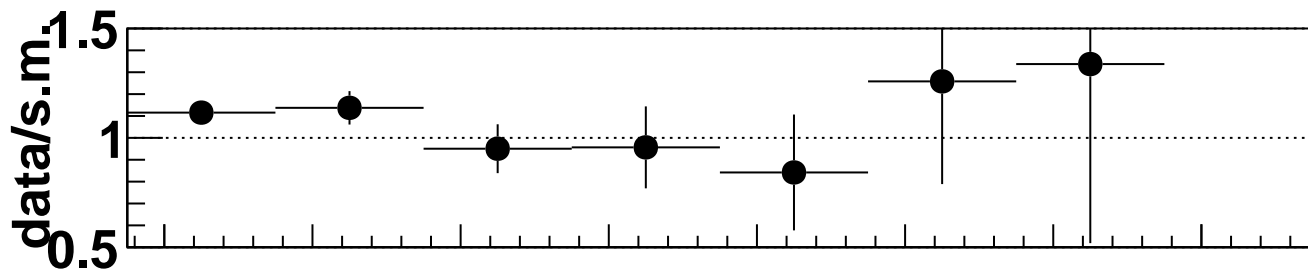
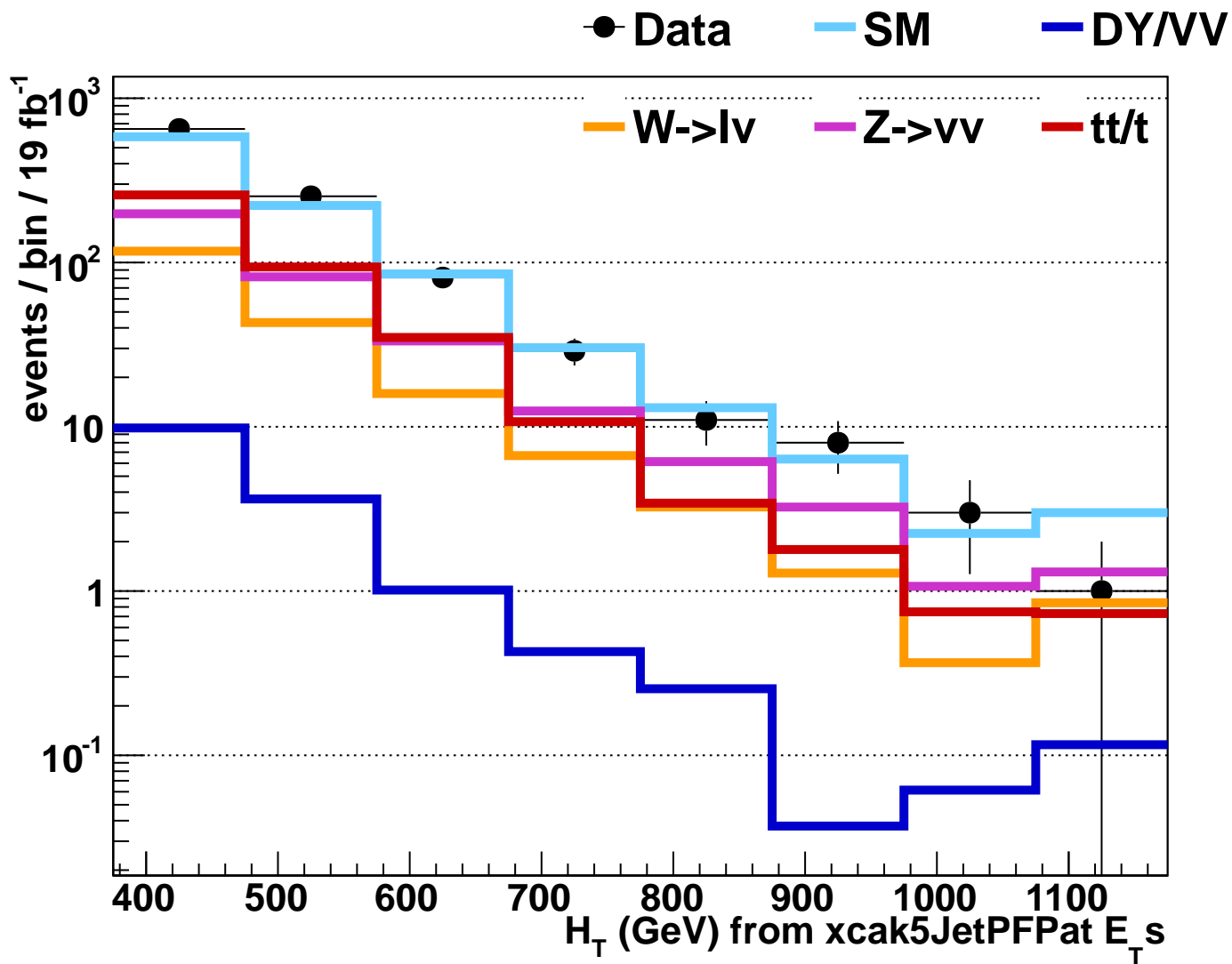


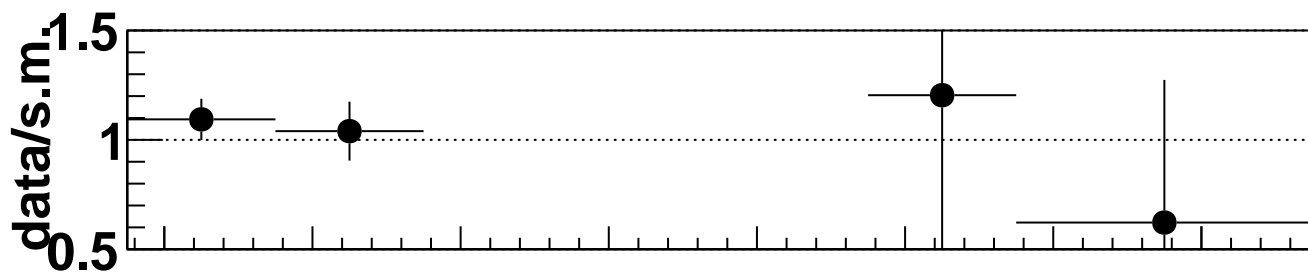
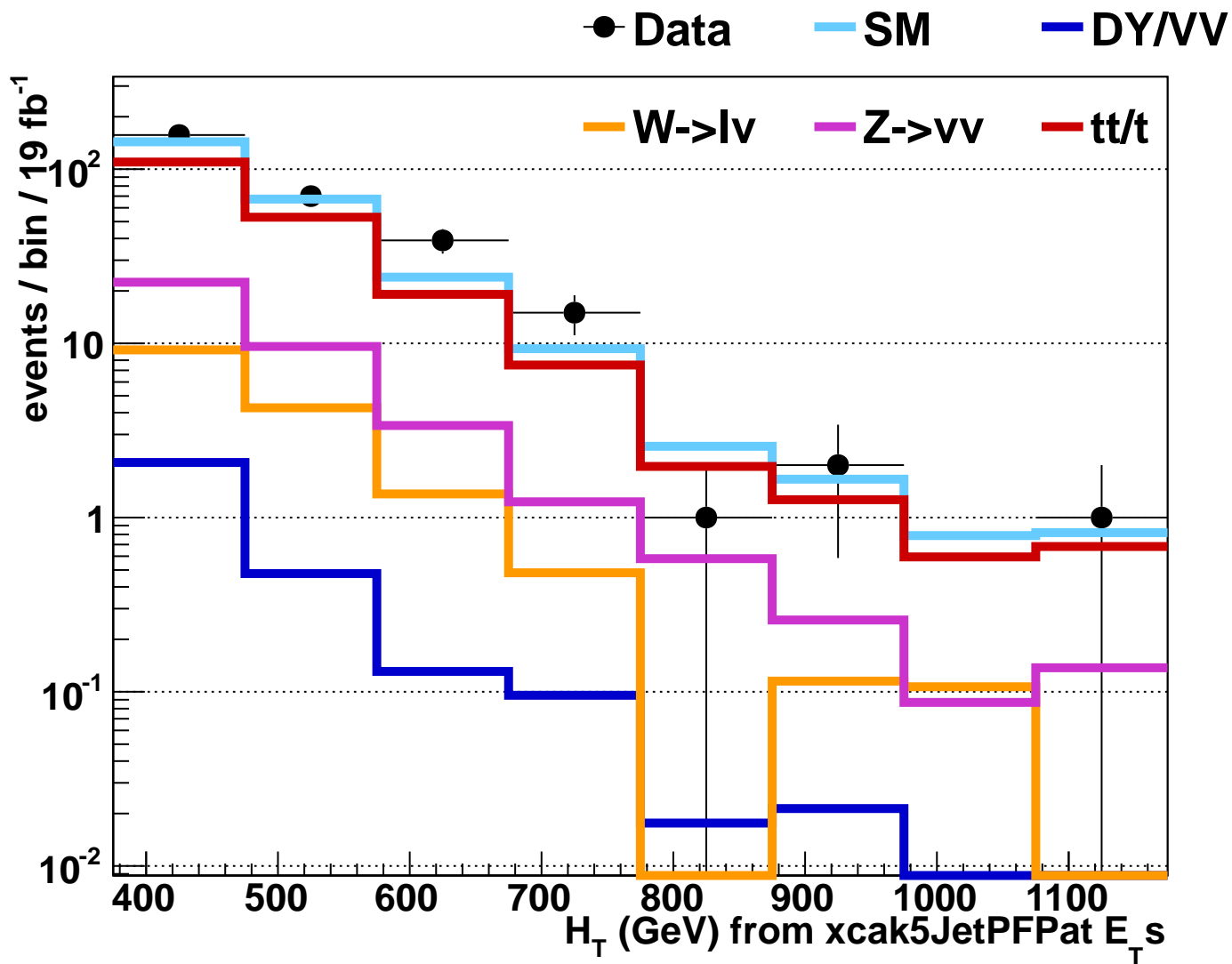


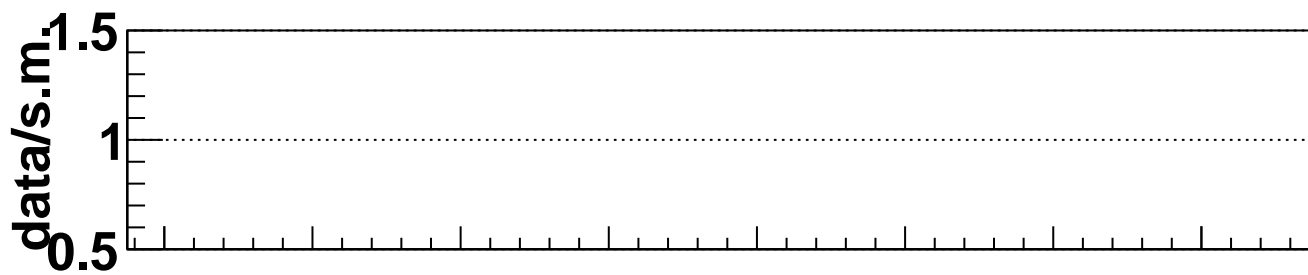
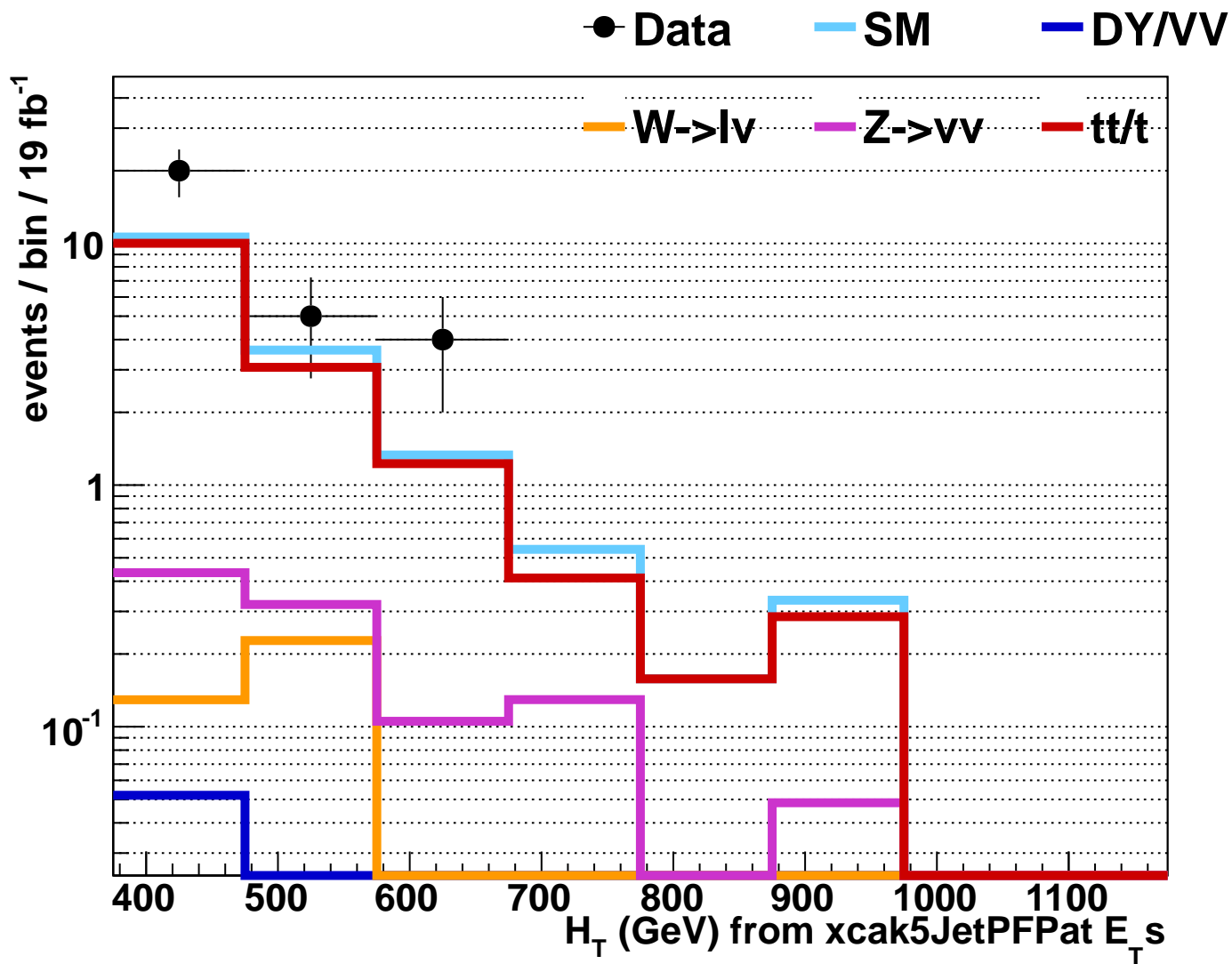


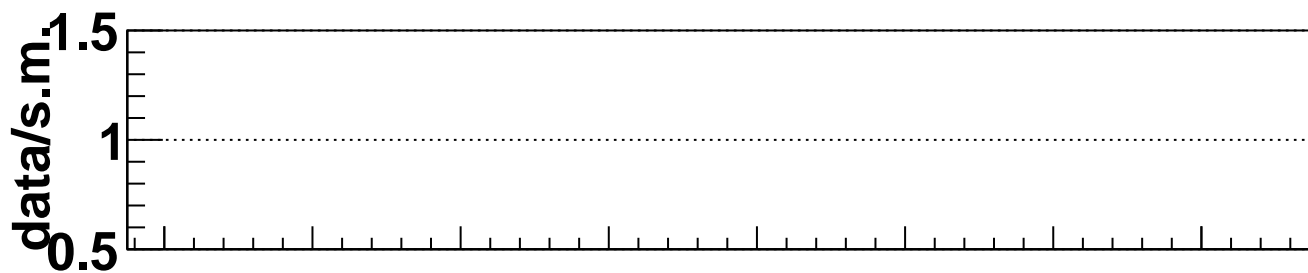
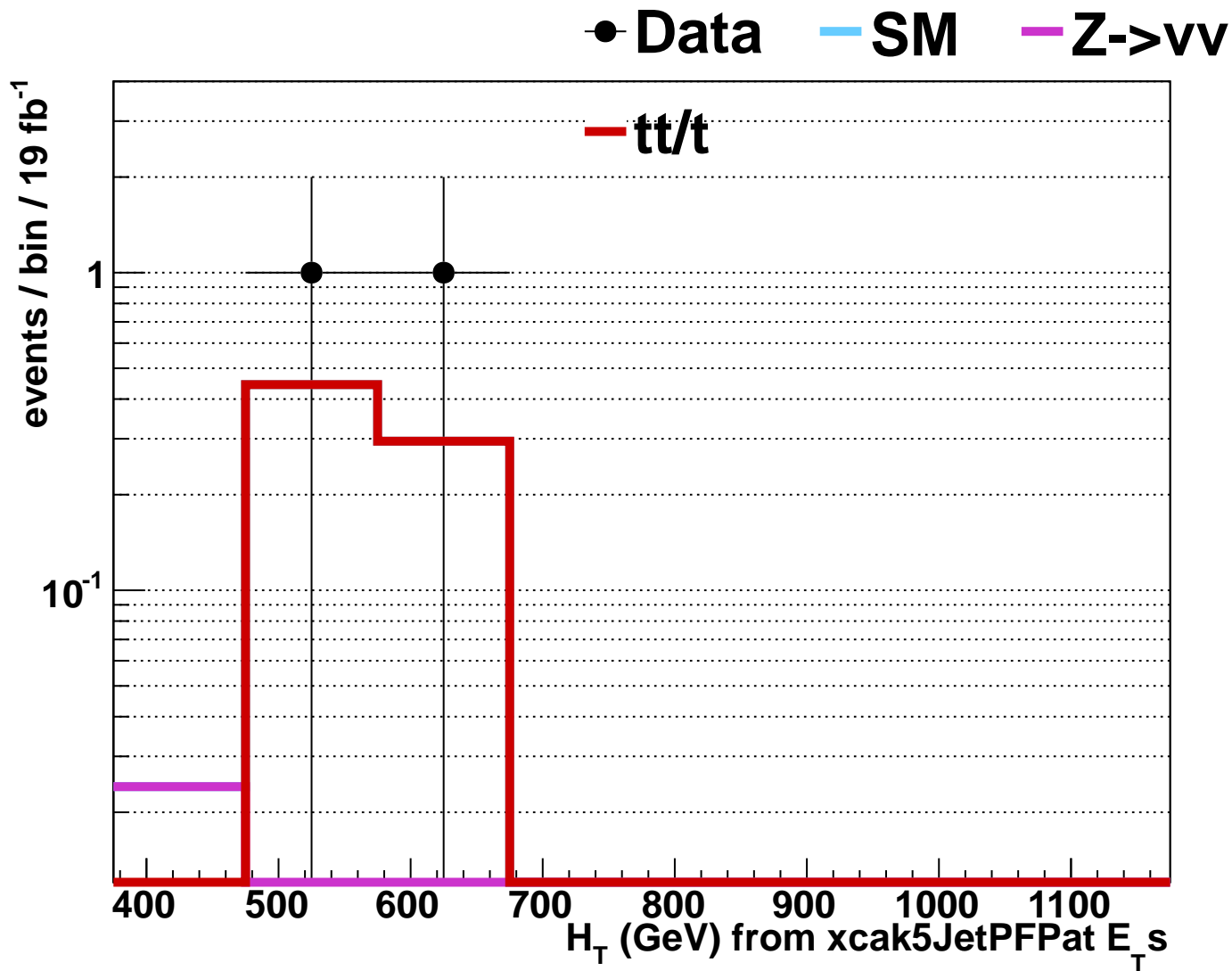


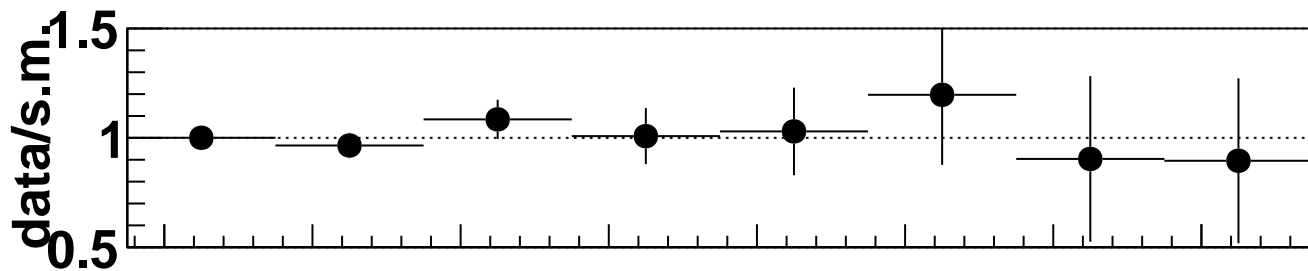
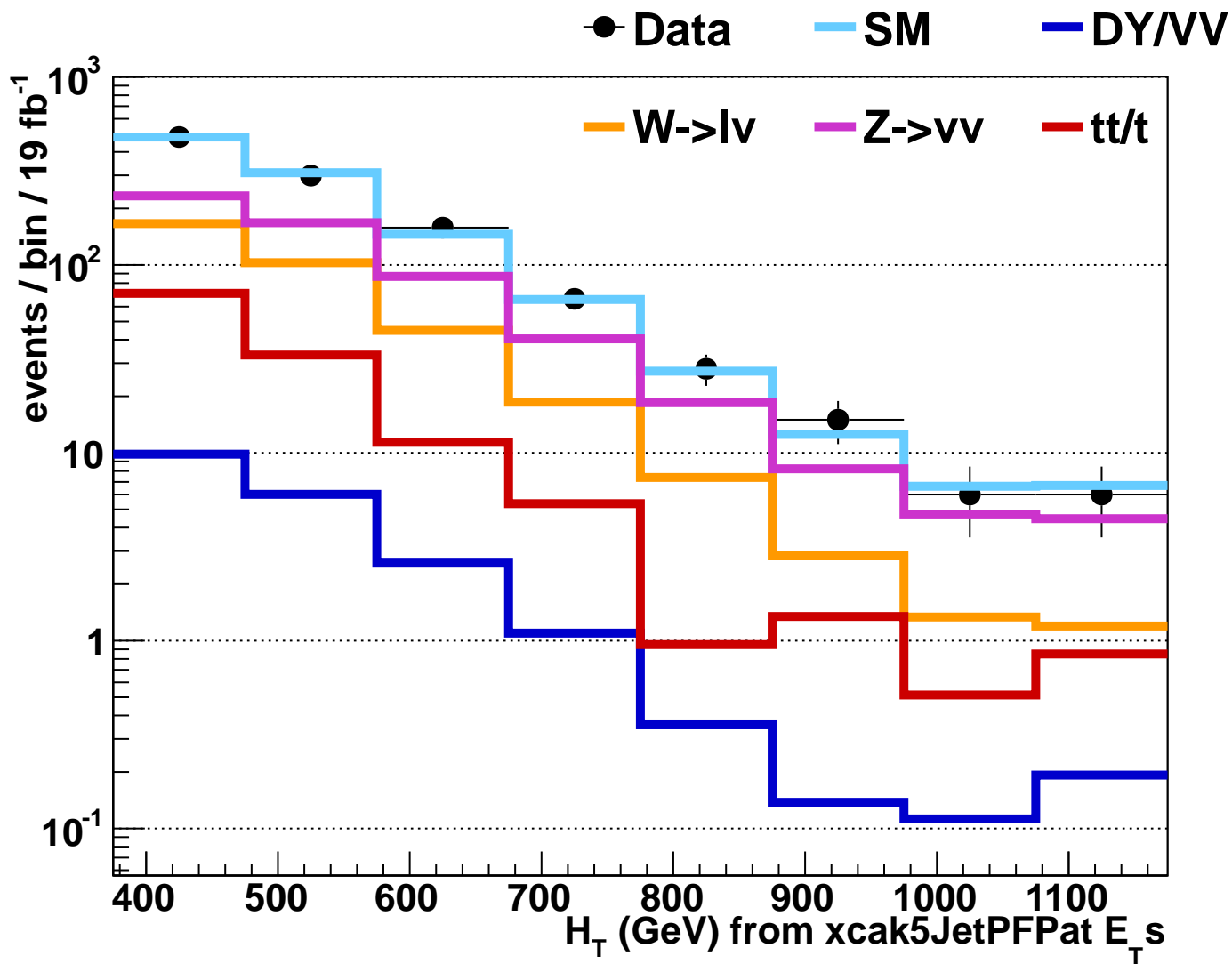


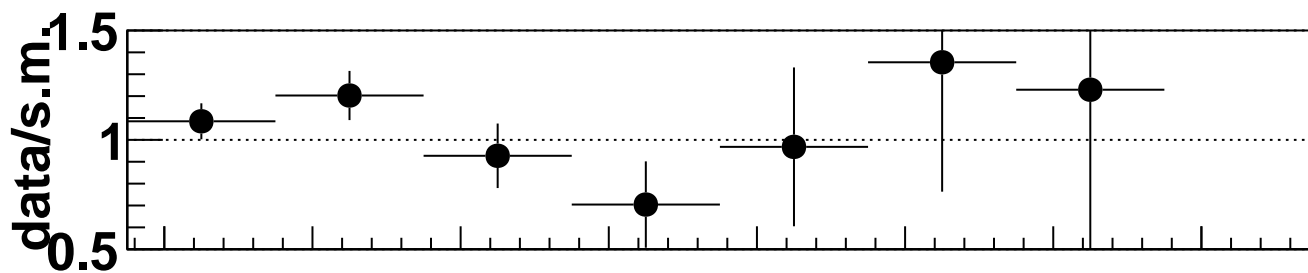
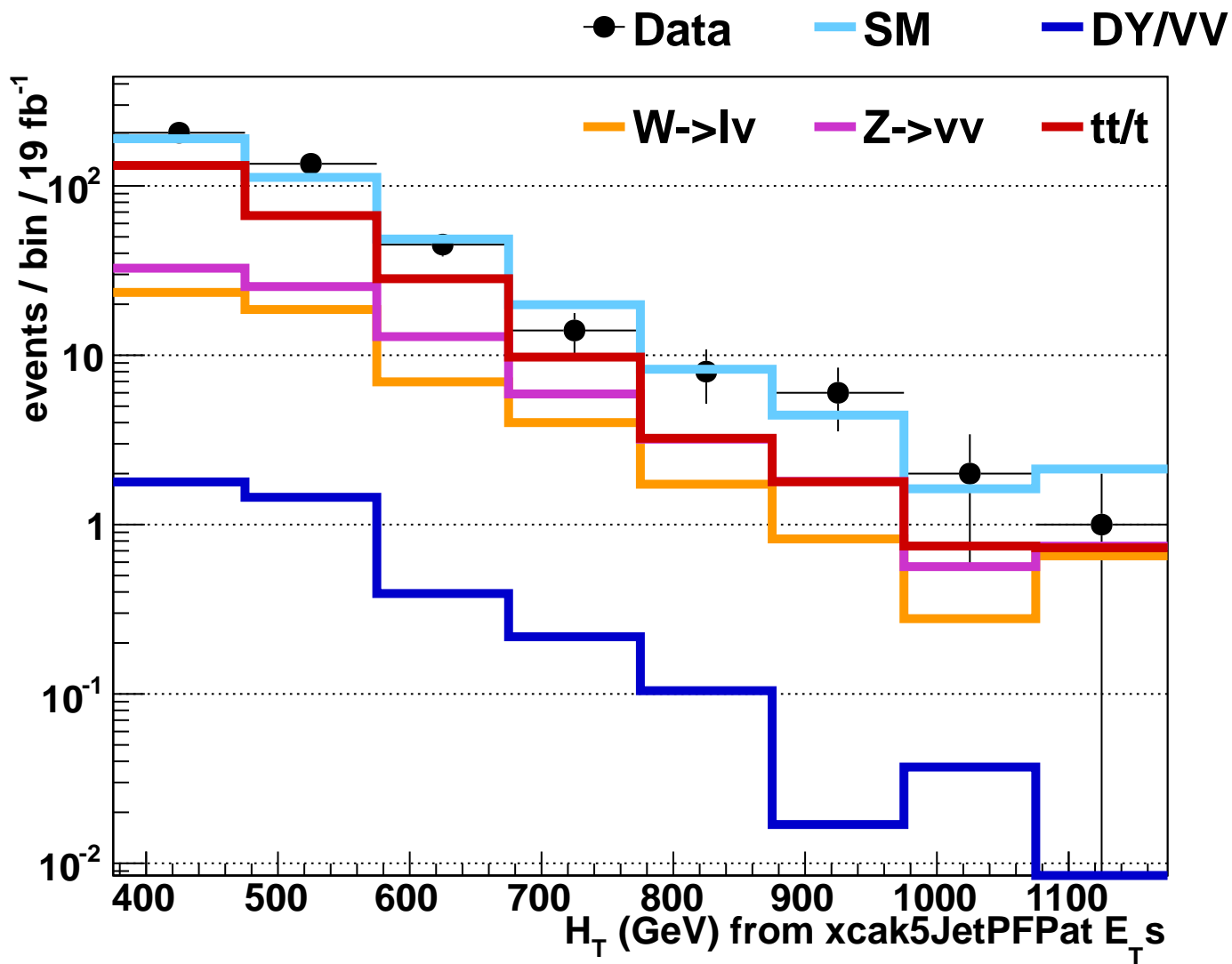


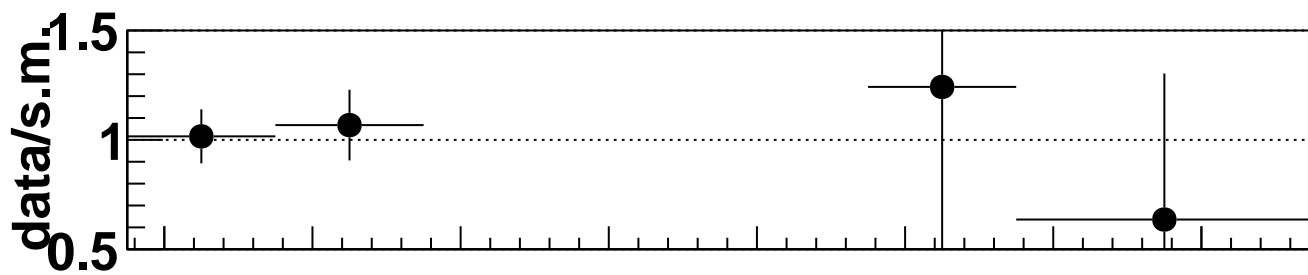
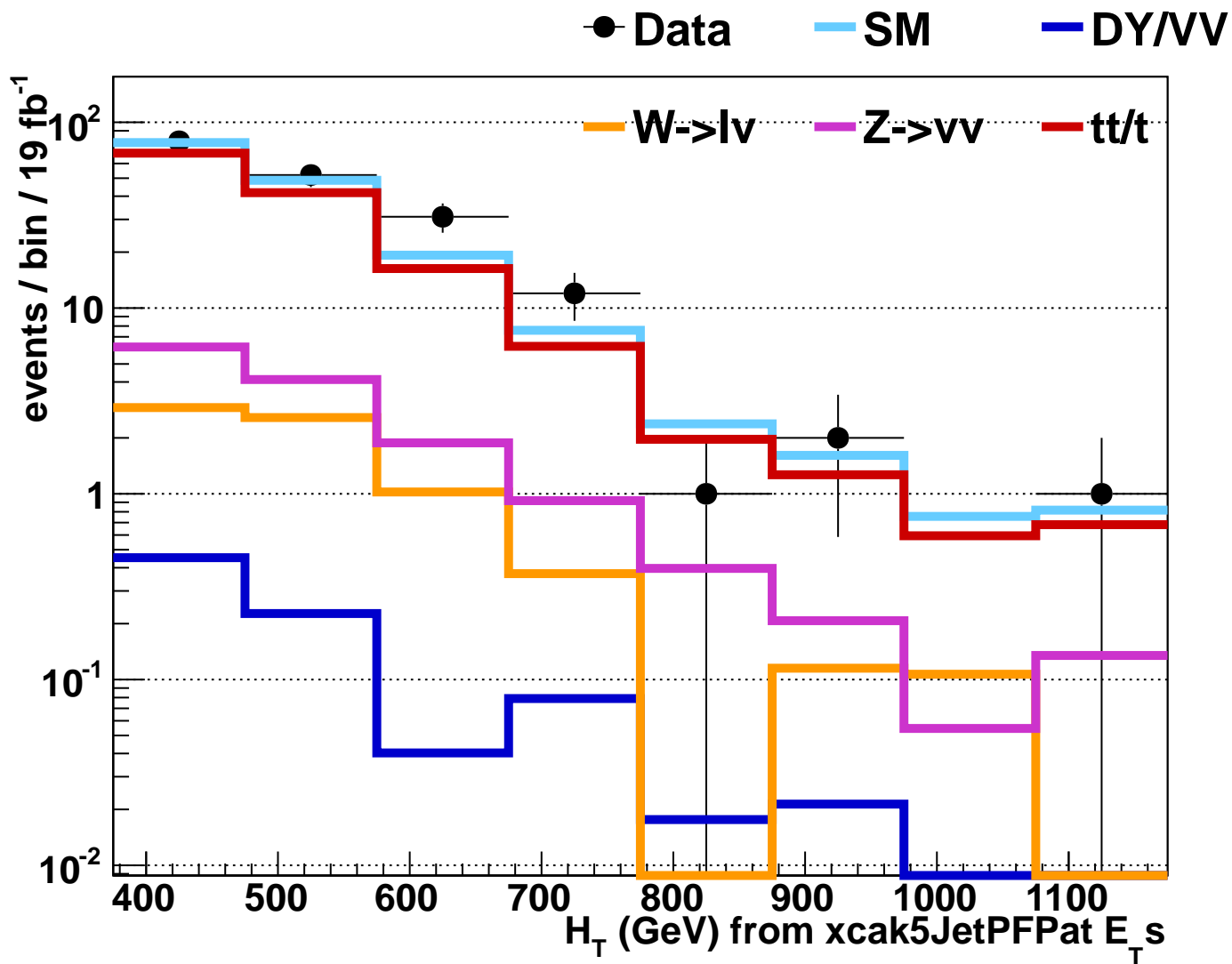


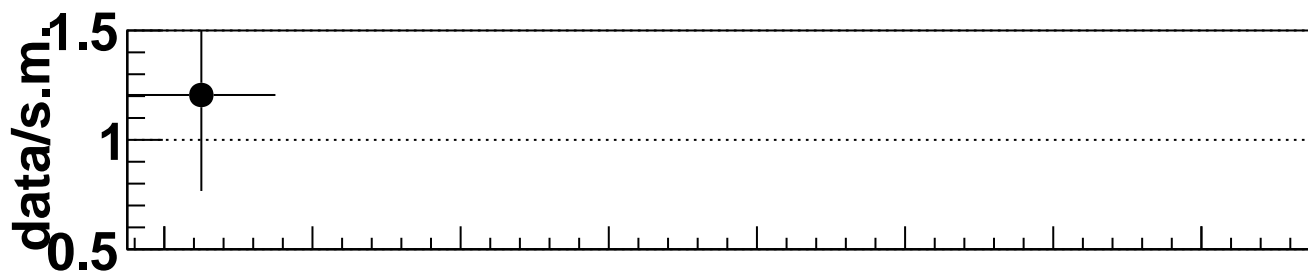
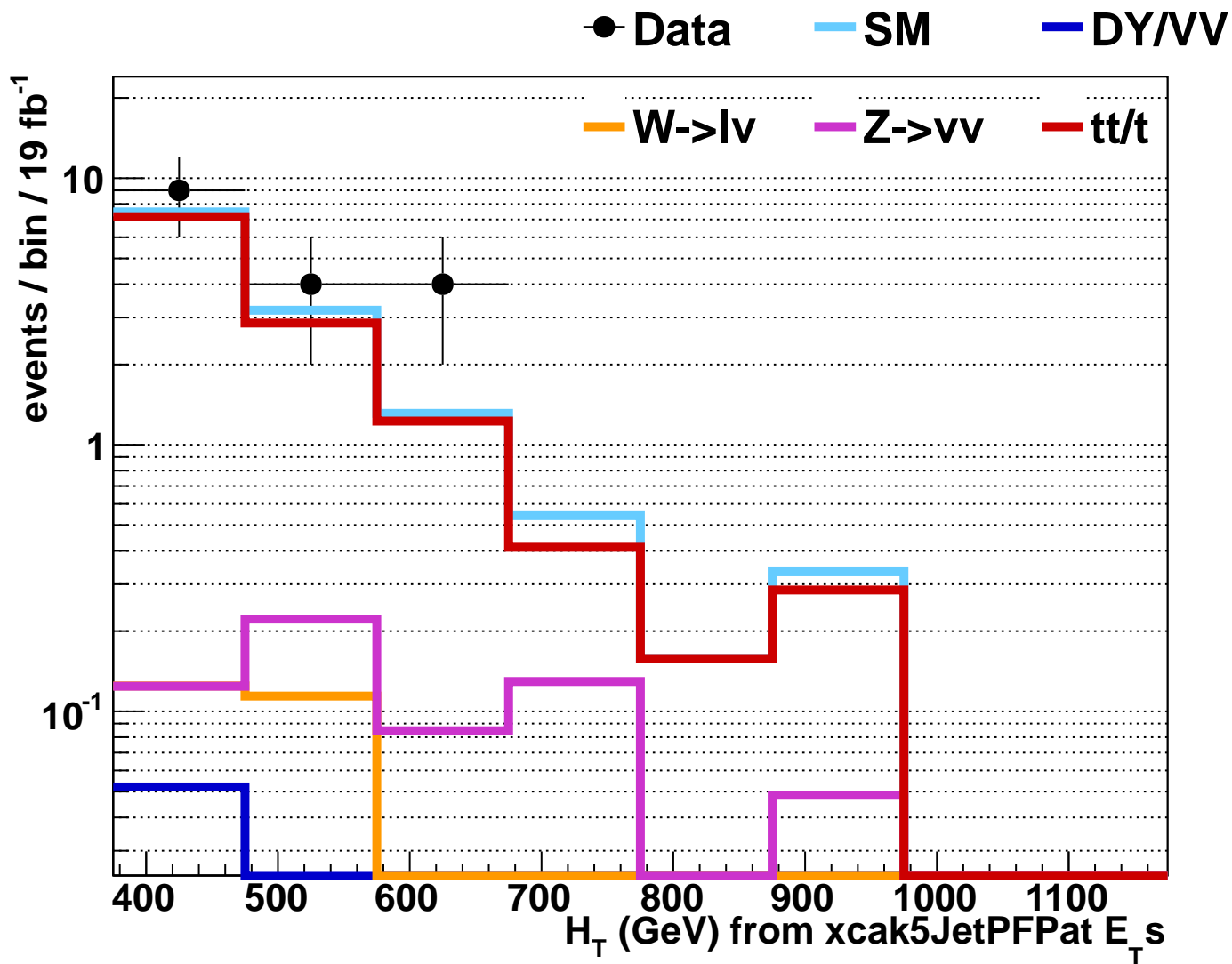


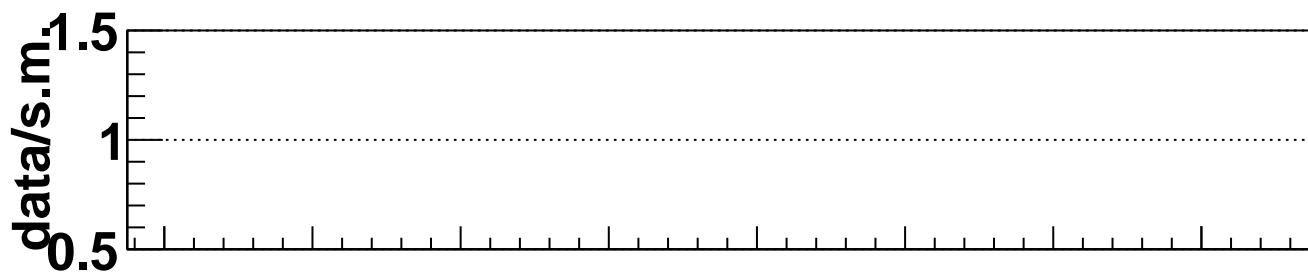
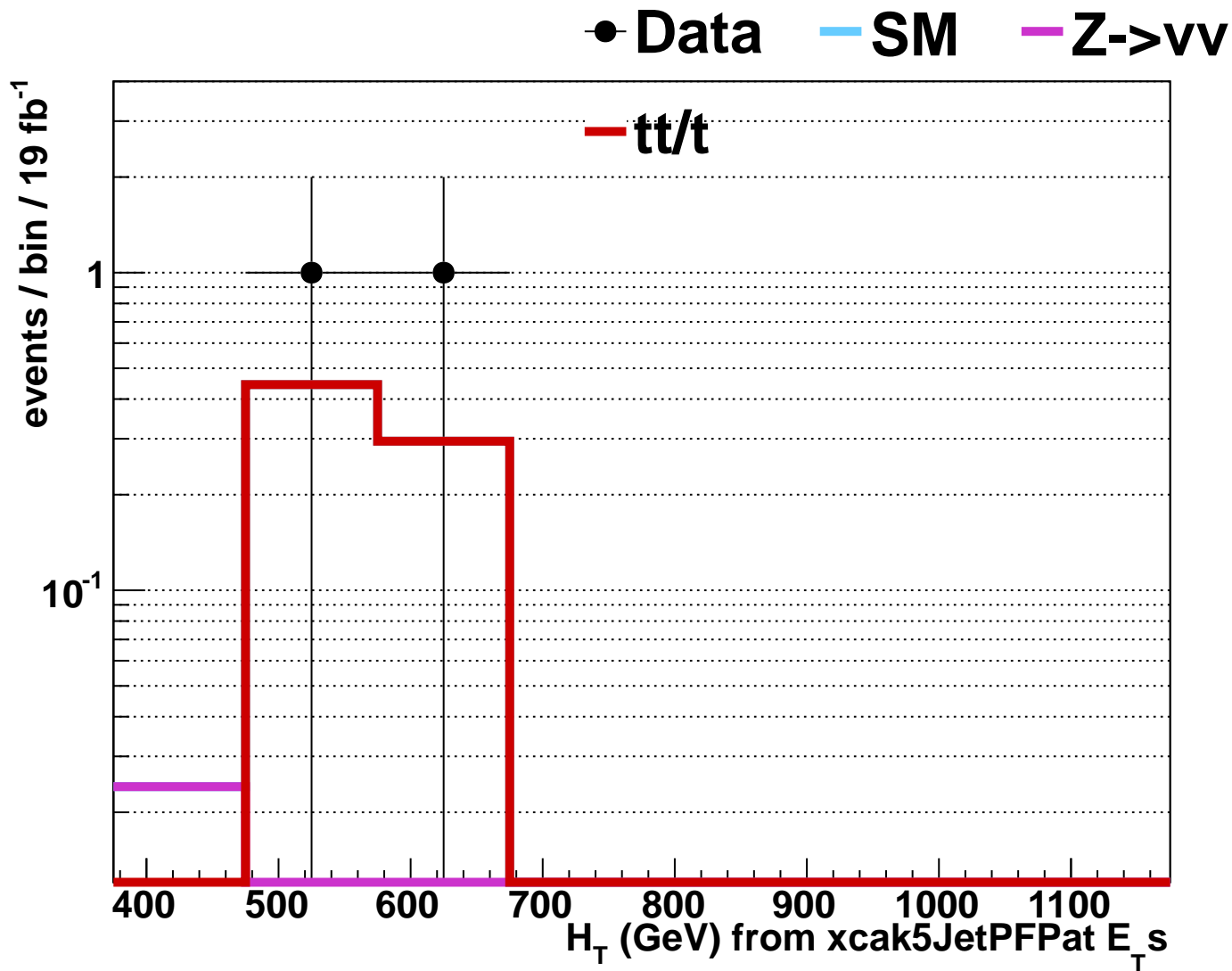


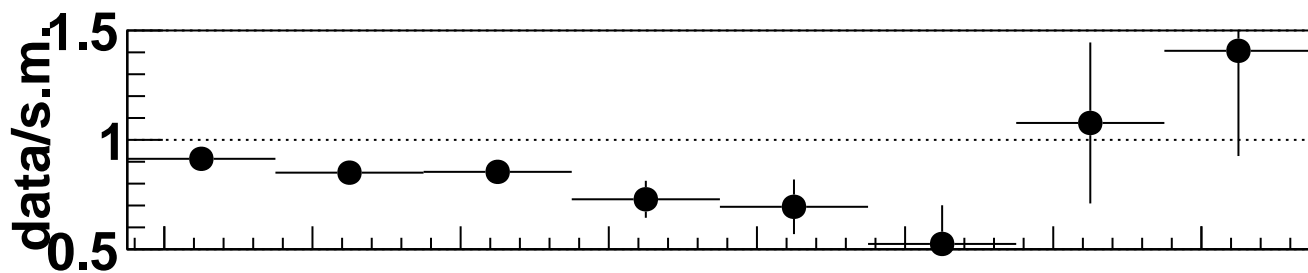
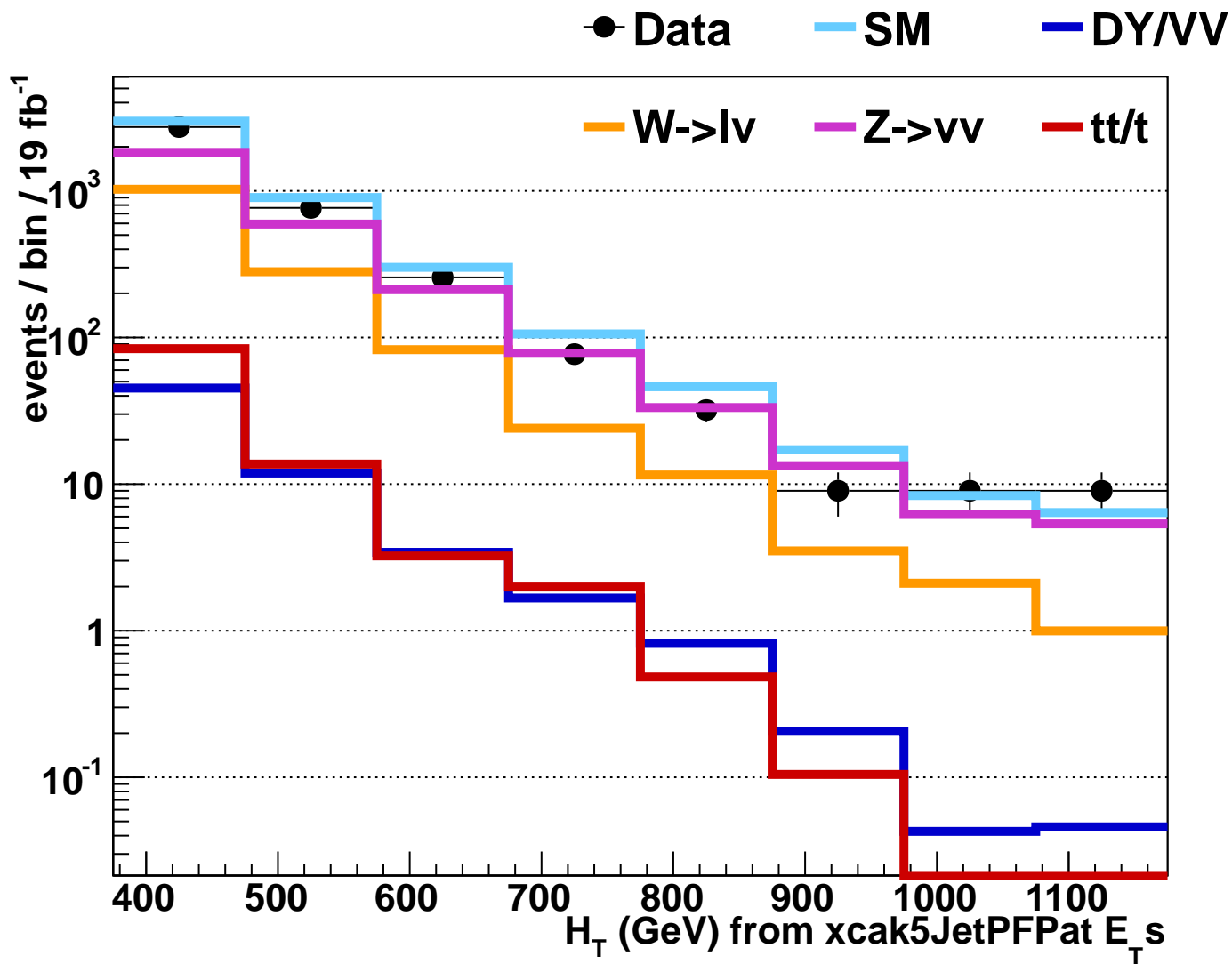


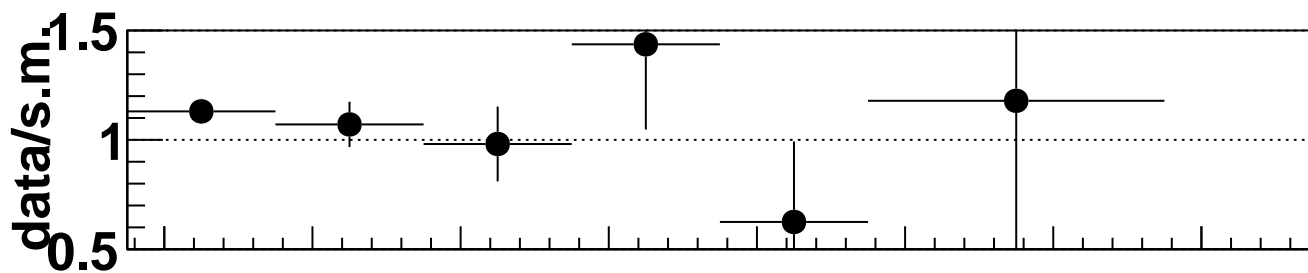
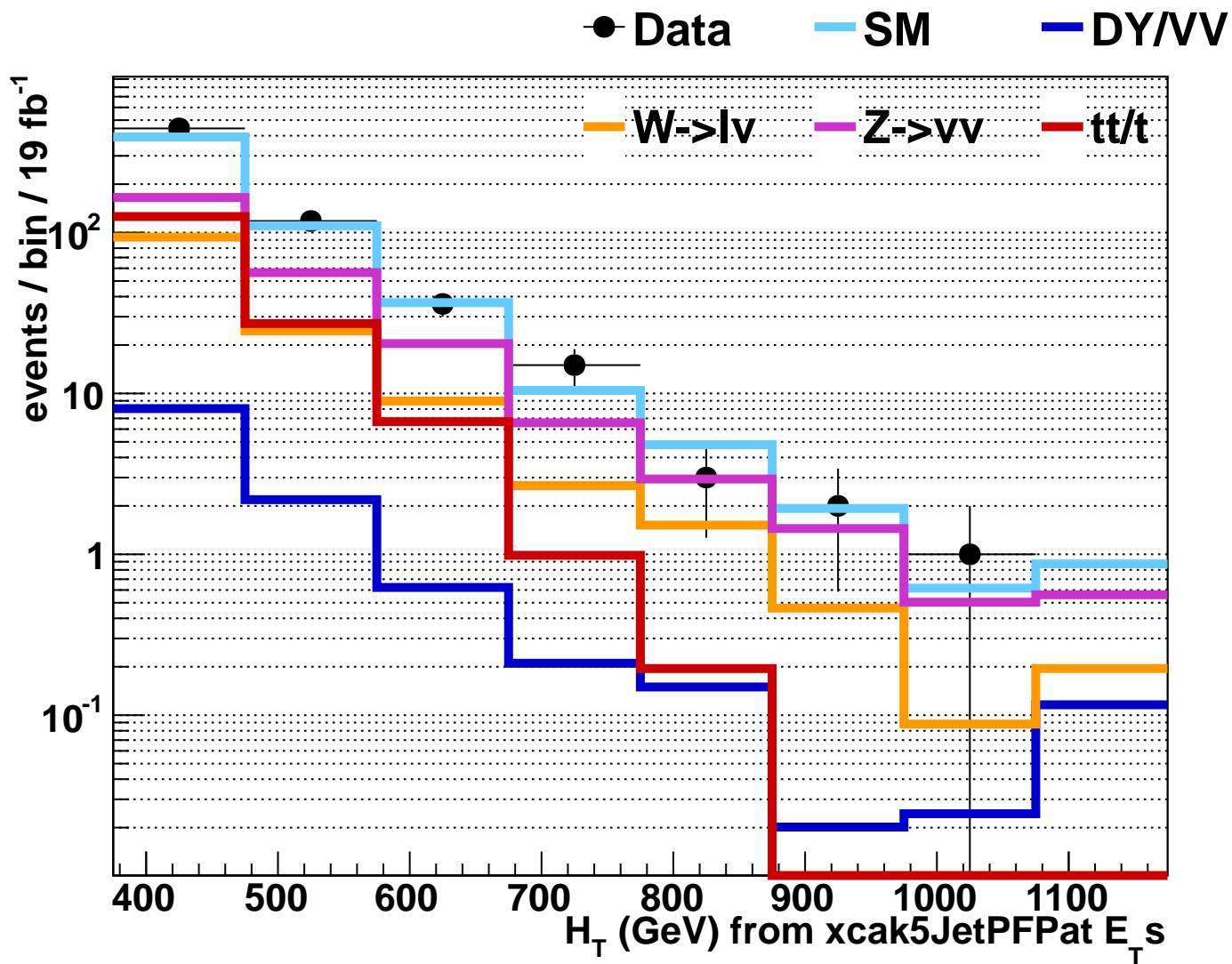


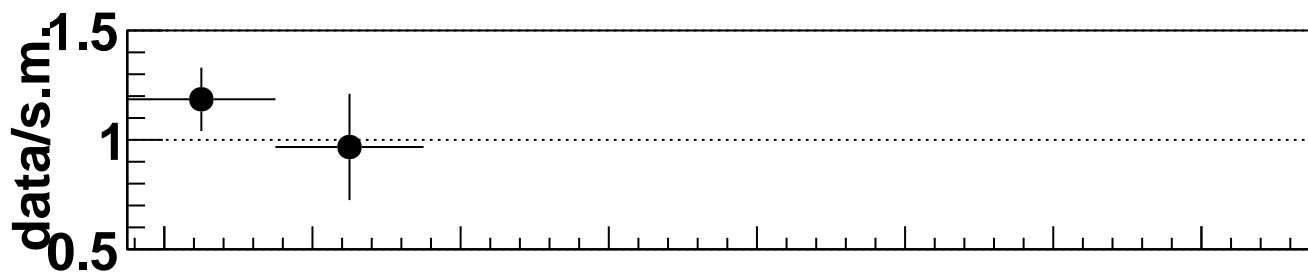
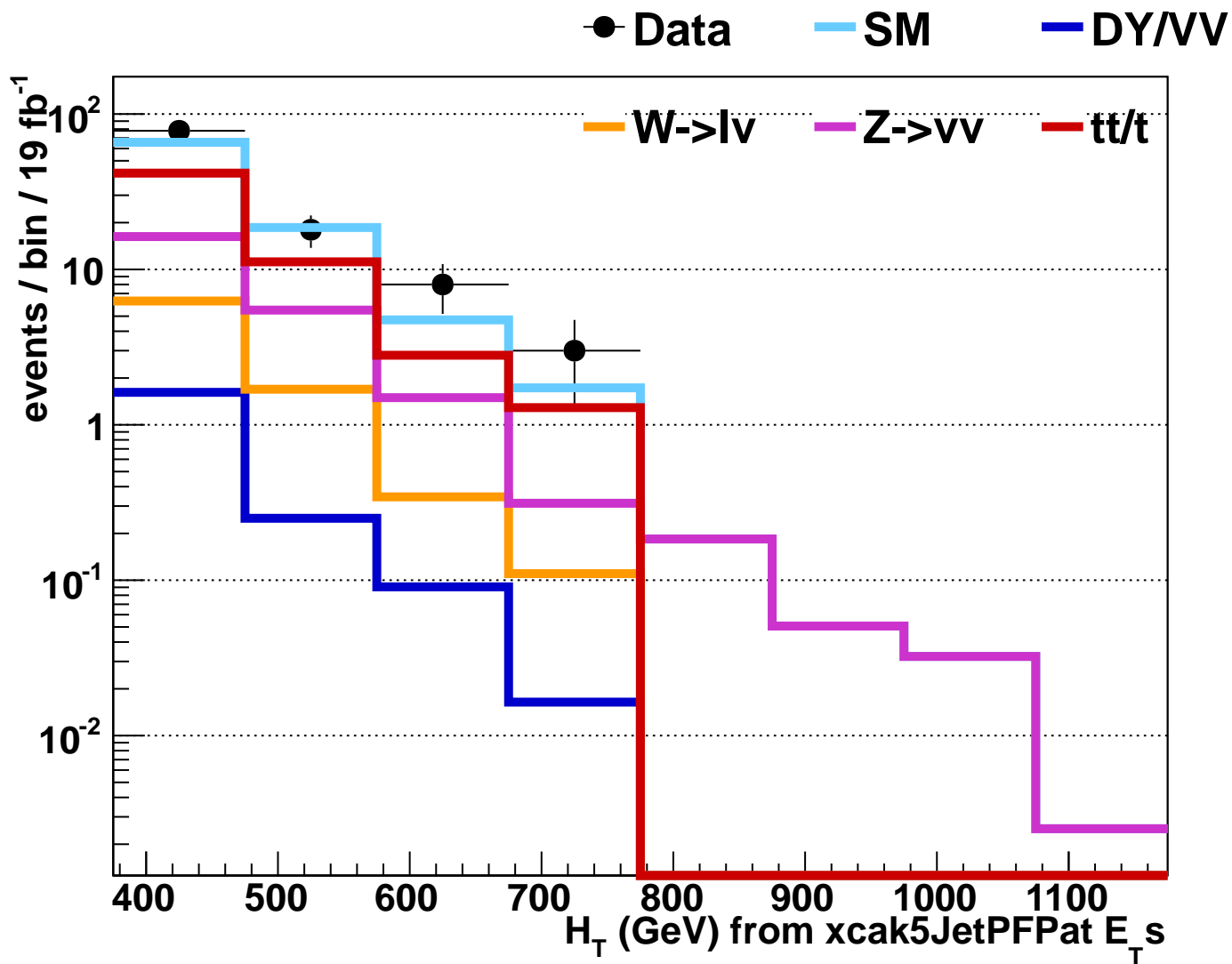


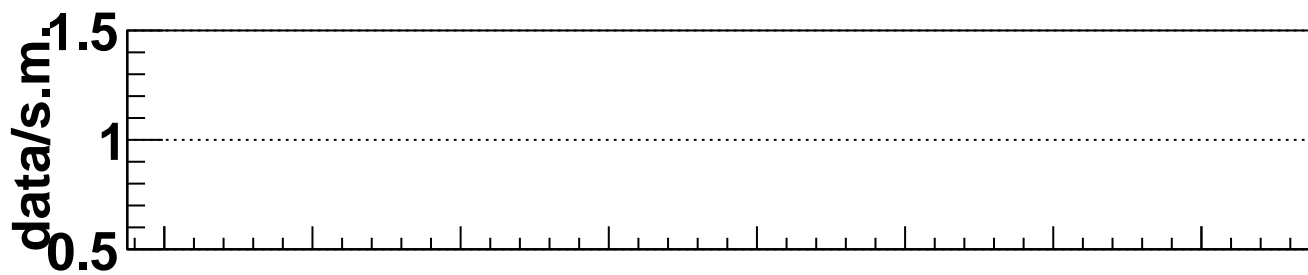
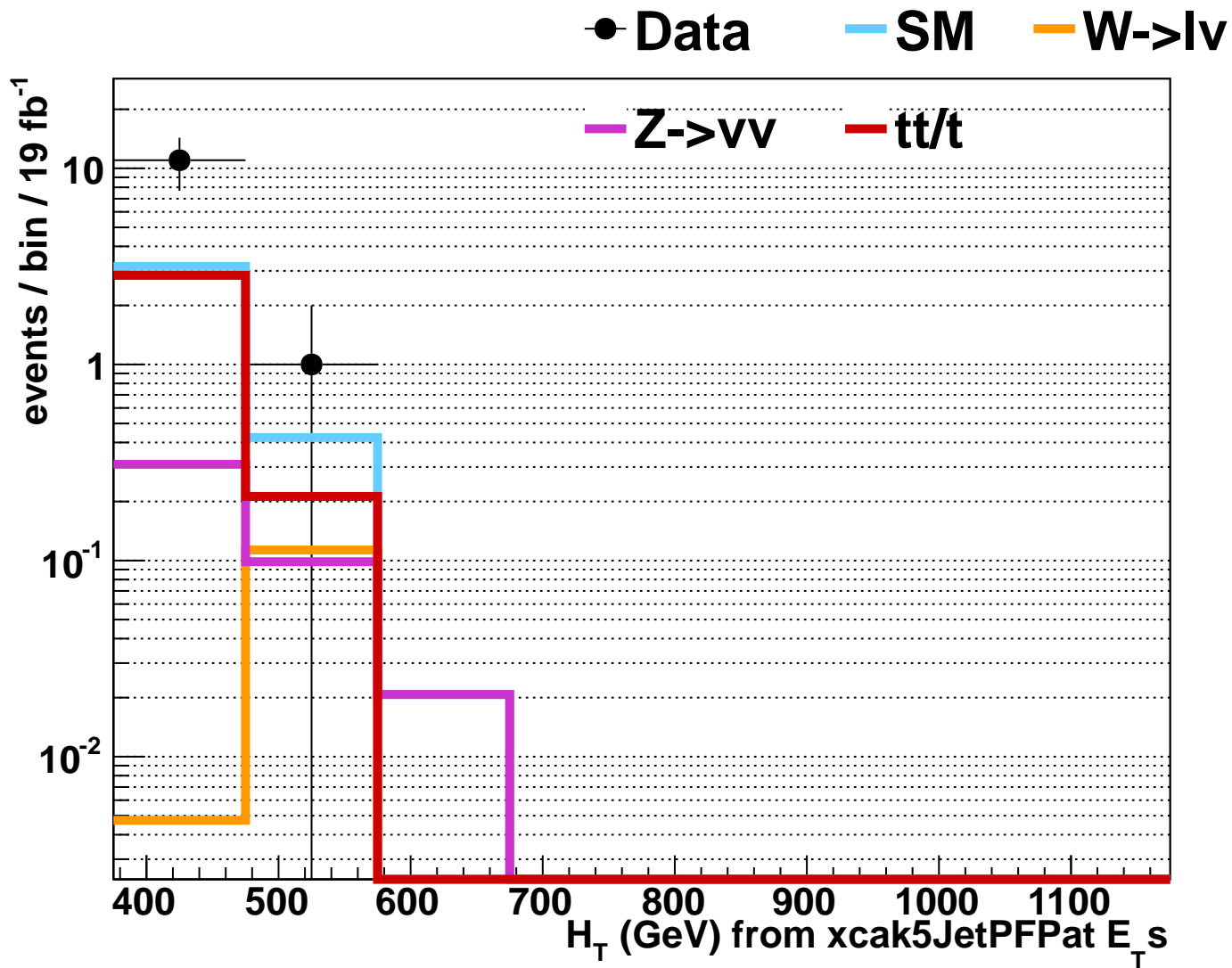












```

y: multiplicity                                0 <= photonIndicesPat <= 0

z: multiplicity                                0 <= muonIndicesPF <= 0
A: multiplicity                                0 <= electronIndicesUnmatchedPF <= 0
B: multiplicity                                0 <= photonIndicesUnmatchedPat <= 0
C: deadEcalFilter                             xcak5JetPFPat; dR>0.300 when deltaPhiStar<0.500
D: value                                       xcak5JetPFMhthighPtPatOvermetP4TypeIPF<=1.25

E: value                                       PFRecHitSumPt<=30.00
F: value                                       0.55<=xcak5JetPFAlphaTEtPat
G: value                                       1.00<=hcalLaserEvent2012
H: value                                       1.00<=ecalLaserCalibEvent2012

```

[jetSumPlots1]

```

J: value                                       475.00<=xcak5JetPFSumEtPat
K: value                                       575.00<=xcak5JetPFSumEtPat
L: value                                       675.00<=xcak5JetPFSumEtPat
M: value                                       775.00<=xcak5JetPFSumEtPat
N: value                                       875.00<=xcak5JetPFSumEtPat

O: value                                       975.00<=xcak5JetPFSumEtPat
P: value                                       1075.00<=xcak5JetPFSumEtPat

```

	Data	SM	DY/VV	W->lν	Z->νν
y:	6905535	9.427(4)e+5	4.895(6)e+4	2.473(2)e+5	8.736(5)e+4
z:	6880817	7.843(4)e+5	3.433(6)e+4	1.572(2)e+5	8.735(5)e+4
A:	6879619	7.838(4)e+5	3.430(6)e+4	1.571(2)e+5	8.734(5)e+4
B:	6879103	7.837(4)e+5	3.429(6)e+4	1.570(2)e+5	8.733(5)e+4
C:	1312306	2.351(2)e+5	9.29(3)e+3	6.33(1)e+4	4.425(4)e+4
D:	460848	1.404(1)e+5	4.80(2)e+3	4.752(9)e+4	3.748(4)e+4
E:	431473	1.399(1)e+5	4.78(2)e+3	4.737(9)e+4	3.737(4)e+4
F:	6313	6.64(2)e+3	102(3)	1.98(2)e+3	3.71(1)e+3
G:	6313	-	-	-	-
H:	6297	-	-	-	-

[jetSumPlots1]

J:	2262	2.44(1)e+3	35(2)	663(9)	1429(6)
K:	868	931(8)	12.9(10)	231(5)	575(4)
L:	328	373(5)	5.7(6)	87(3)	239(2)
M:	141	162(3)	2.4(4)	37(2)	107(2)
N:	69	73(2)	1.0(2)	15(1)	48(1)
O:	35	35(1)	0.6(2)	7.0(8)	23.3(8)
P:	17	17(1)	0.4(1)	3.0(5)	11.3(5)