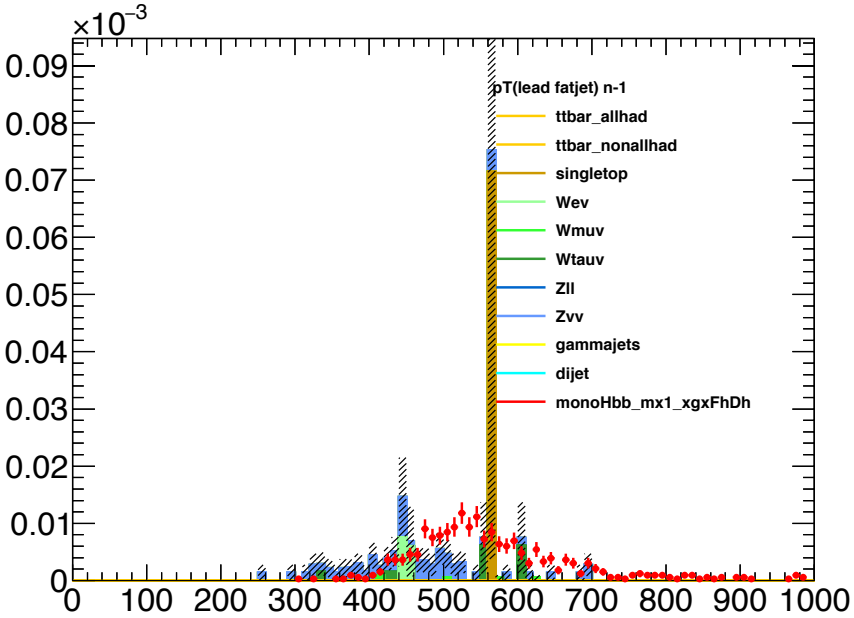
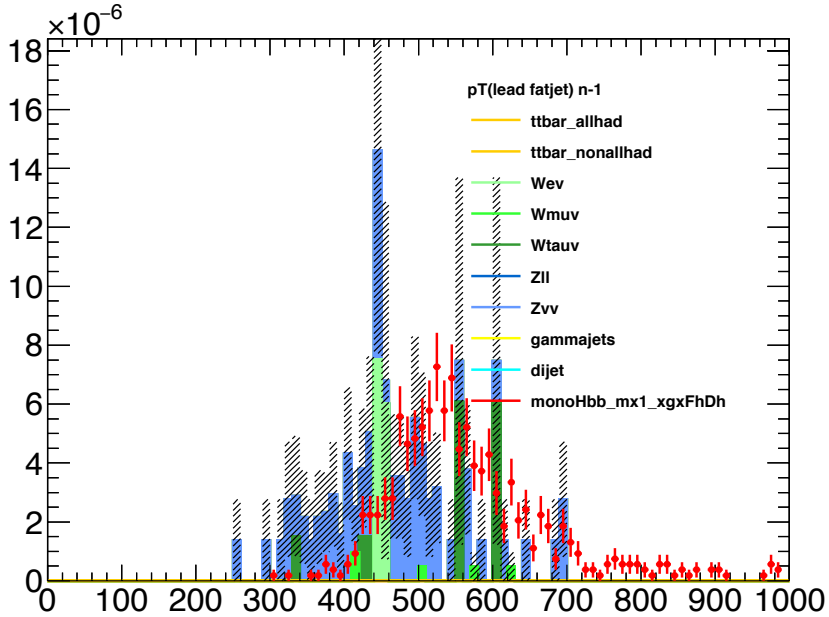
Mono-H n-1 plots

pT(lead fatjet) n-1





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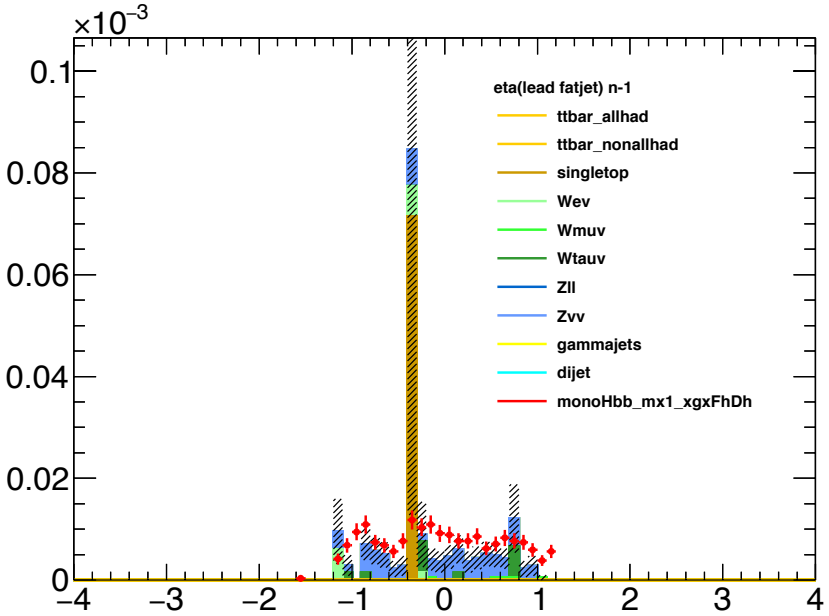
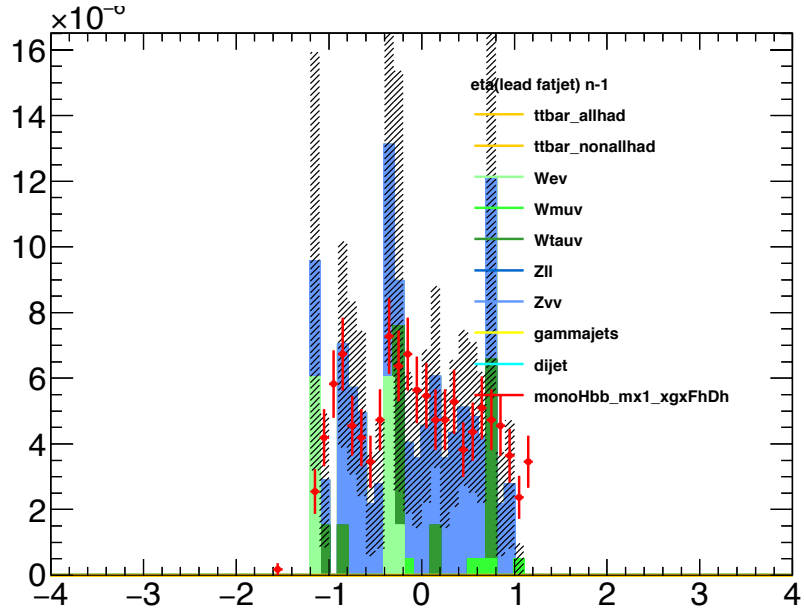
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

eta(lead fatjet) n-1





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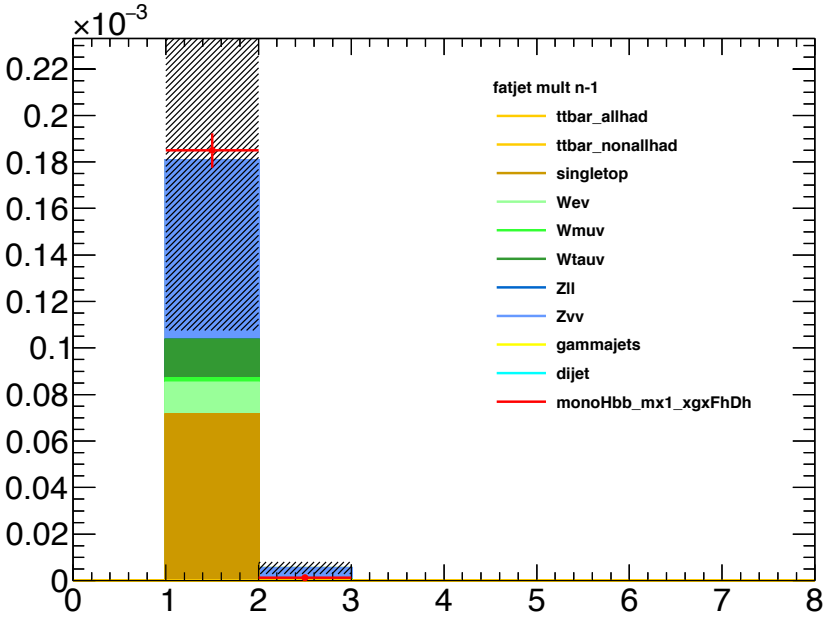
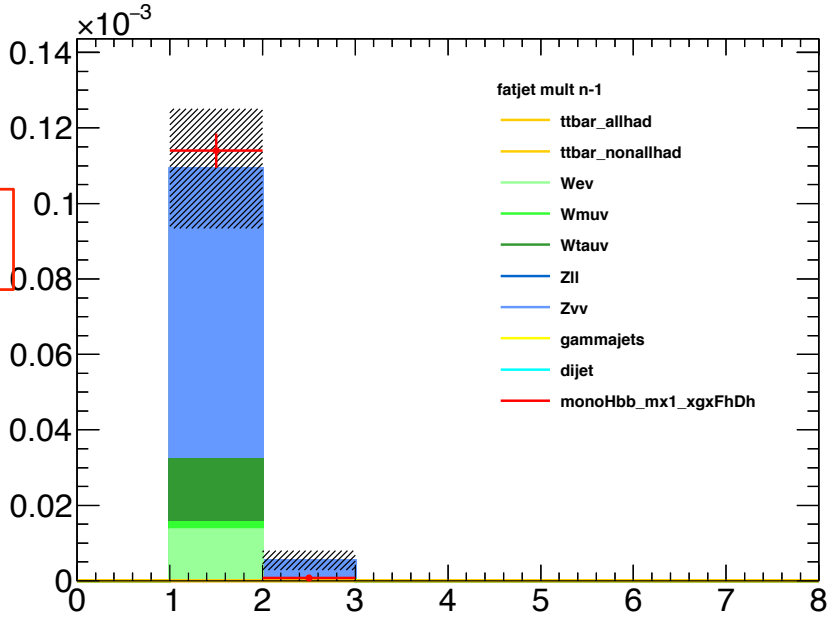
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

fatjet mult n-1





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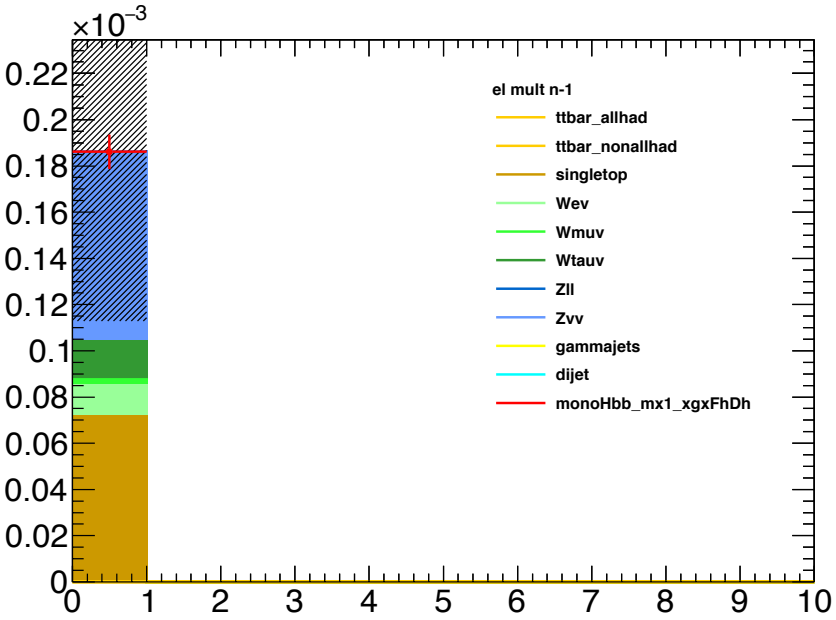
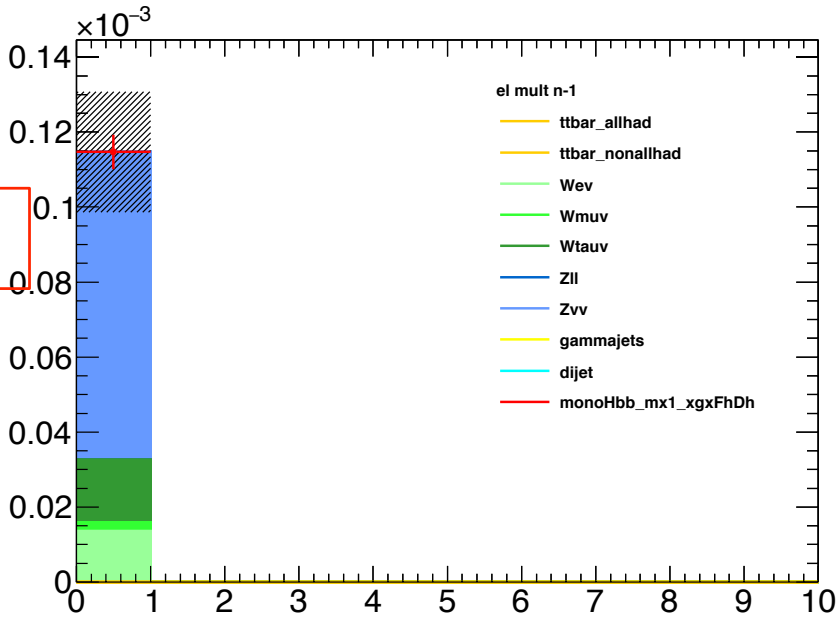
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	pT, eta cuts applied
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

el mult n-1





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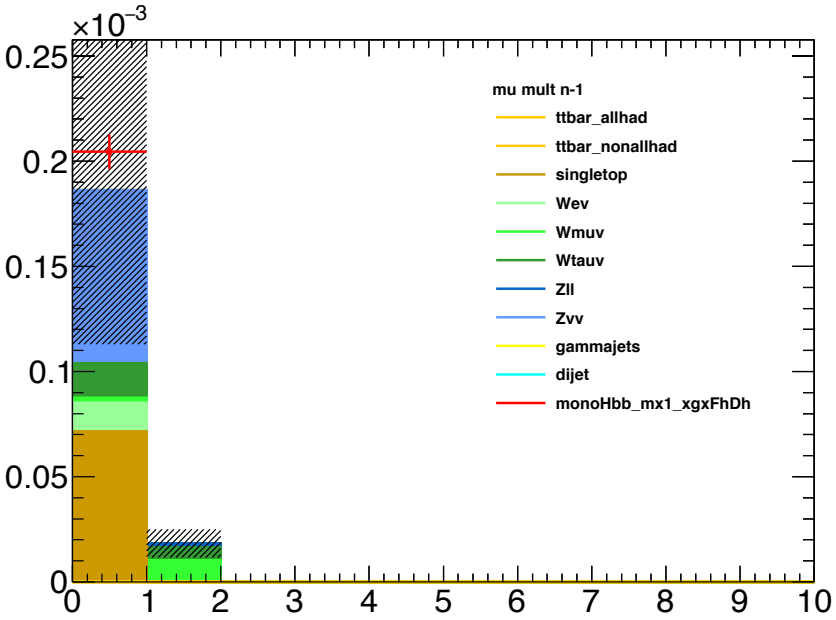
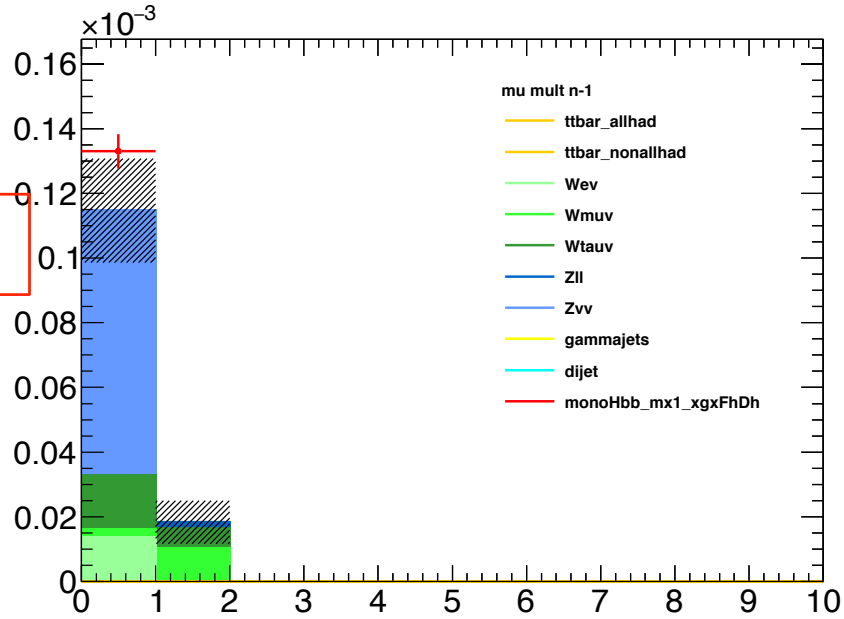
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

mu mult n-1





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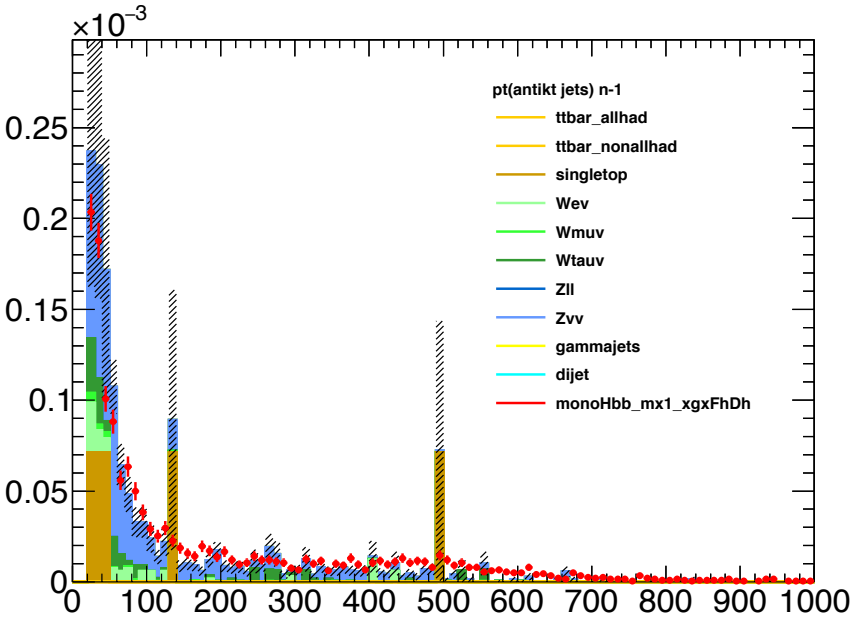
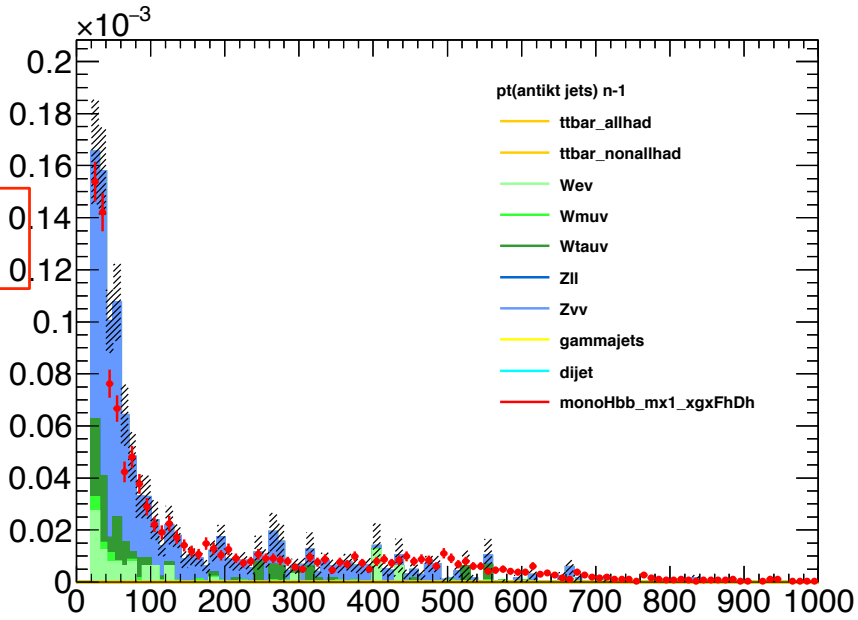
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

pt(antikt jets) n-1





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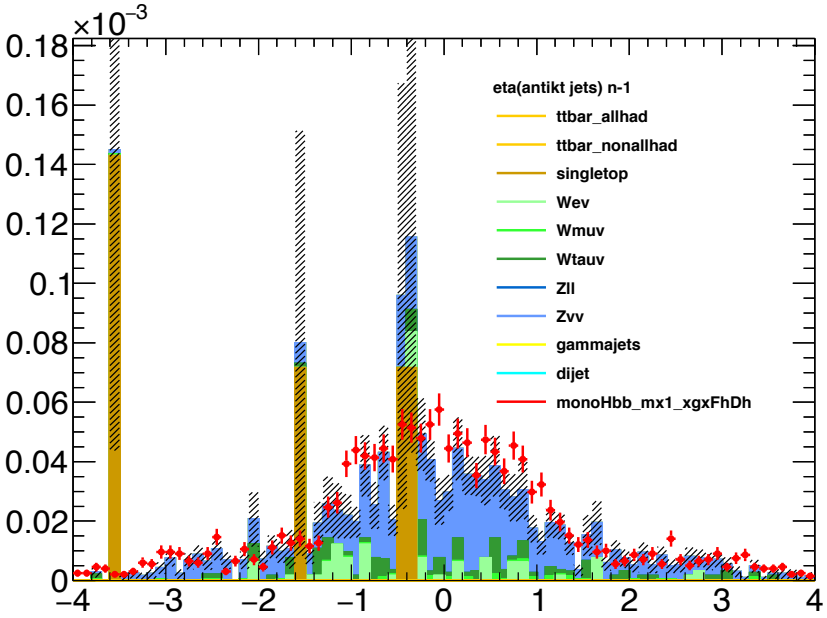
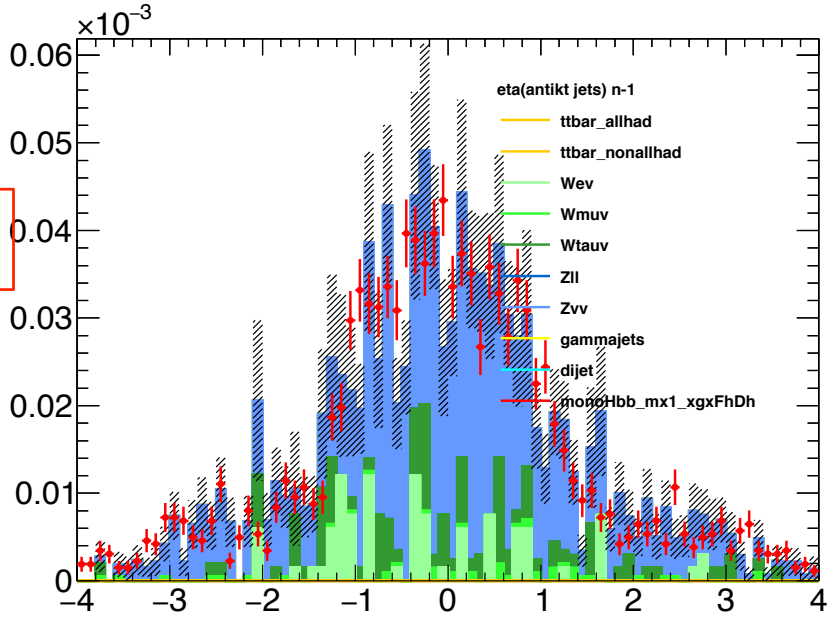
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	pT > 20, eta < 4.5
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

eta(antikt jets) n-1





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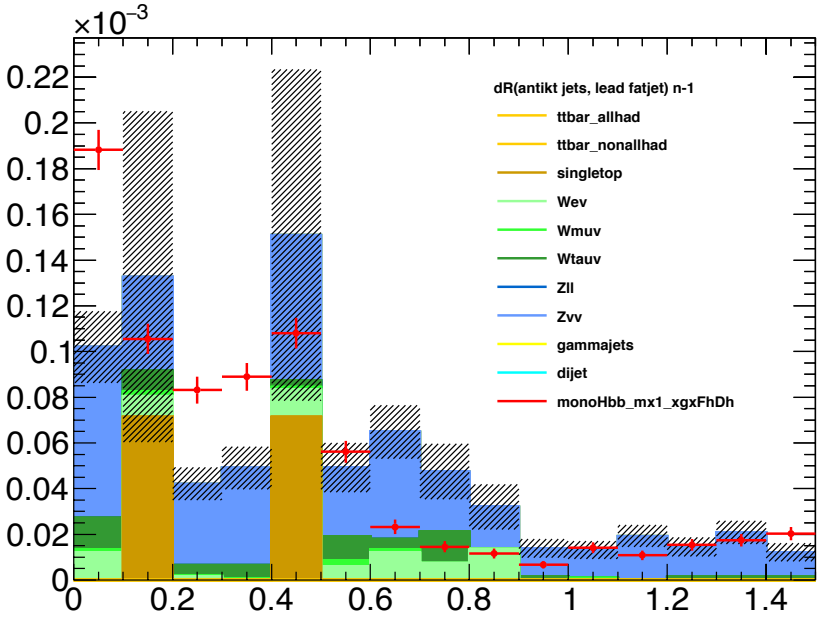
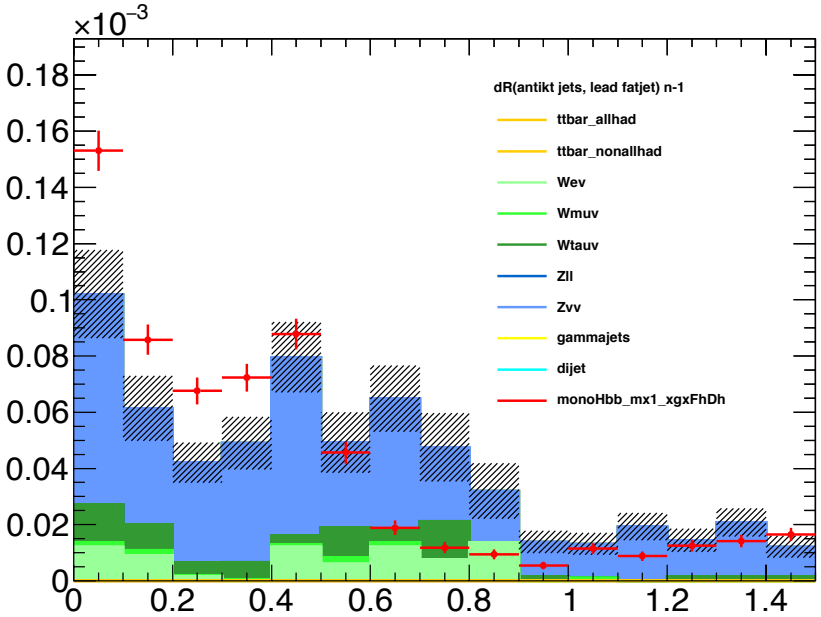
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	pT > 20, eta < 4.5
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

dR(antikt jets, lead fatjet) n-1





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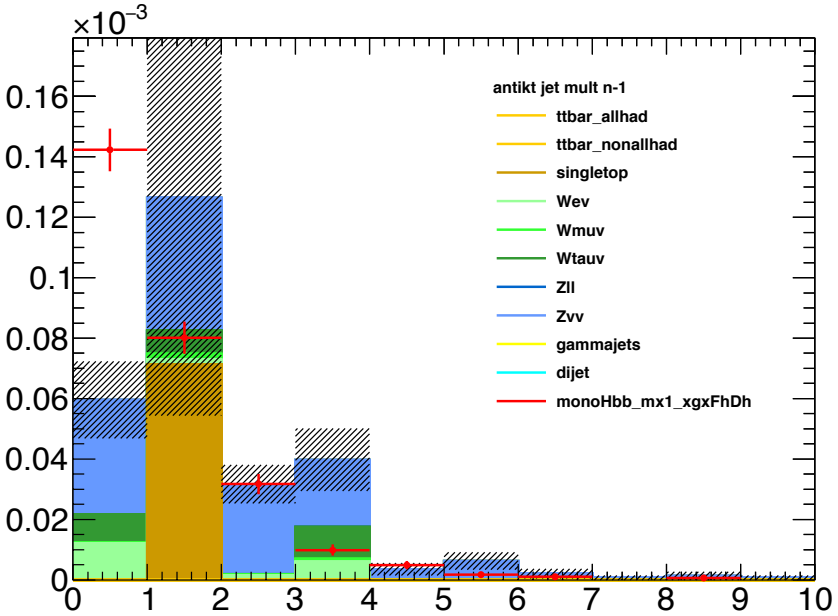
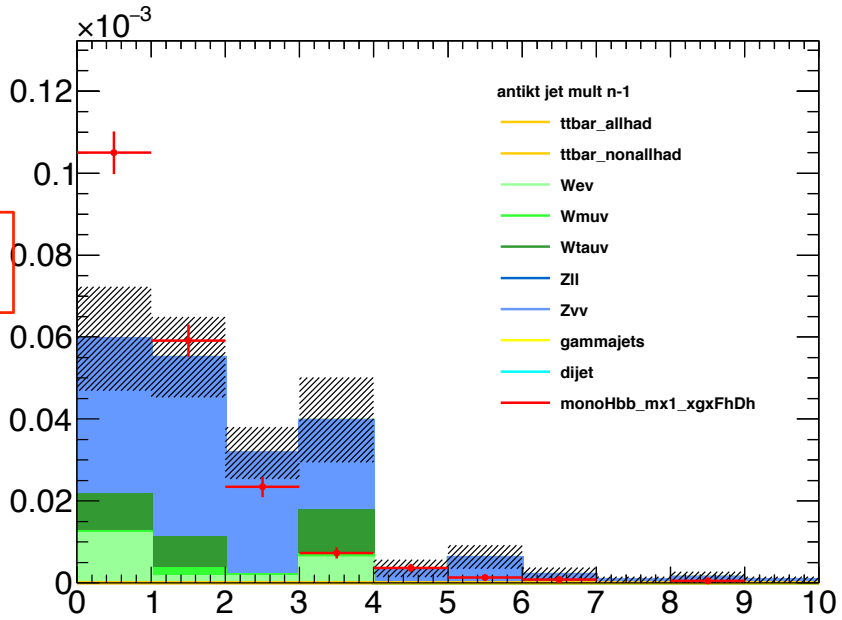
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	pT > 20, eta < 4.5
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

antikt jet mult n-1





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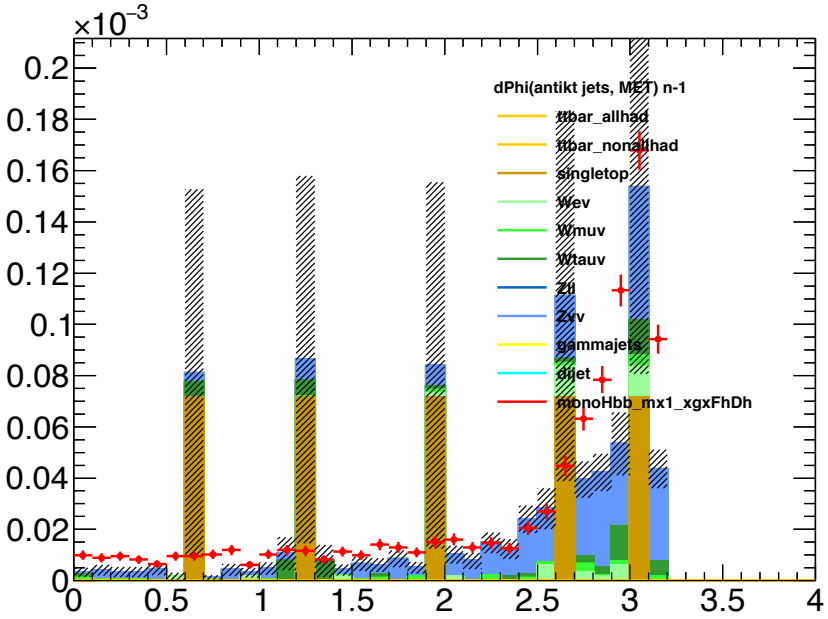
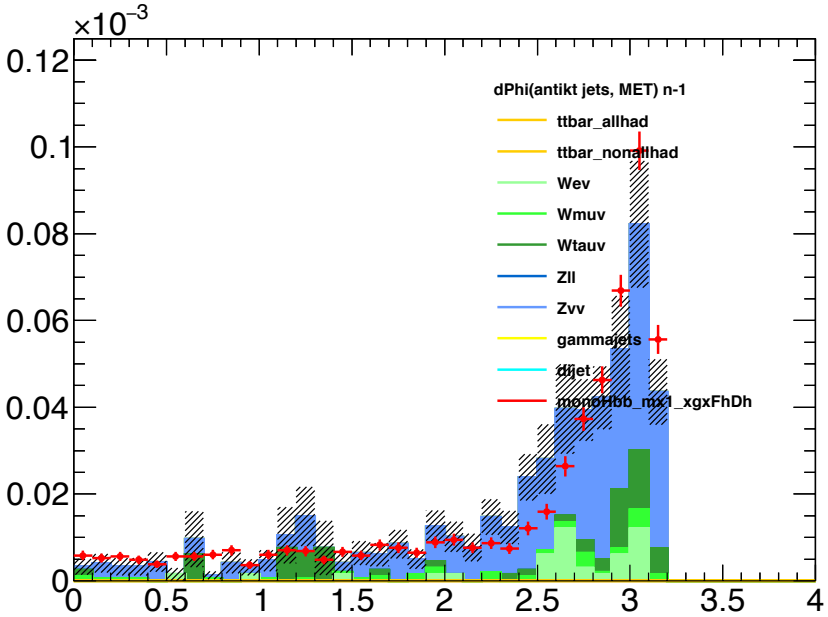
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	pT, eta, dR cuts applied
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

dPhi(antikt jets, MET) n-1





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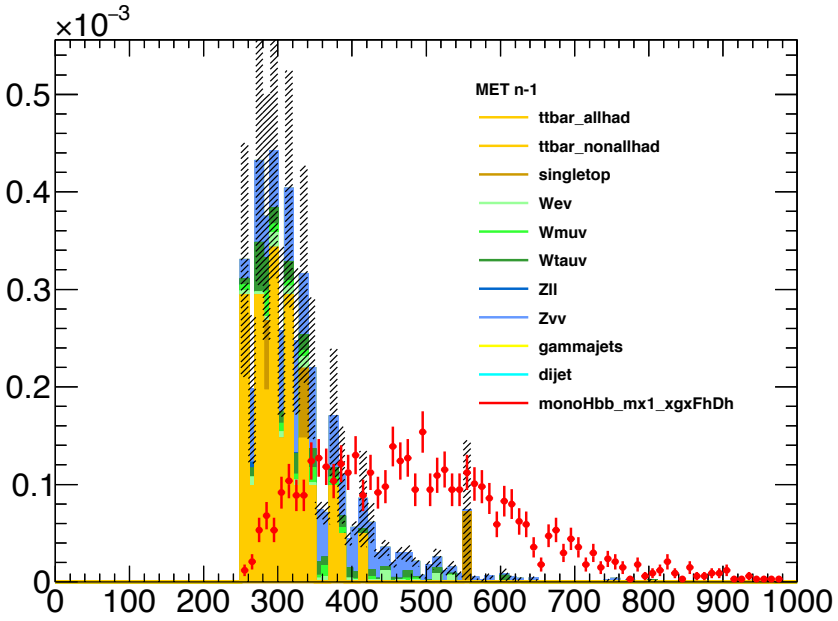
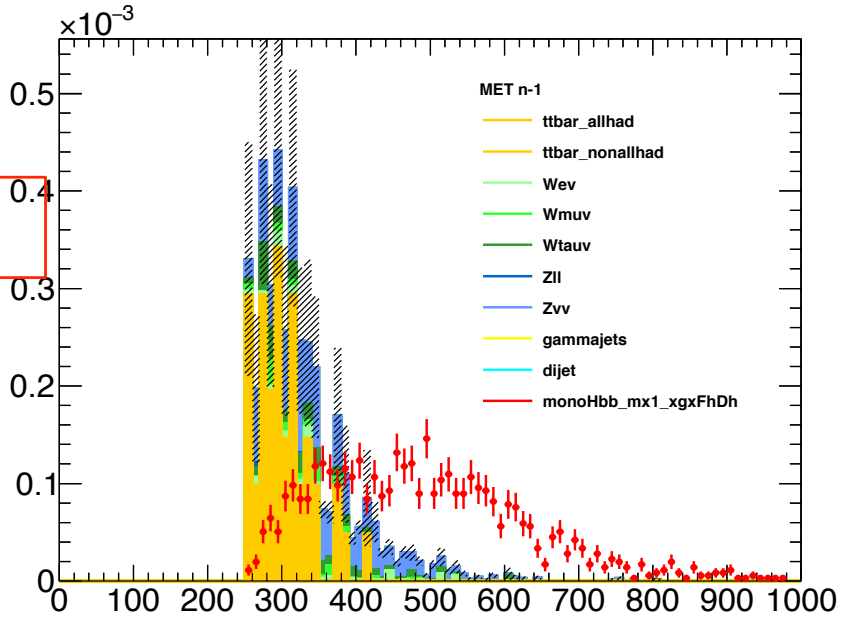
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	pT, eta cuts applied
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

MET n-1





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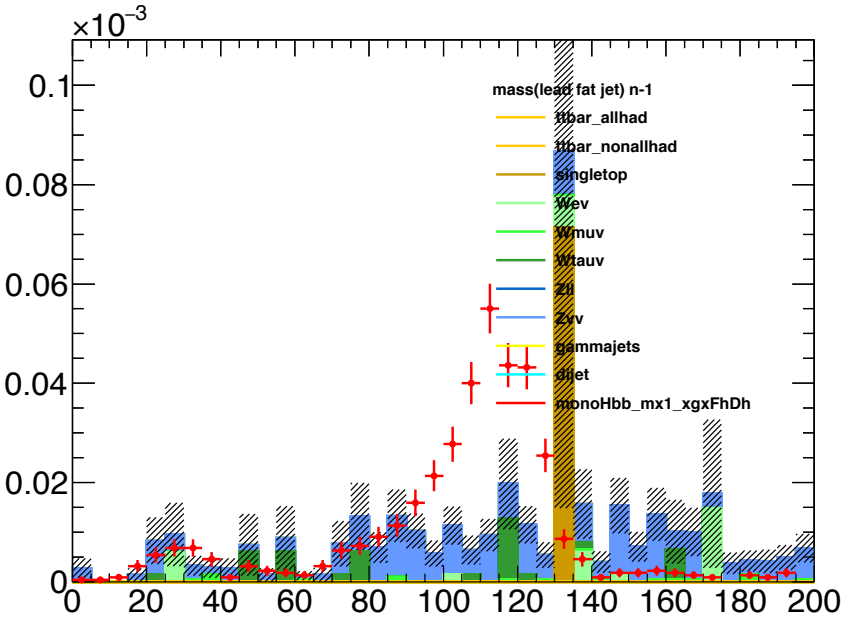
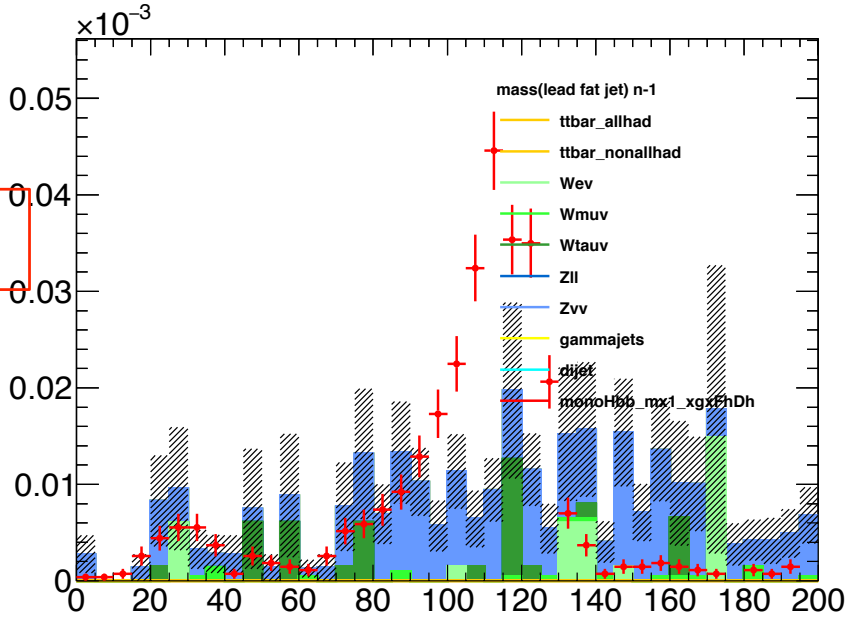
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

mass(lead fat jet)n-1





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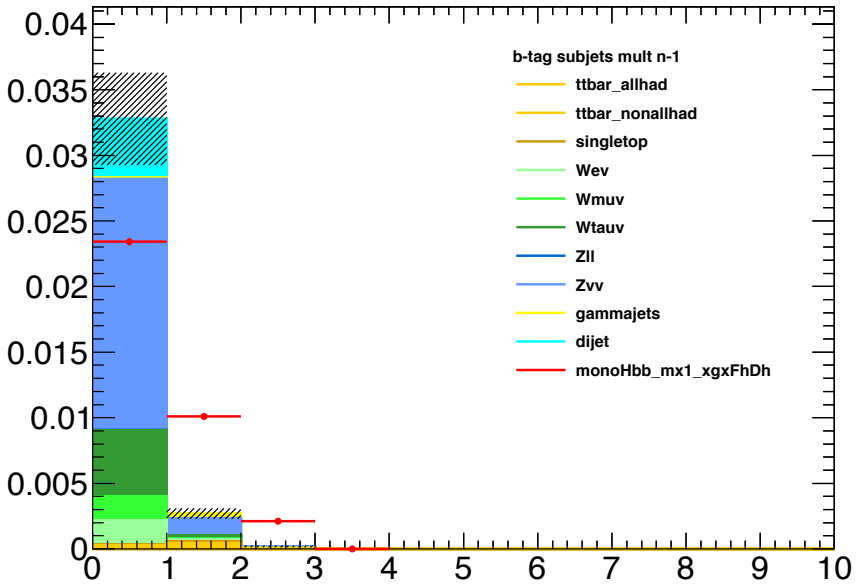
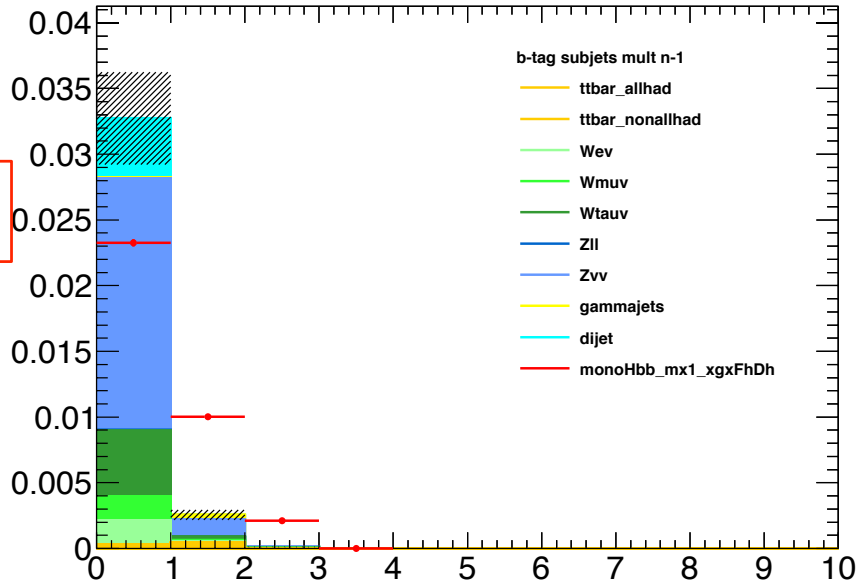
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

b-tag subjets mult n-1





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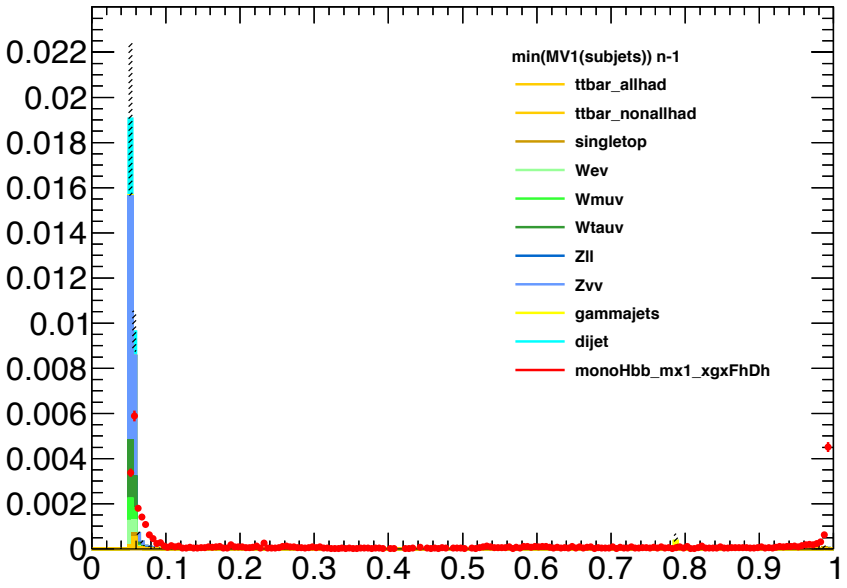
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	
2 antikt subjets: b-tag MV1 > 0.971966	dR (fat jet) < 1.0, b-tagged

min(MV1(subjets)) n-1



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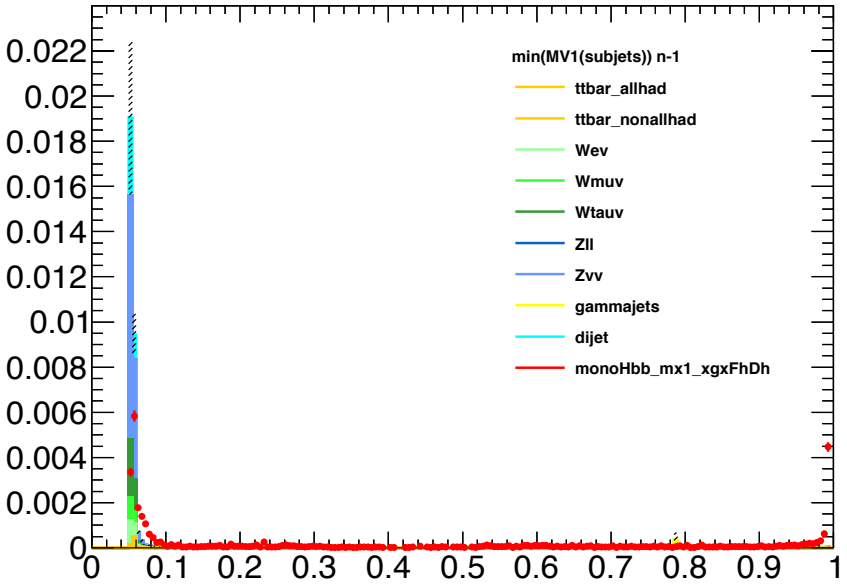
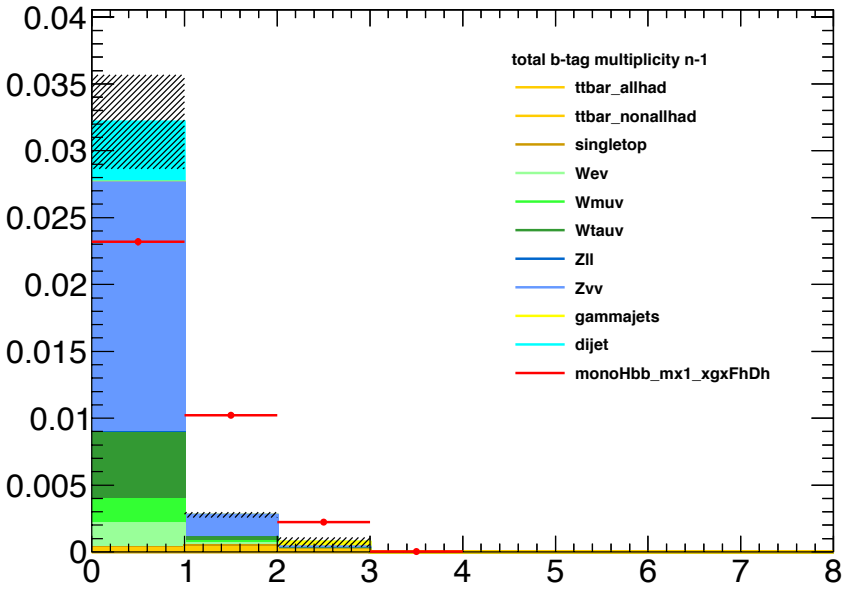
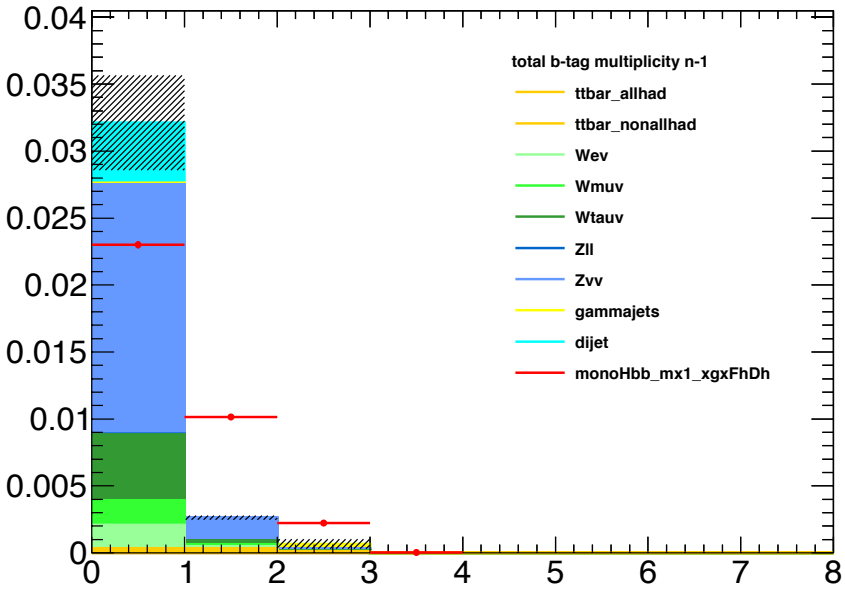


Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	

total b-tag multiplicity n-1





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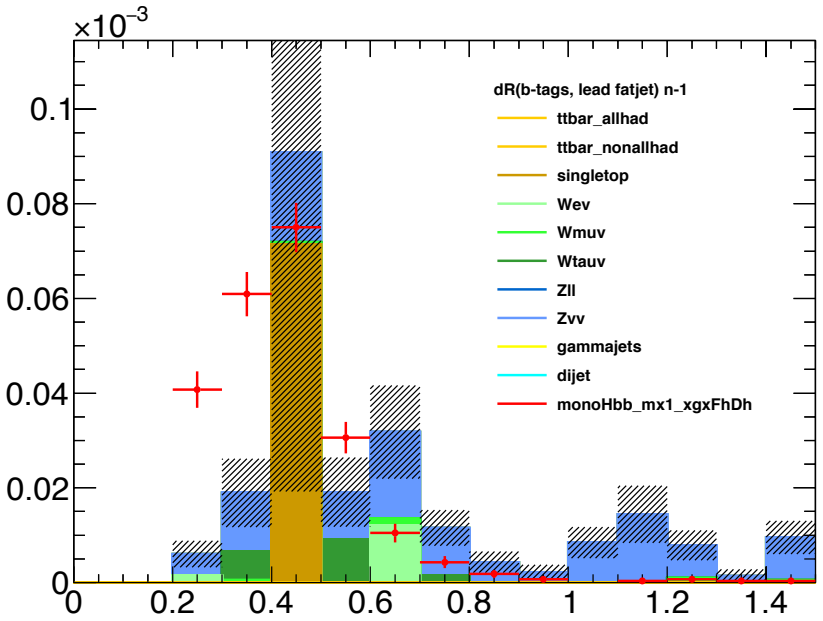
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	pT, eta cuts applied
2 antikt subjets: b-tag MV1 > 0.971966	b-tag required

(max) dR(b-tags, lead fatjet) n-1



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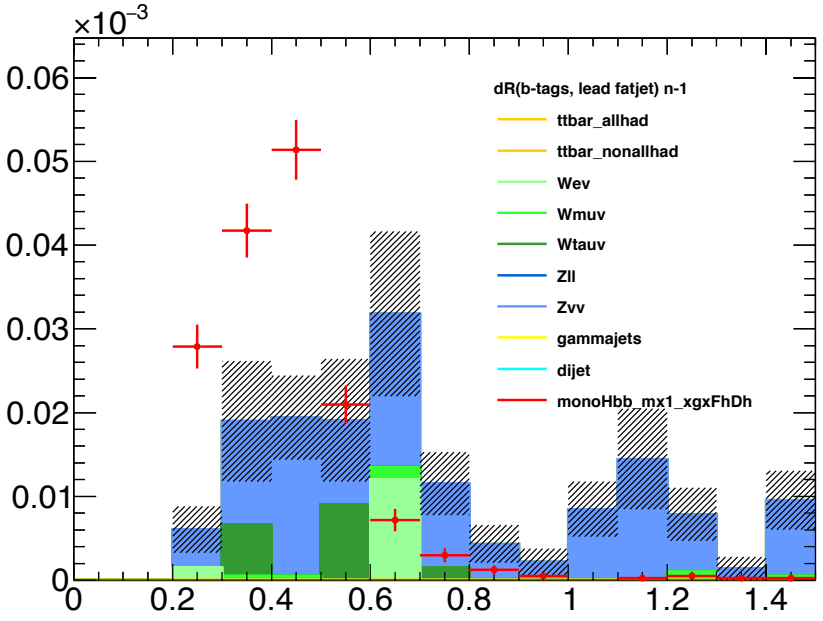
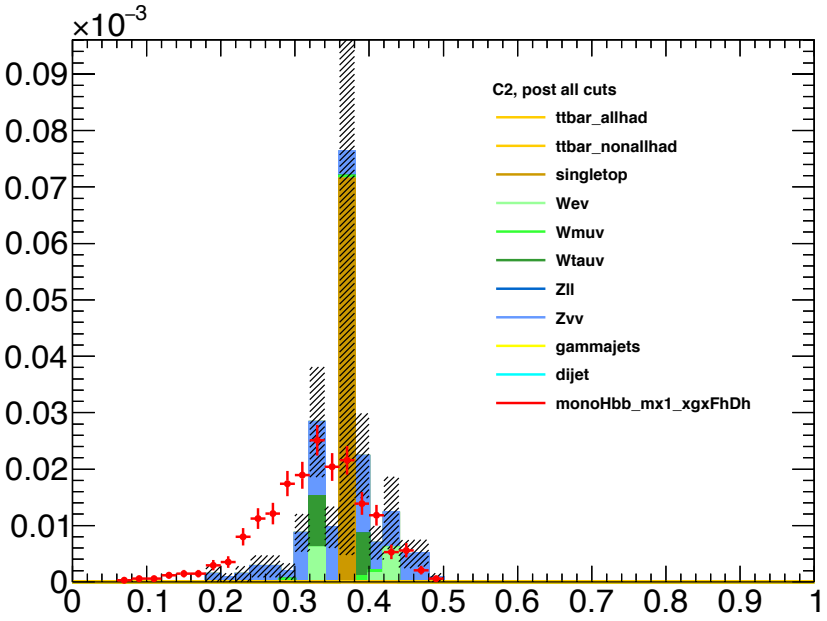
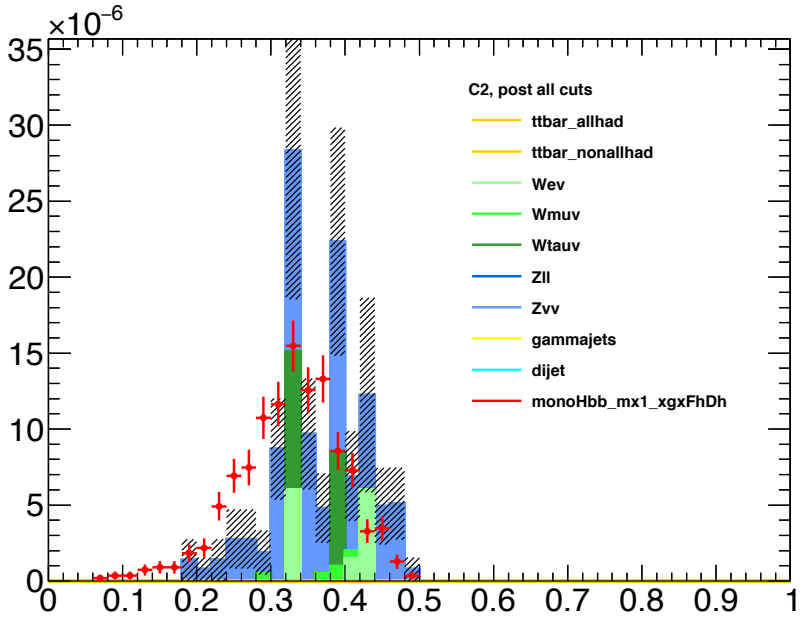


Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	pT, eta cut applied
2 antikt subjets: b-tag MV1 > 0.971966	2 b-tags (not required to be subjets)

Mono-H C2, D2, Tau21

C2, post all cuts





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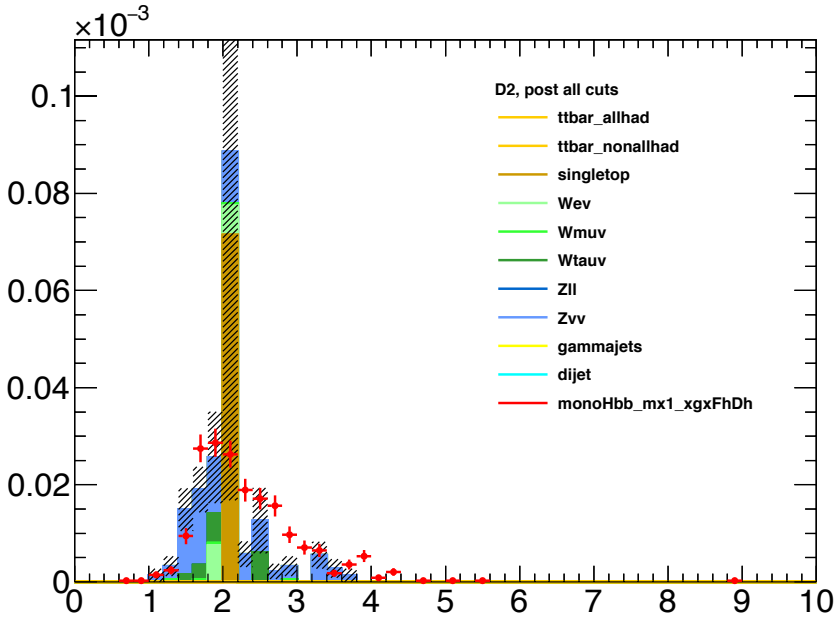
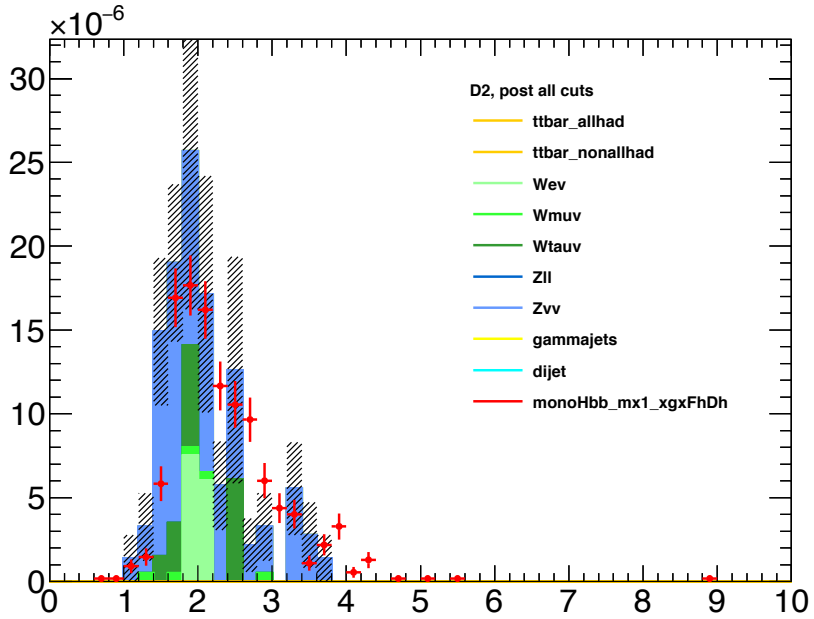
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

D2, post all cuts





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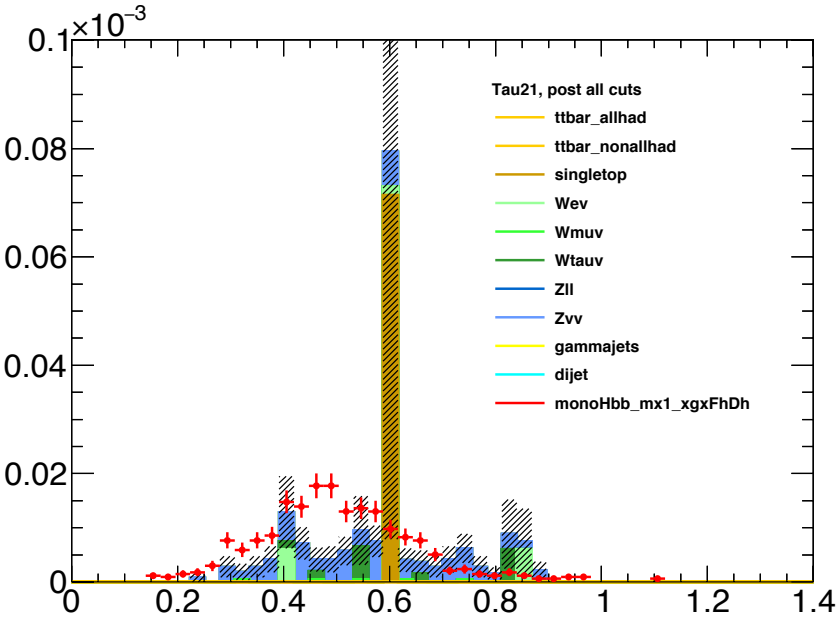
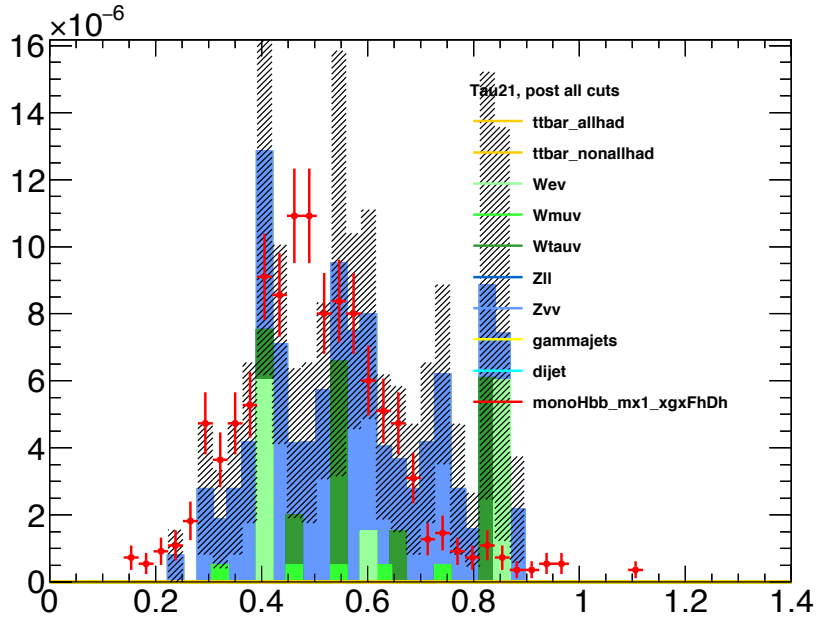
Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y

Tau21, post all cuts





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Selection	Cut applied
MET > 250 GeV	Y
>= 1 fat jet: pT > 250 eta < 1.2)	Y
Electron veto	Y
Muon veto	Y
Remove jet overlapping el: pt > 20 eta < 4.5	Y
<= 1 antikt4 jet with: pT > 40, eta < 4.5, dR(lead fat jet) > 0.9	Y
Veto events with antikt4 jet: pt > 20 eta < 2.5 dPhi(MET, antikt jet) > 0.4	Y
MET > 500	Y
Mono-H	
90 < m(fj) < 145	Y
2 antikt jets: pt > 20 eta < 2.5 dR (fat jet) < 1.0	Y
2 antikt subjets: b-tag MV1 > 0.971966	Y