

HEP Weekly Report

NTUA

24/6/2020

George Bakas



Status Report

- ttX status report today
- Unfolding:
 - Binning → Threshold ~ 20 events/bin
 - Revert to old method (TOP-18-013) using reco bins \approx gen bins for the di-jet variables
- Stack of input variables for the topTagger (Data vs MC)
 - Leading and Subleading jets
 - Do we need top tagger scale factors??
 - All mc's are scaled to the ttbar signal strength taken from the MC
- B-tagging Scale Factors
 - 2016, 2018 TBA
 - 2017 not ready for ttbar analyses



Signal Selection

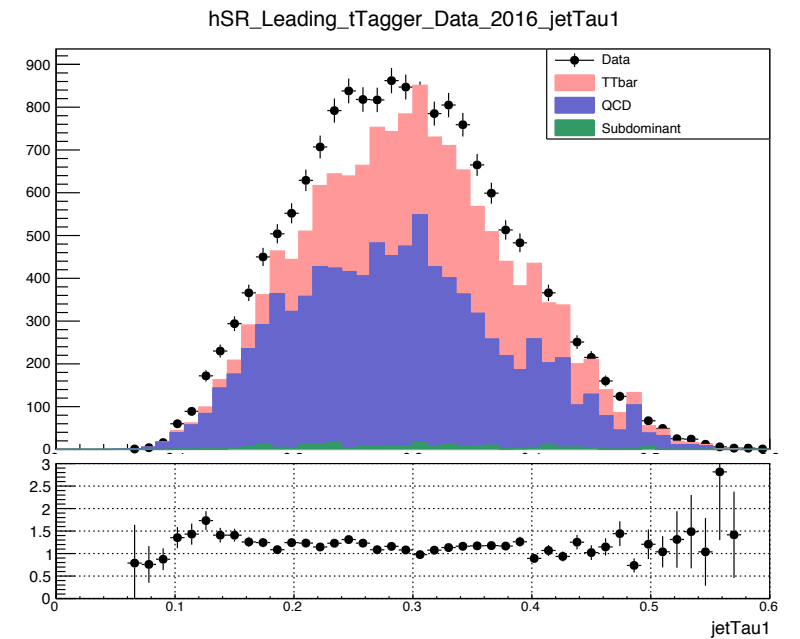
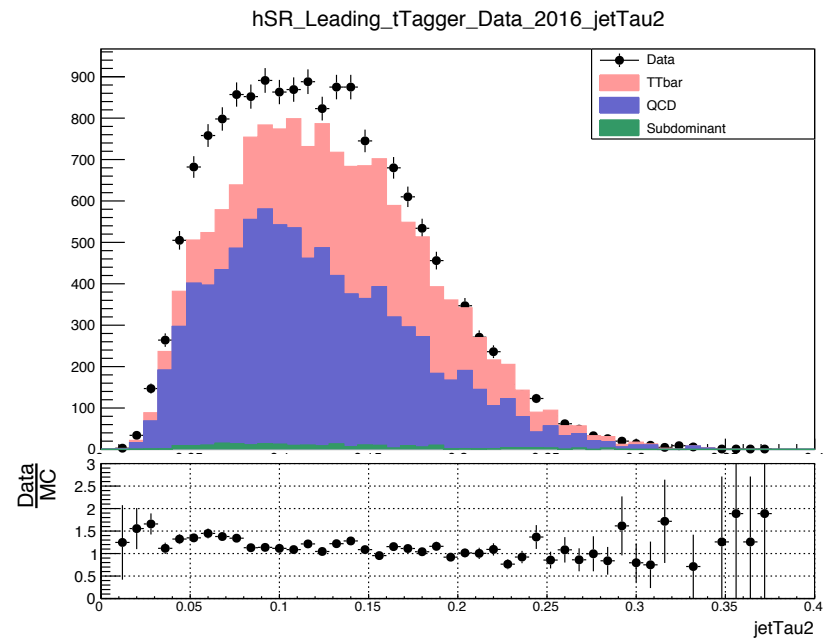
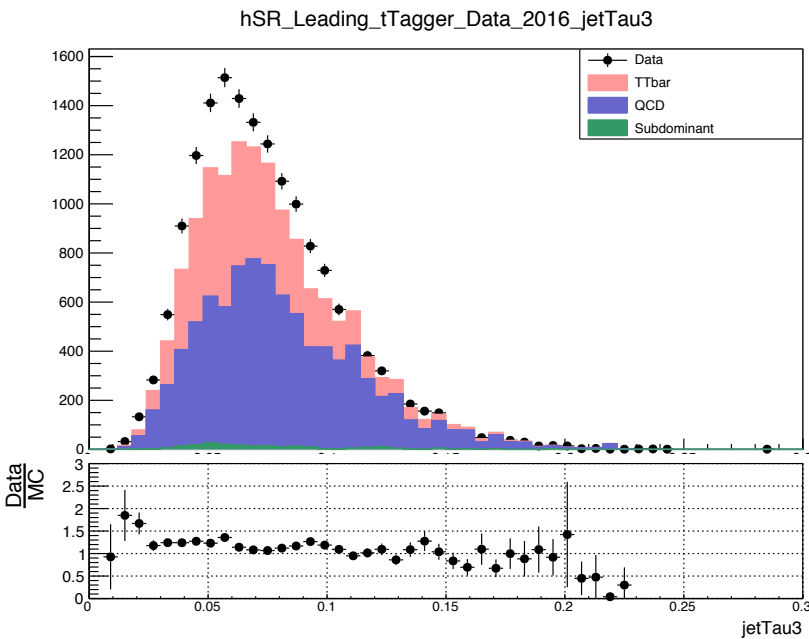
Variables	Selected Cut
pT (both leading jets)	> 400 GeV
Njets	> 1
N leptons	= 0
eta (both leading jets)	< 2.4
mJJ	> 1000 GeV
jetMassSoftDrop (only for fit)	(50,300) GeV
Top Tagger	> 0.2
B tagging (2 btagged jets)	> Medium WP
Signal Trigger	

Control Region Selection

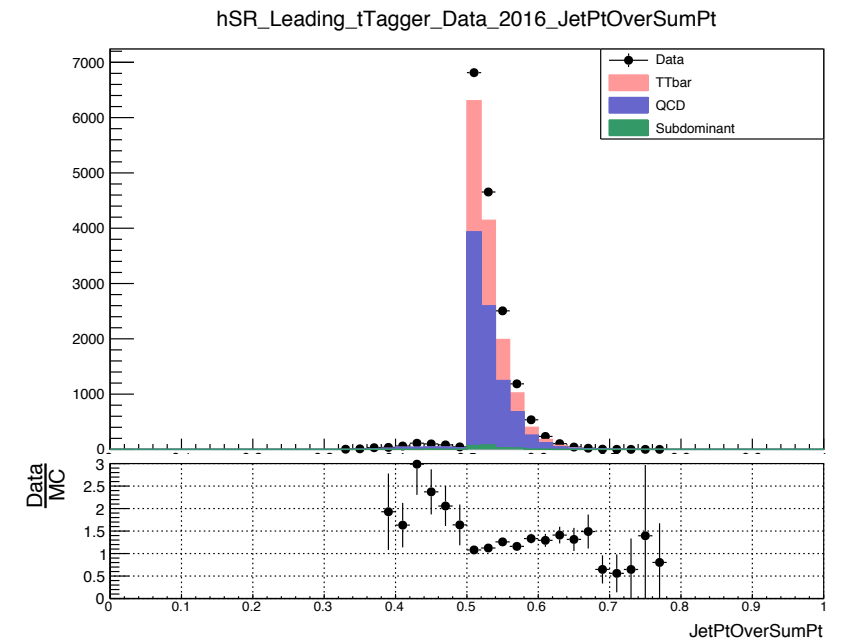
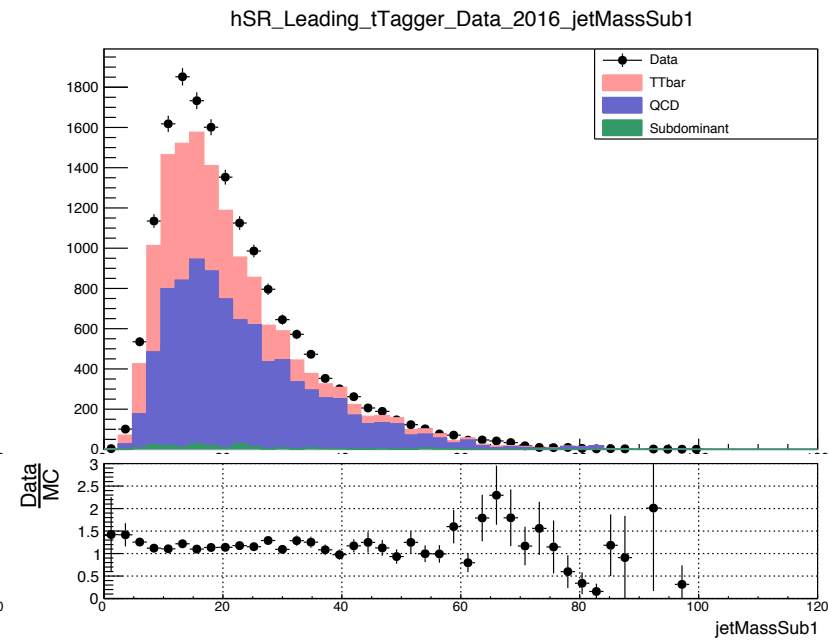
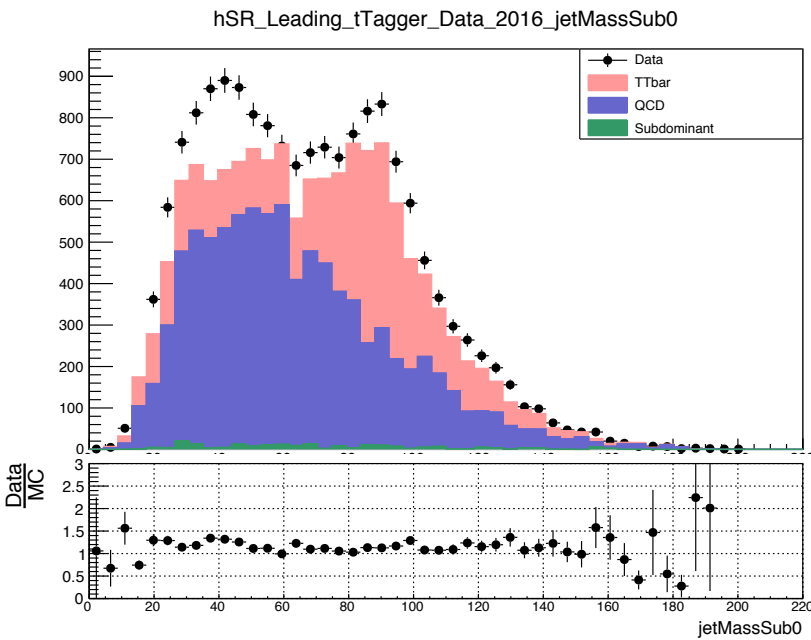
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Njets	> 1
N leptons	= 0
eta (both leading jets)	< 2.4
mJJ	> 1000 GeV
jetMassSoftDrop (only for fit)	(50,300) GeV
Top Tagger	> 0.2
B tagging (0 btagged jets)	< Medium WP
Control Trigger	



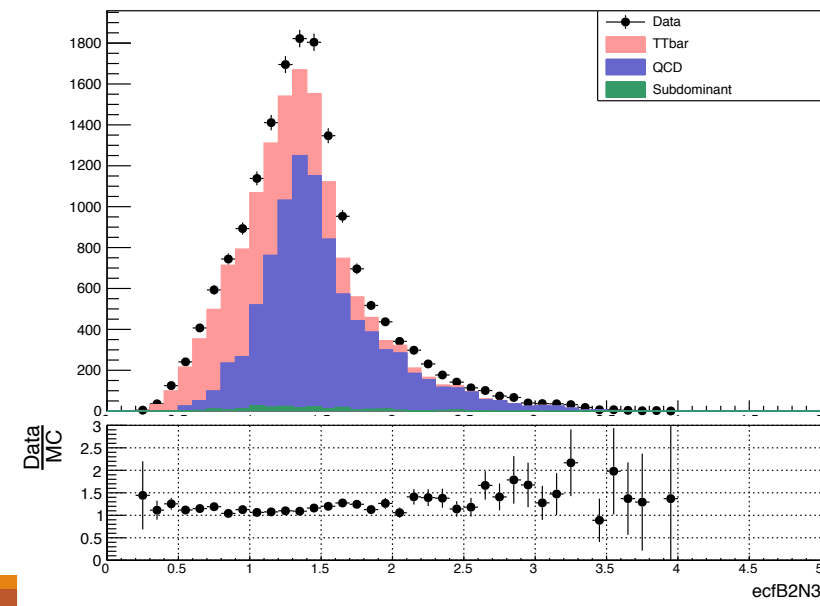
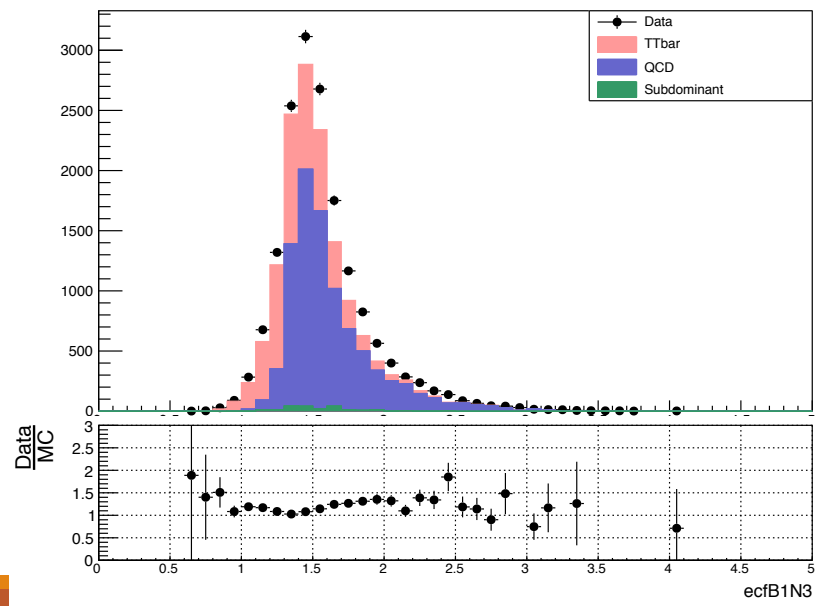
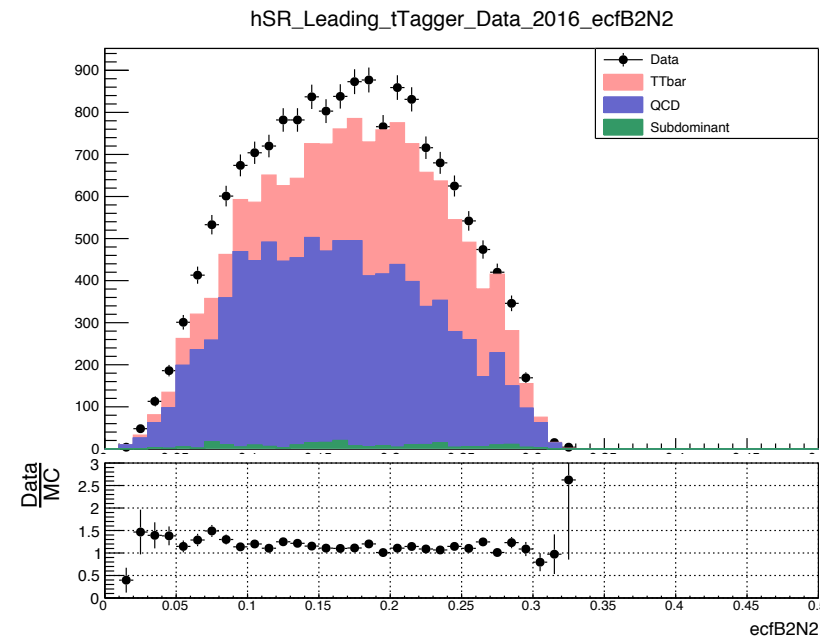
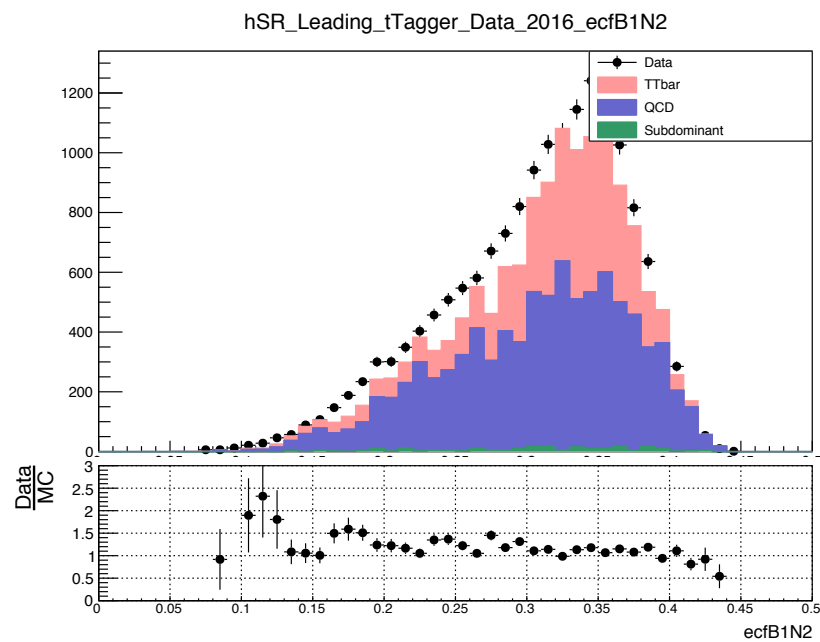
Stack of BDT input variables for leading jet (2016)



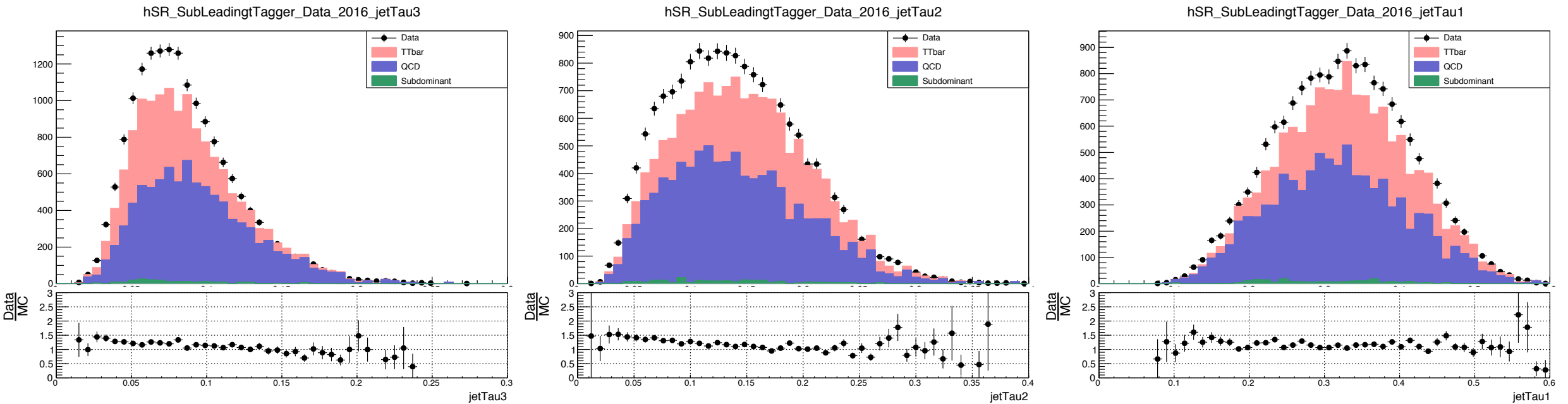
Stack of BDT input variables for leading jet (2016)



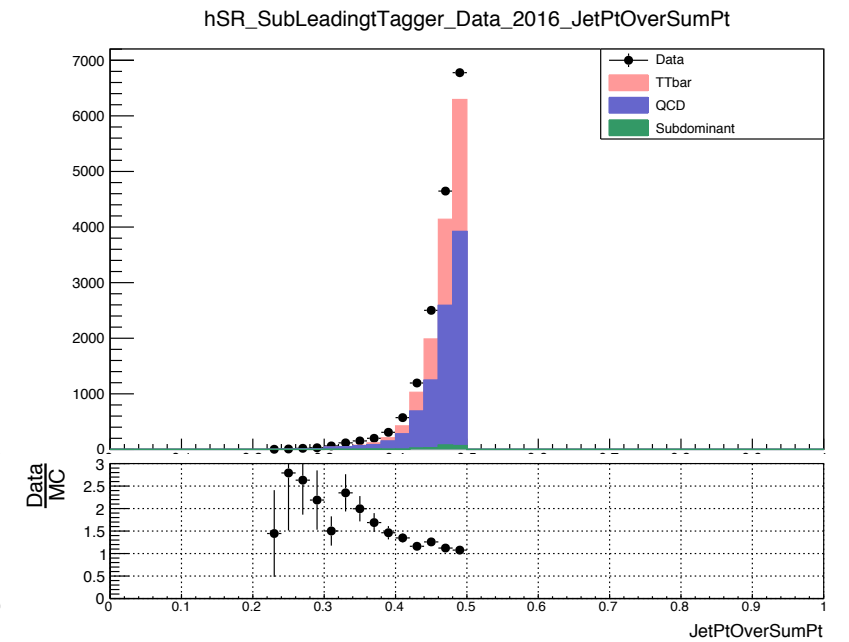
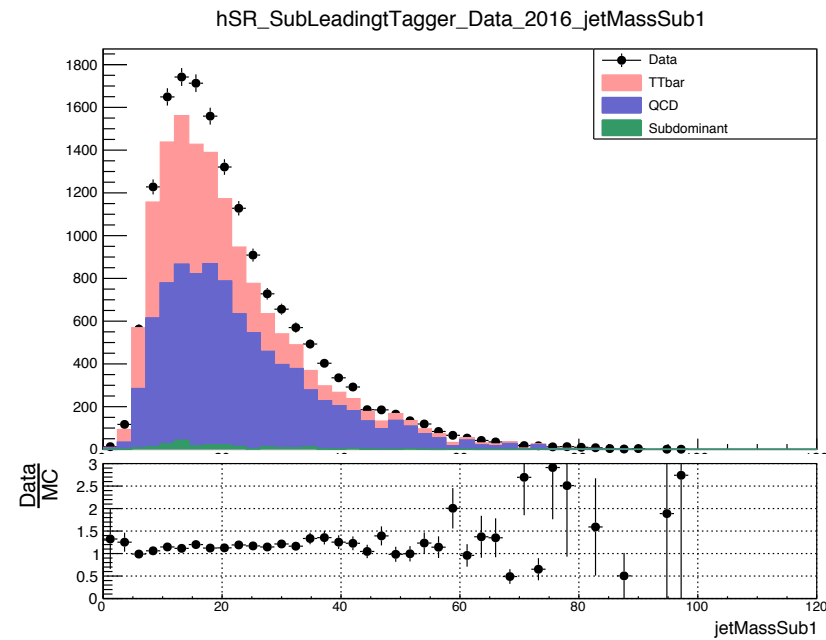
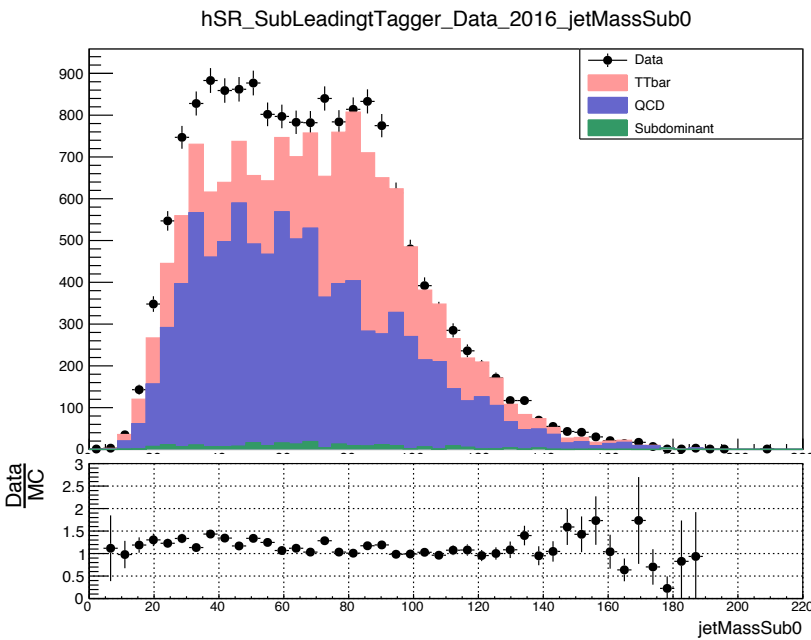
Stack of BDT input variables for leading jet (2016)



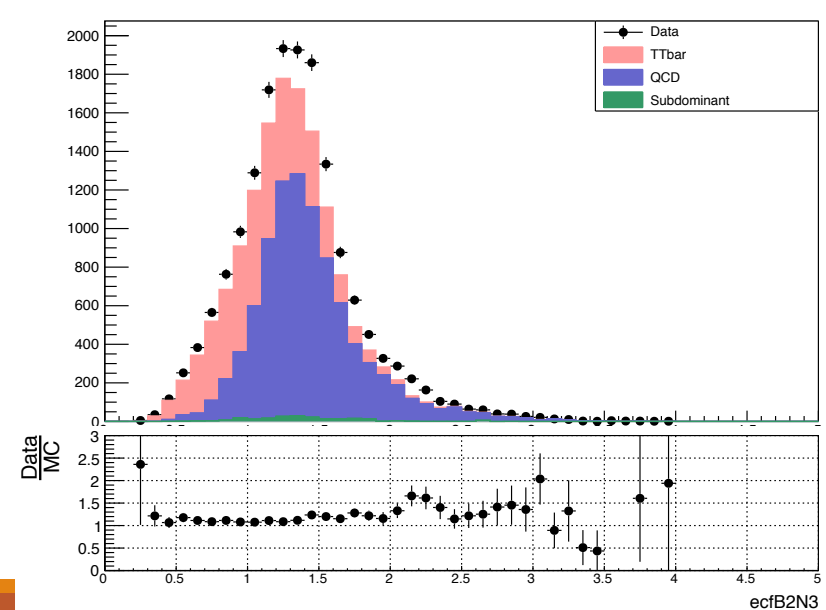
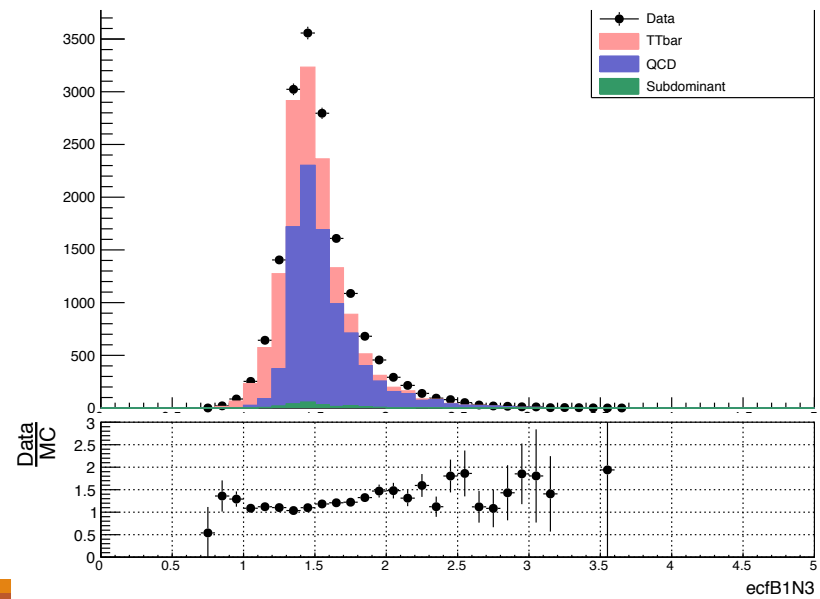
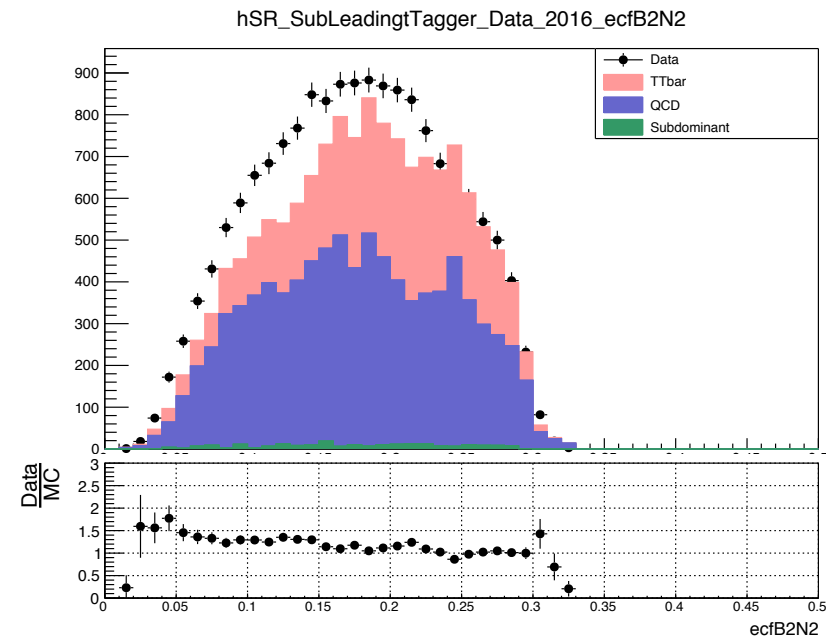
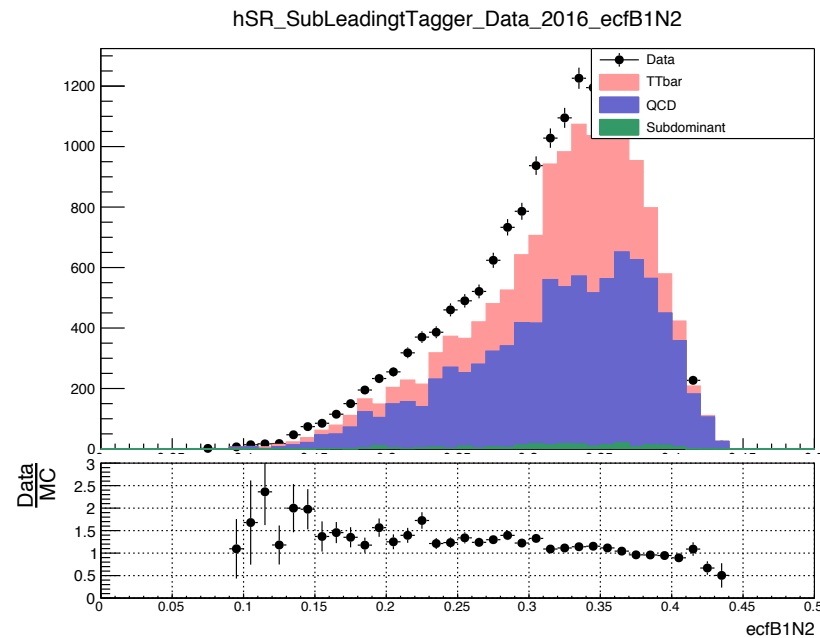
Stack of BDT input variables for subleading jet (2016)



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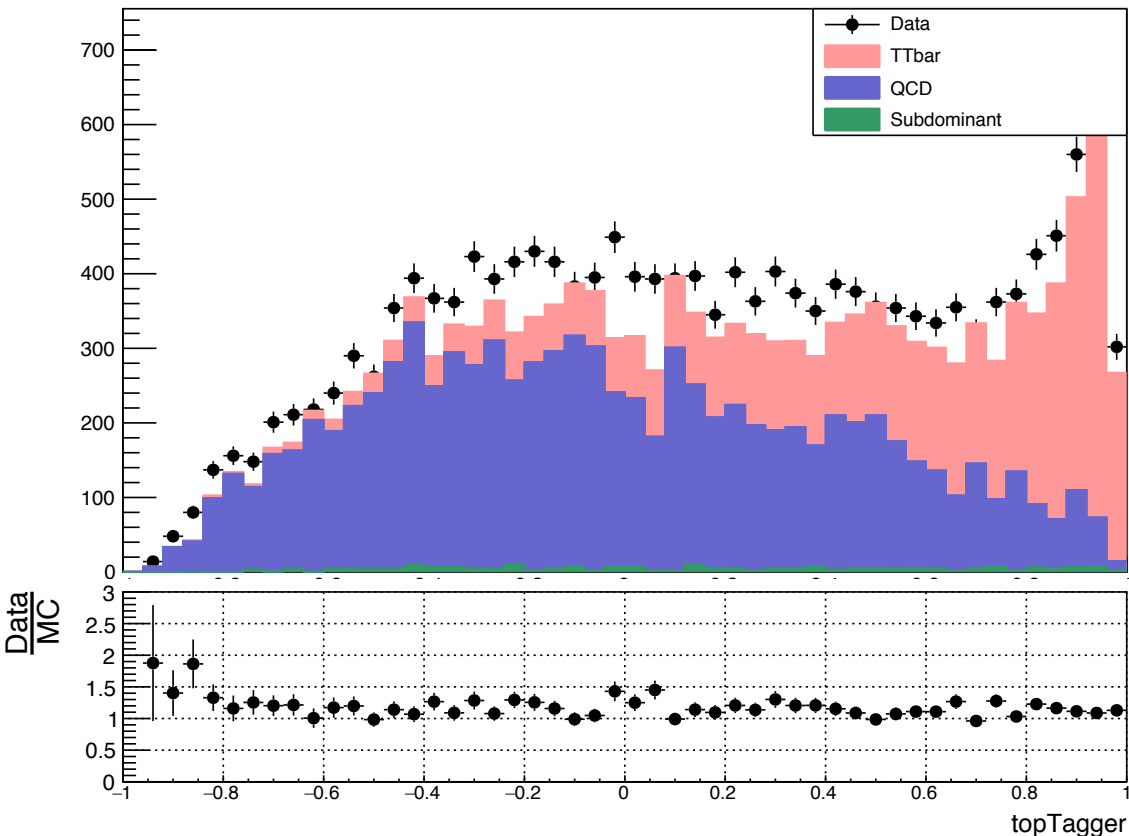
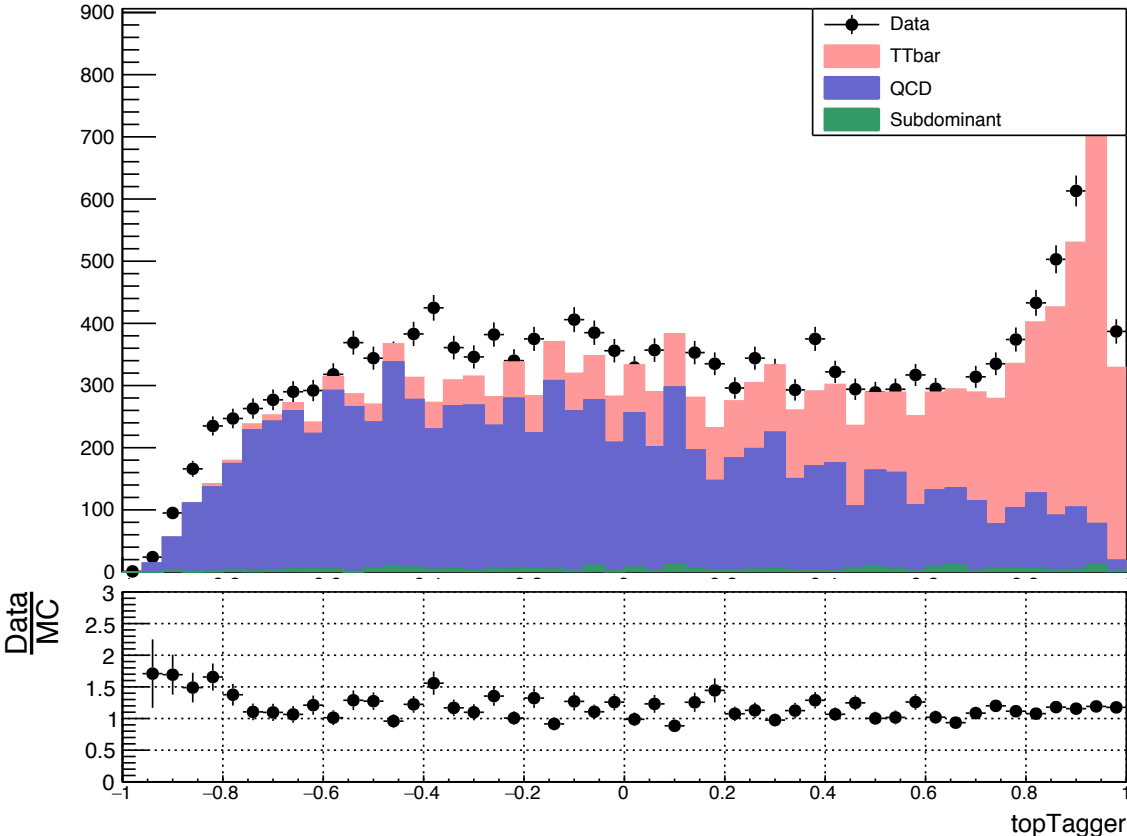
Stack of BDT input variables for leading and subleading jet (2016)

Leading

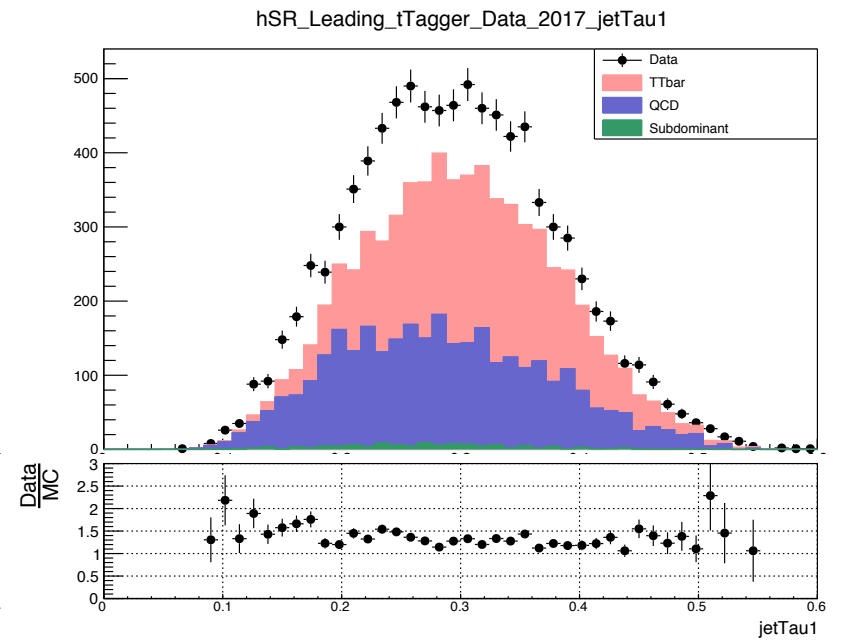
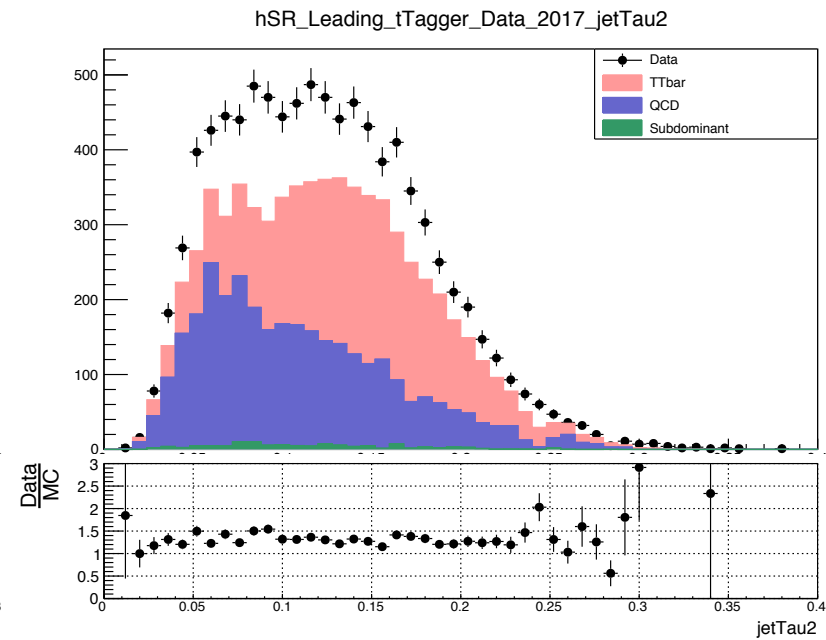
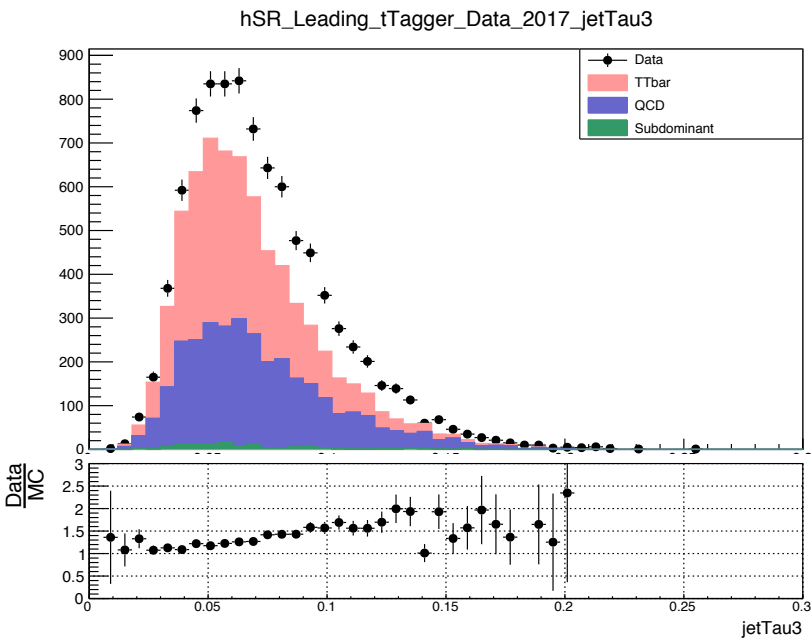
Sub-Leading

hSR_Leading_tTagger_Data_2016_topTagger

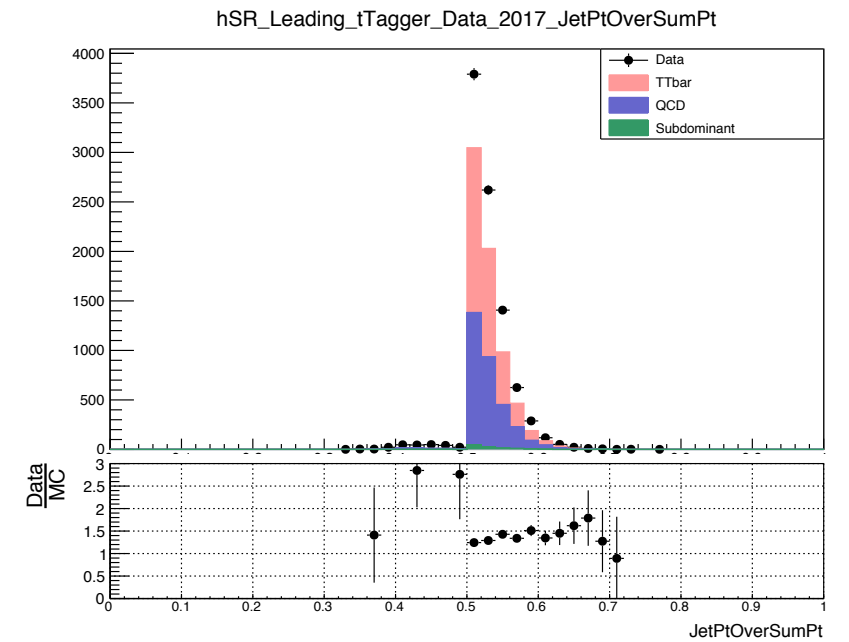
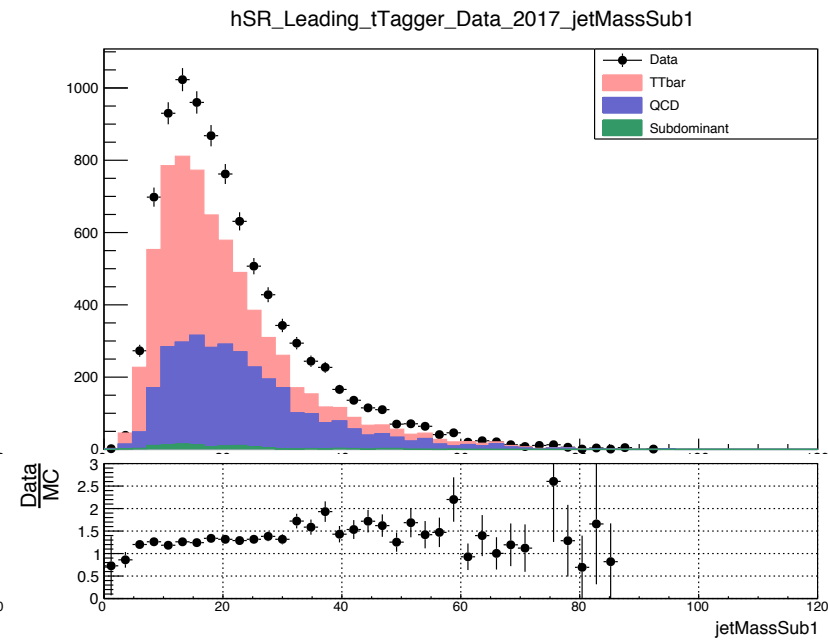
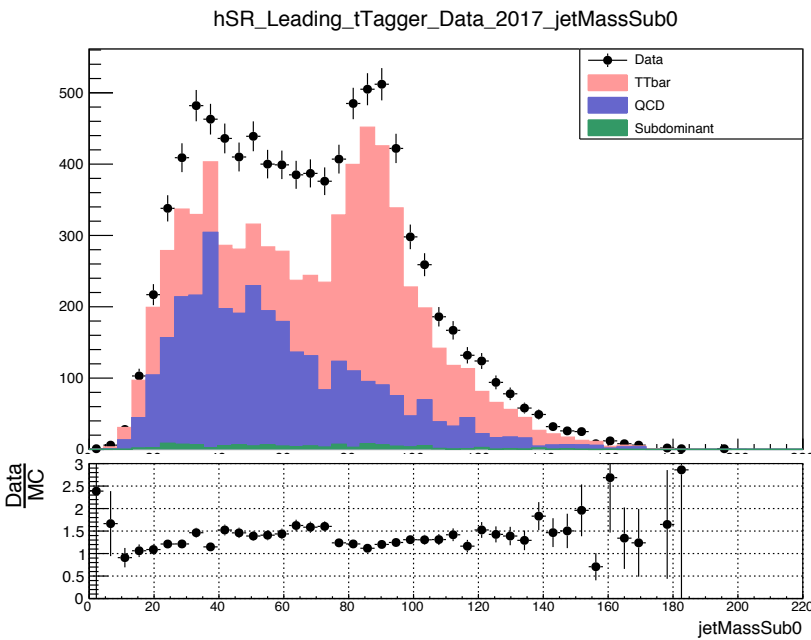
hSR_SubLeadingtTagger_Data_2016_topTagger



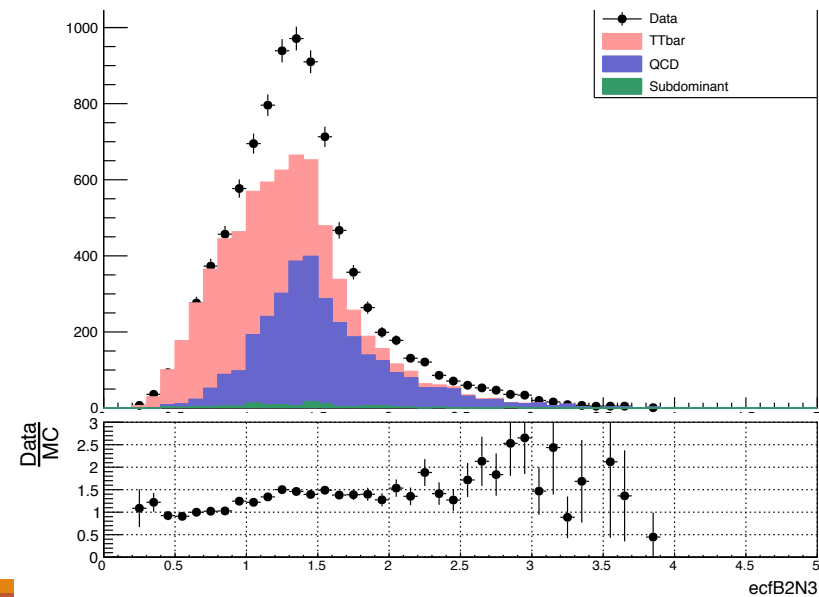
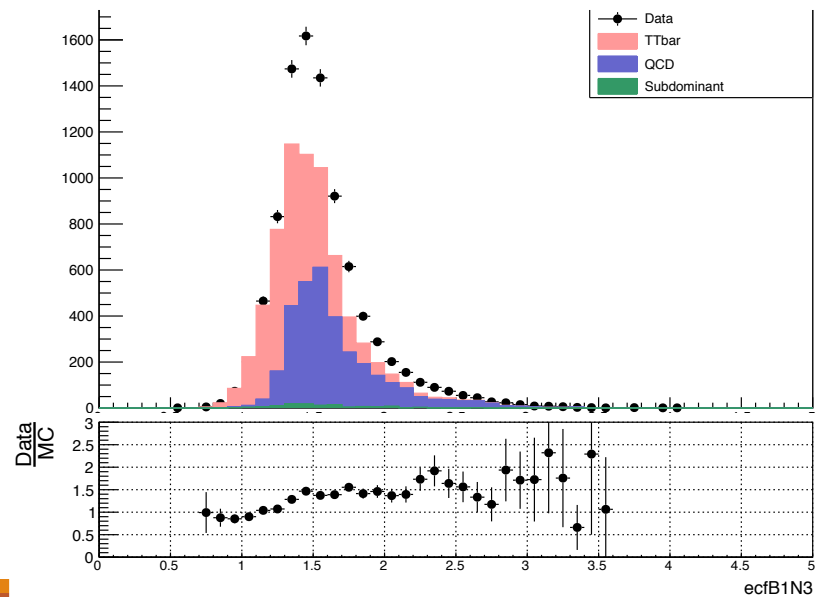
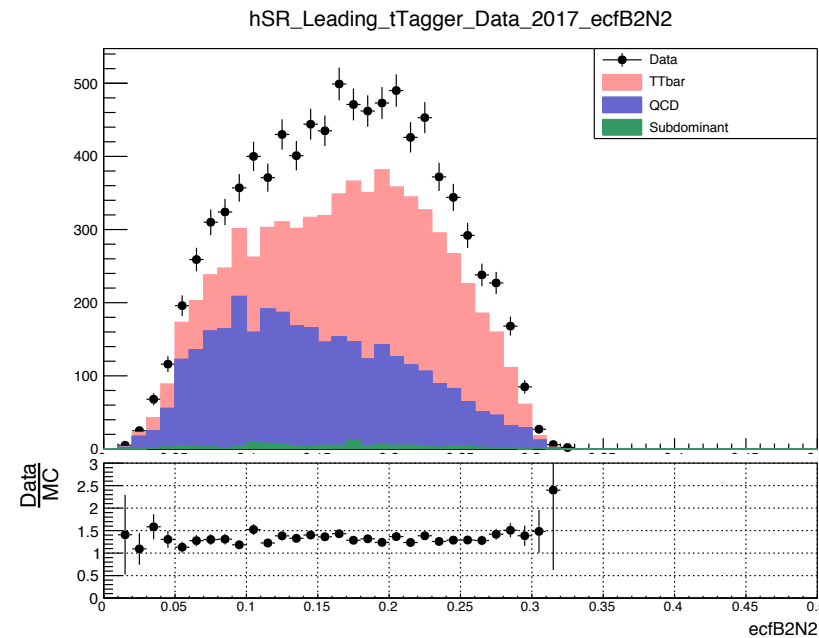
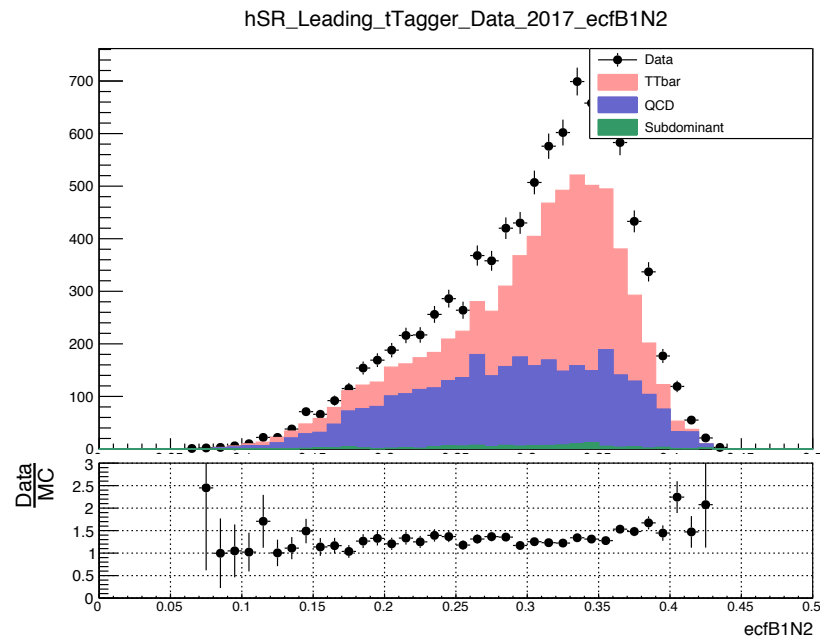
Stack of BDT input variables for leading jet (2017)



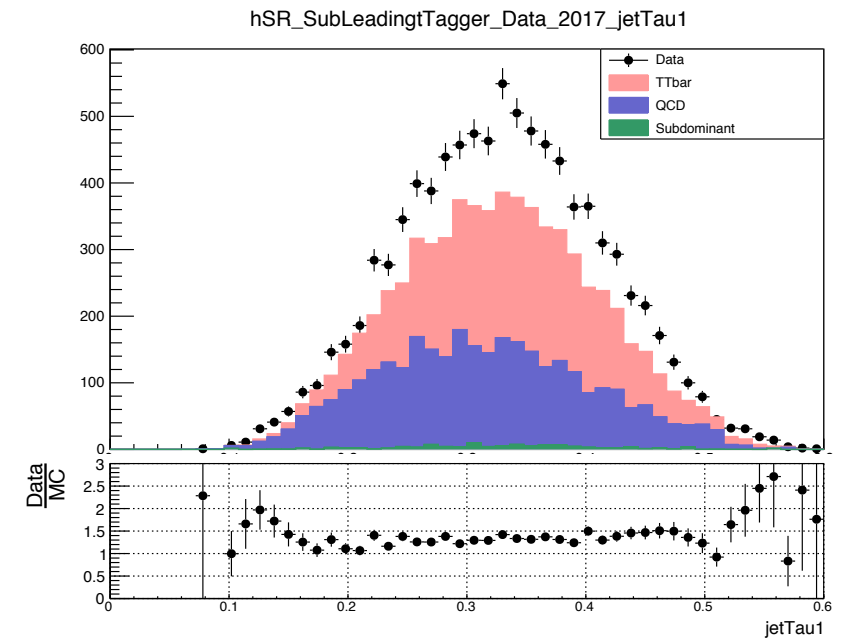
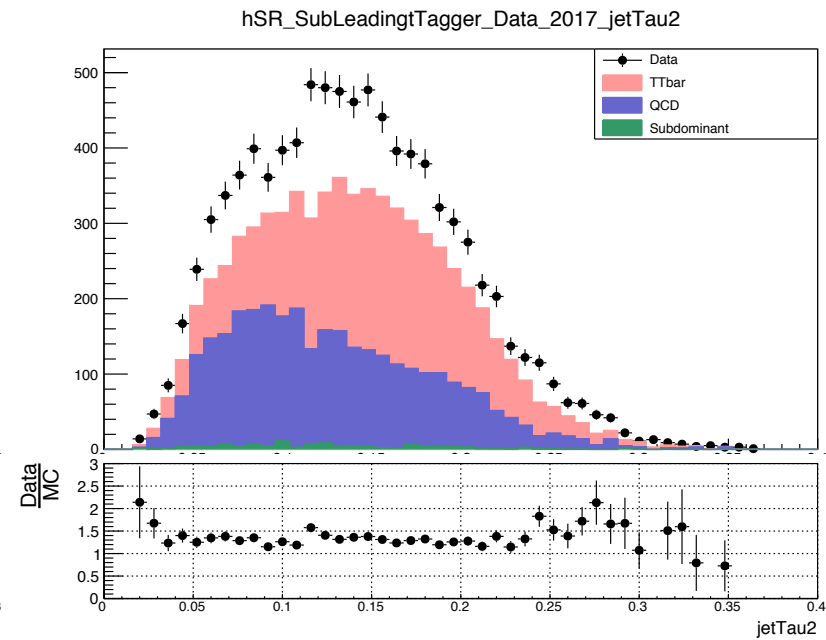
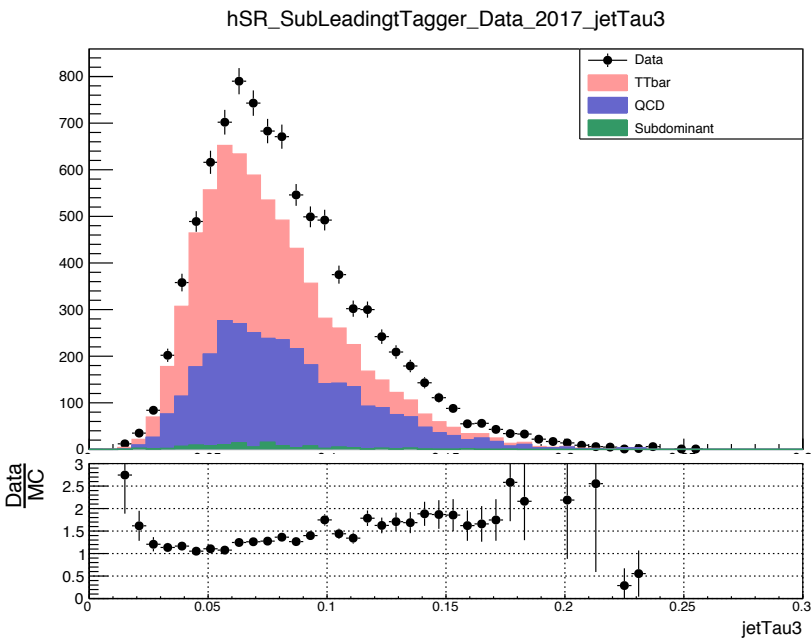
Stack of BDT input variables for leading jet (2017)



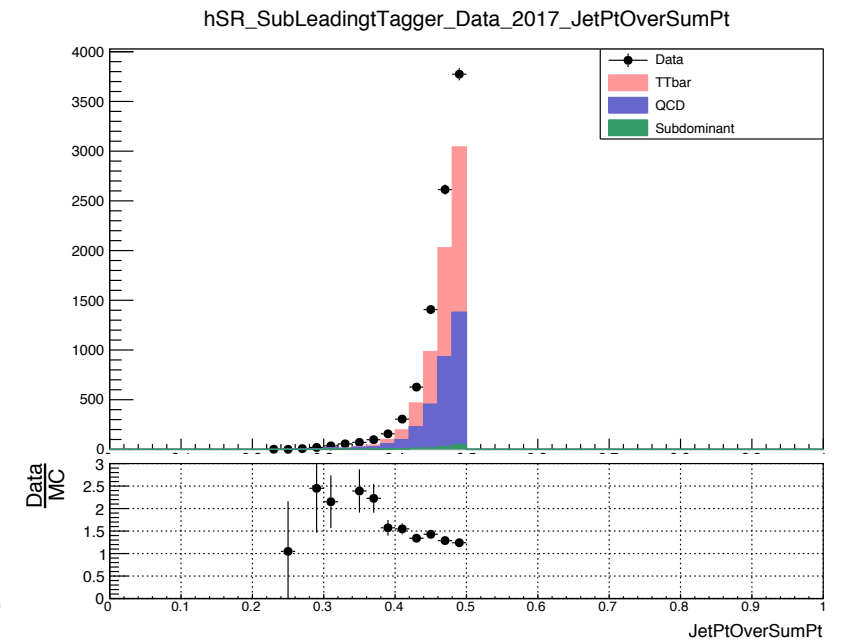
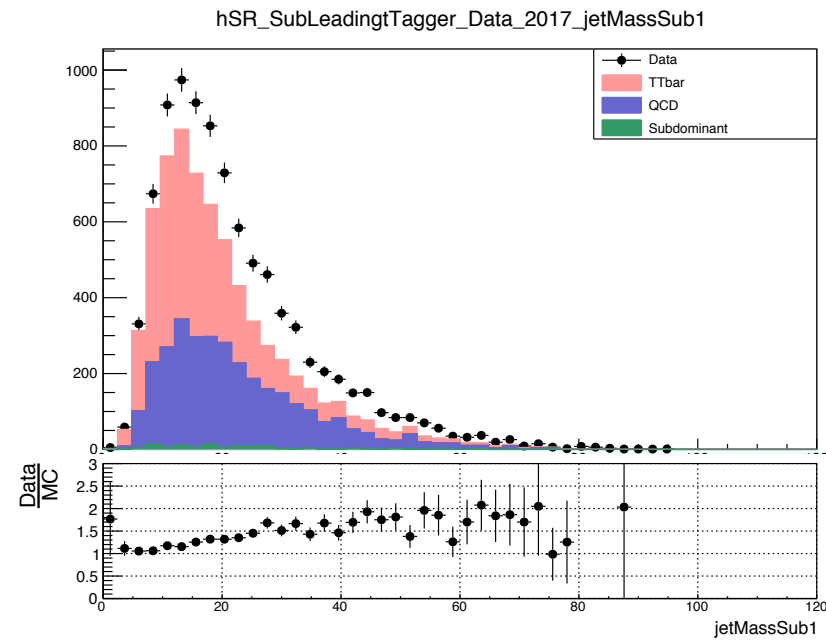
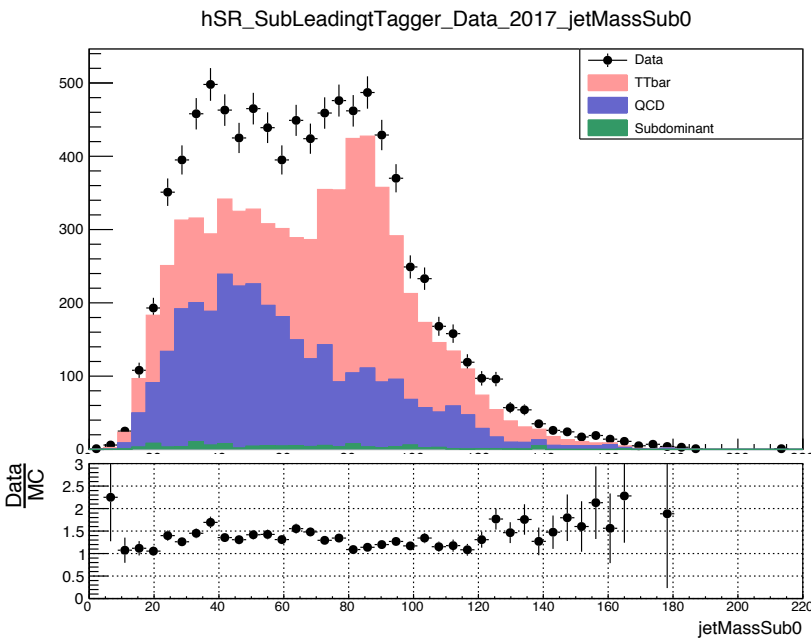
Stack of BDT input variables for leading jet (2017)



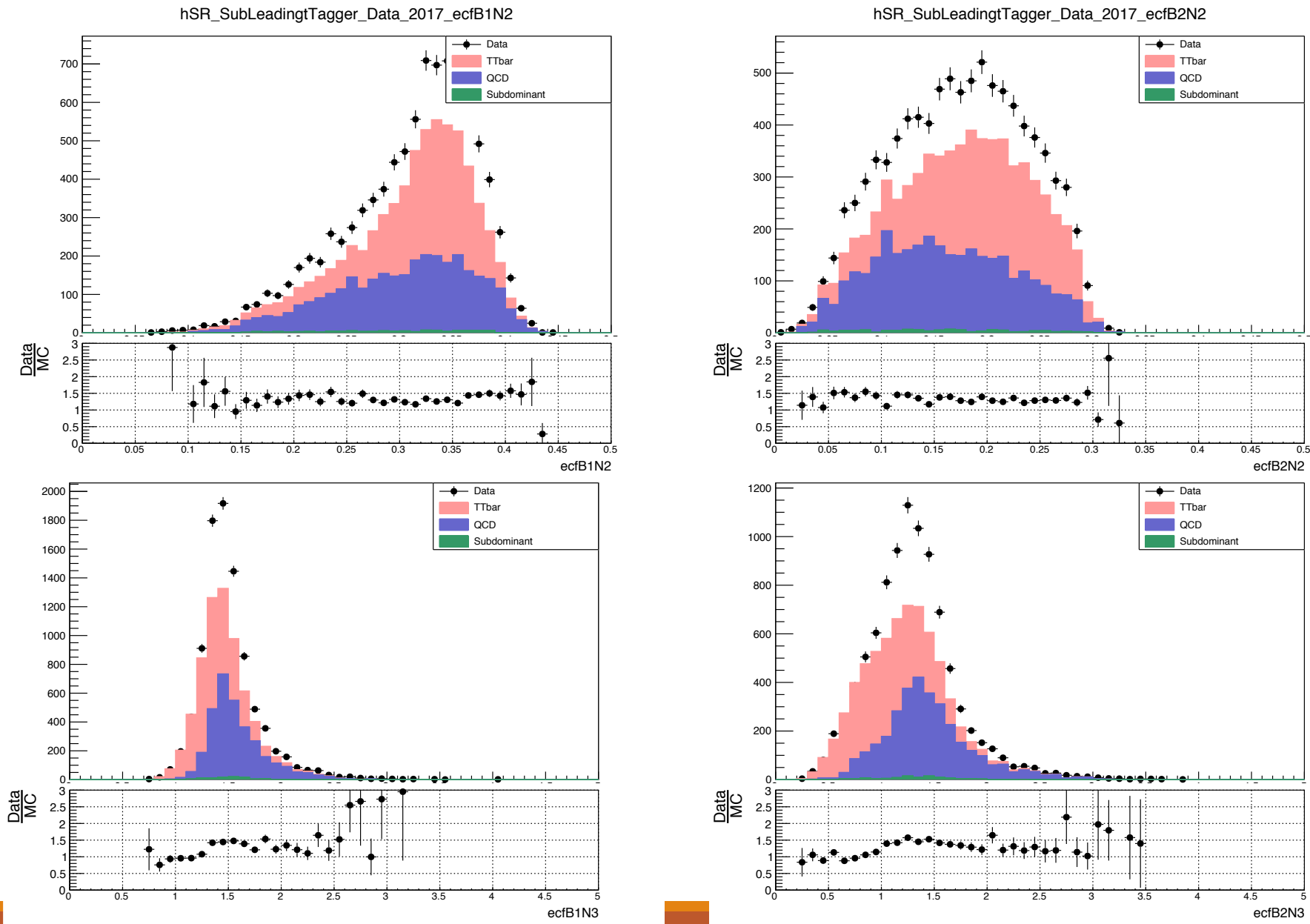
Stack of BDT input variables for subleading jet (2017)



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Stack of BDT input variables for subleading jet (2017)

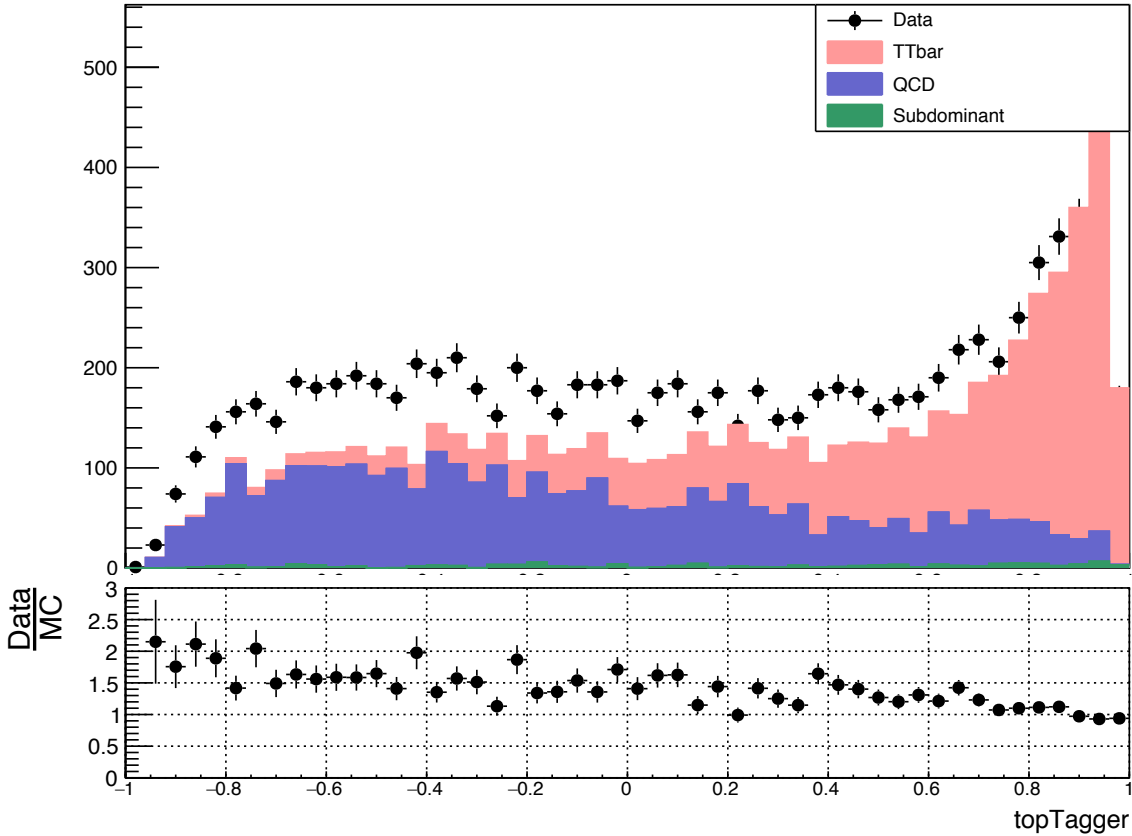


Stack of BDT input variables for leading and subleading jet (2017)

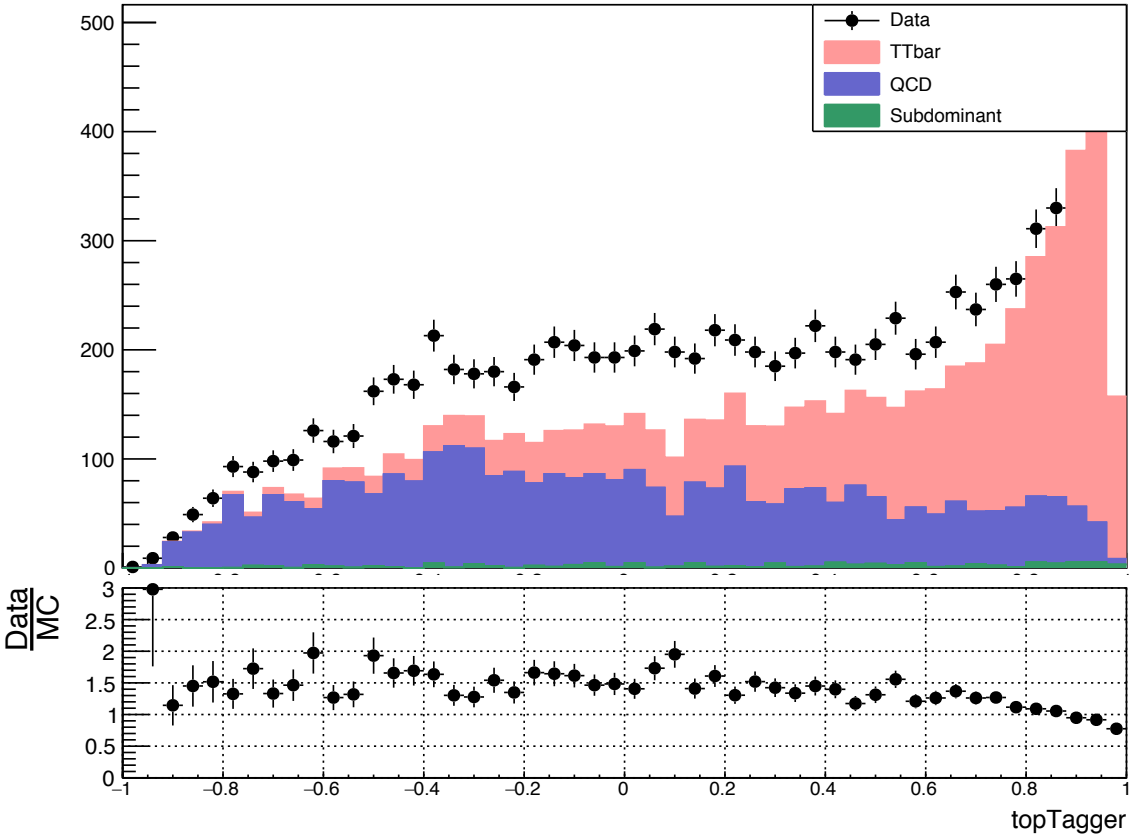
Leading

Sub-Leading

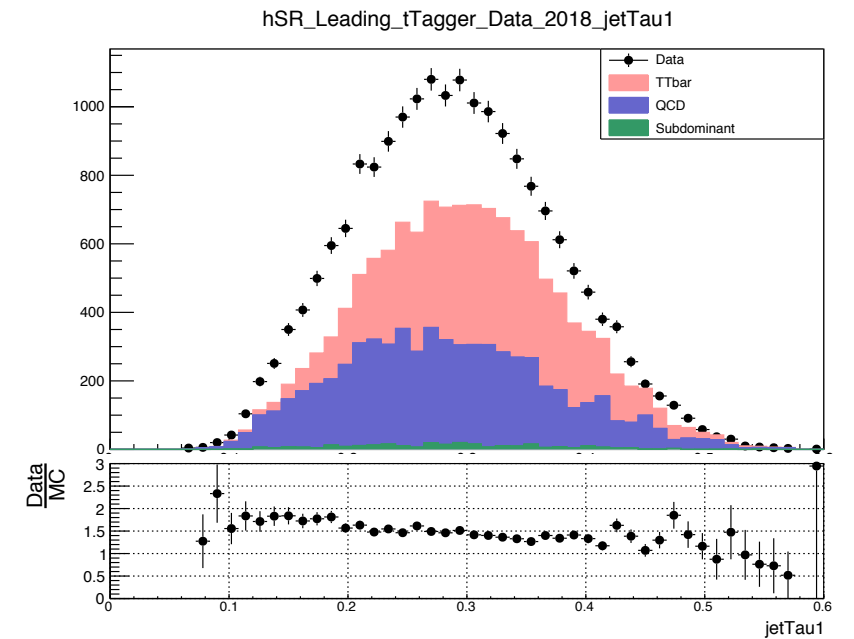
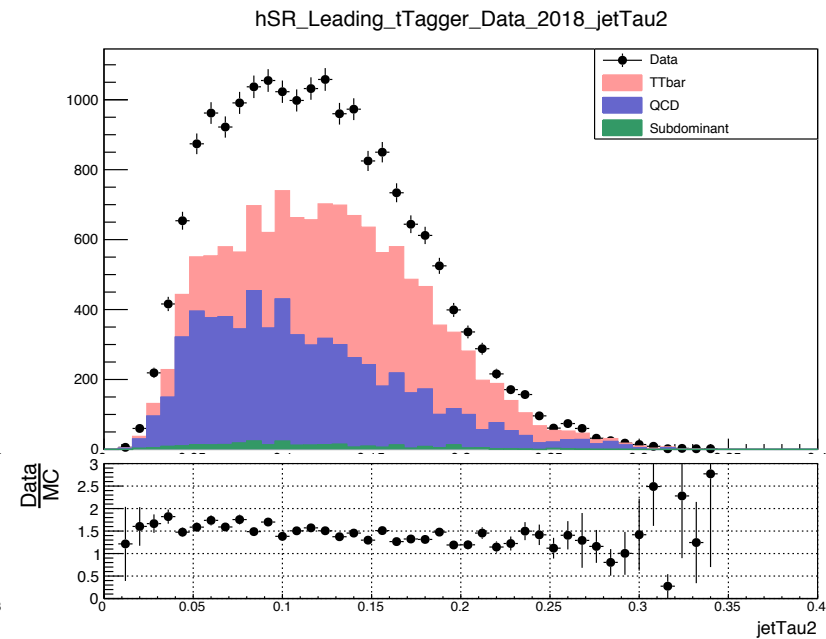
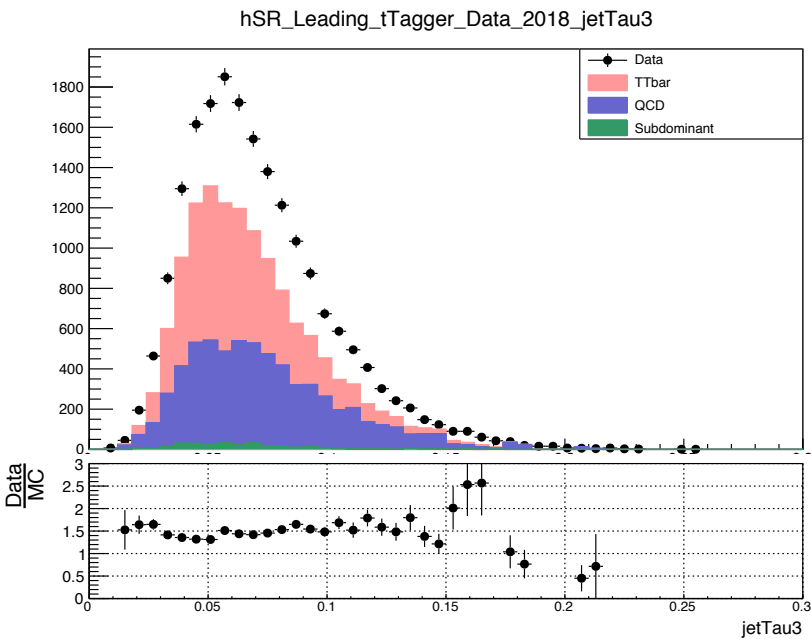
hSR_Leading_tTagger_Data_2017_topTagger



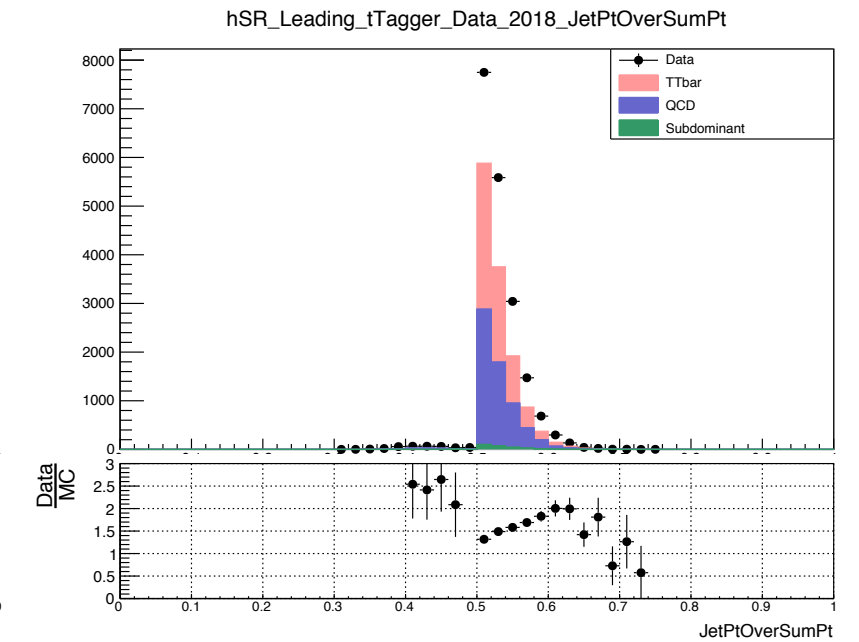
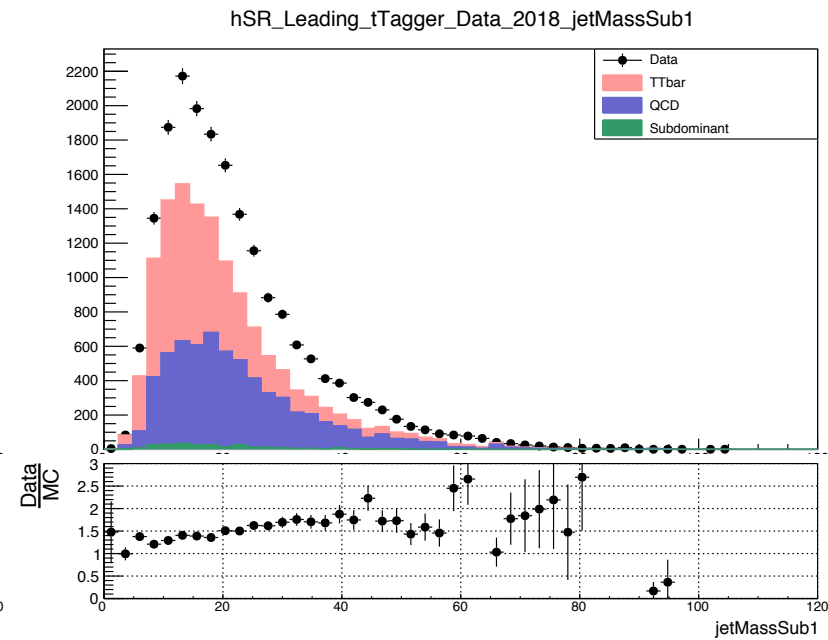
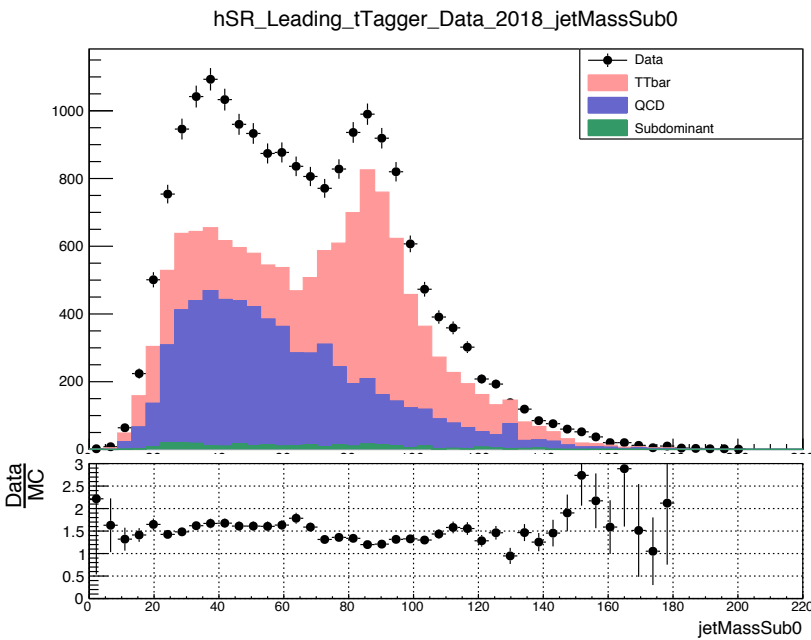
hSR_SubLeadingtTagger_Data_2017_topTagger



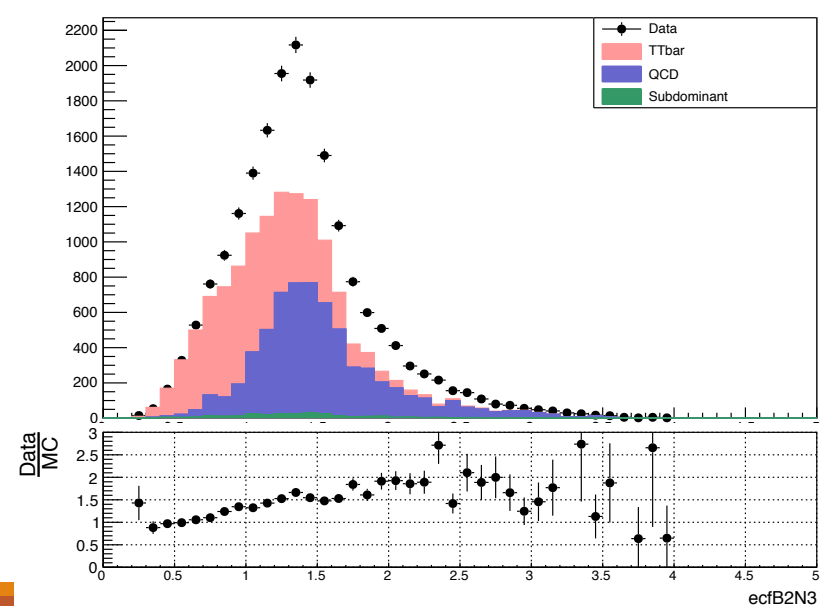
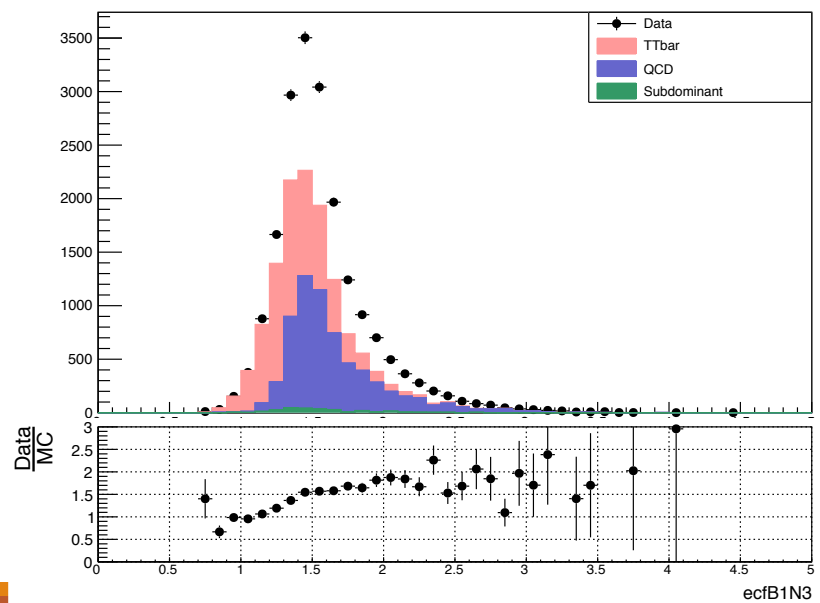
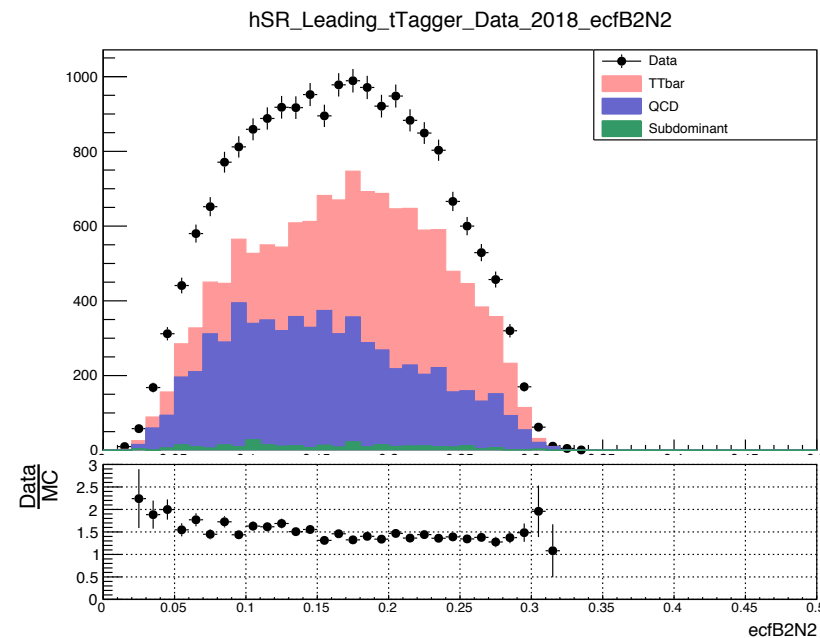
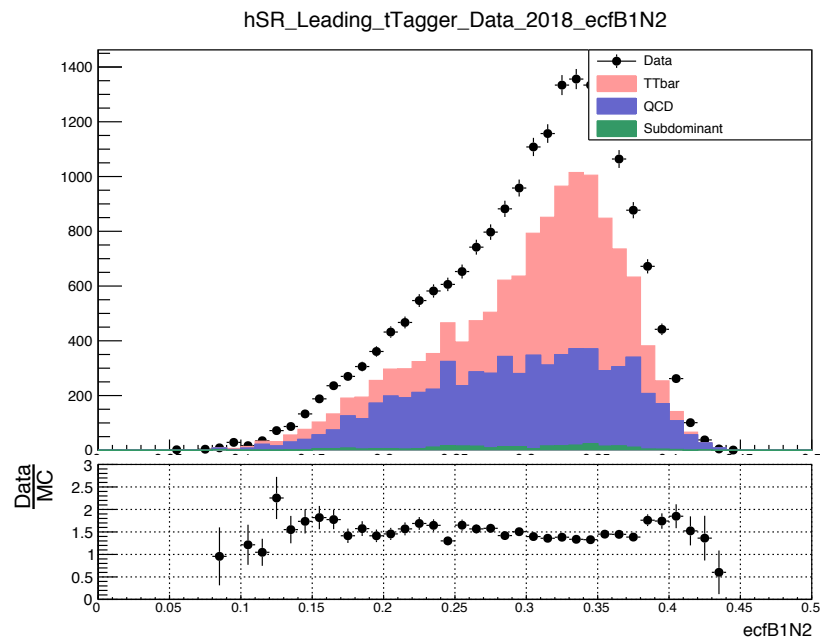
Stack of BDT input variables for leading jet (2018)



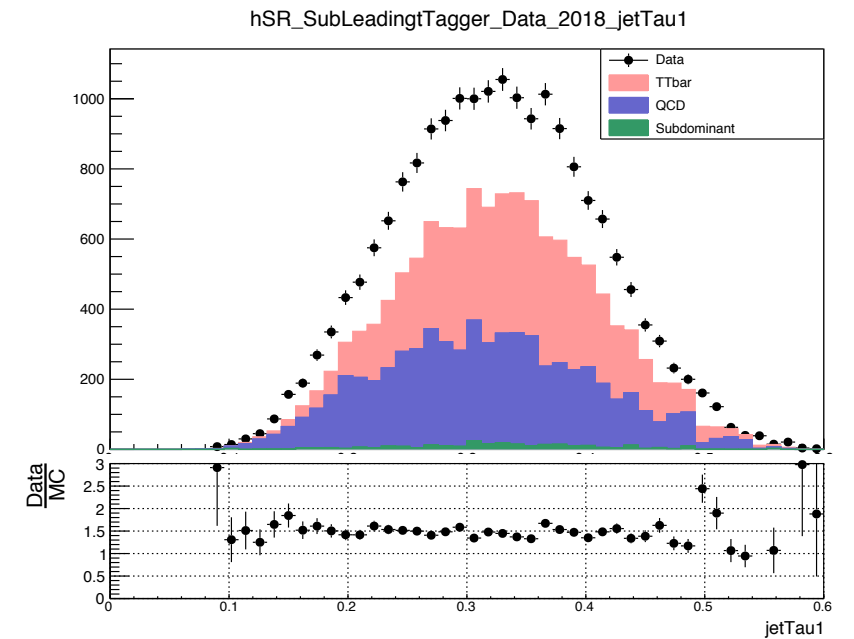
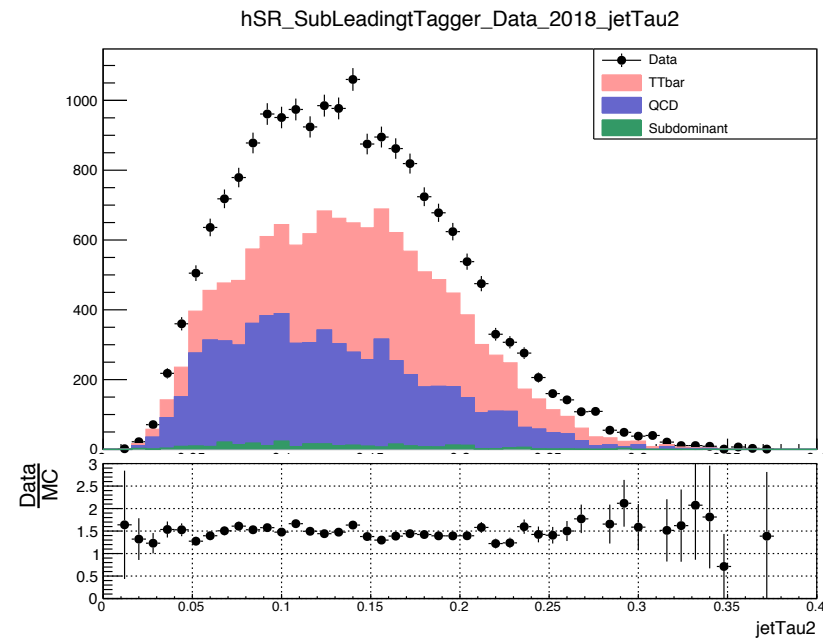
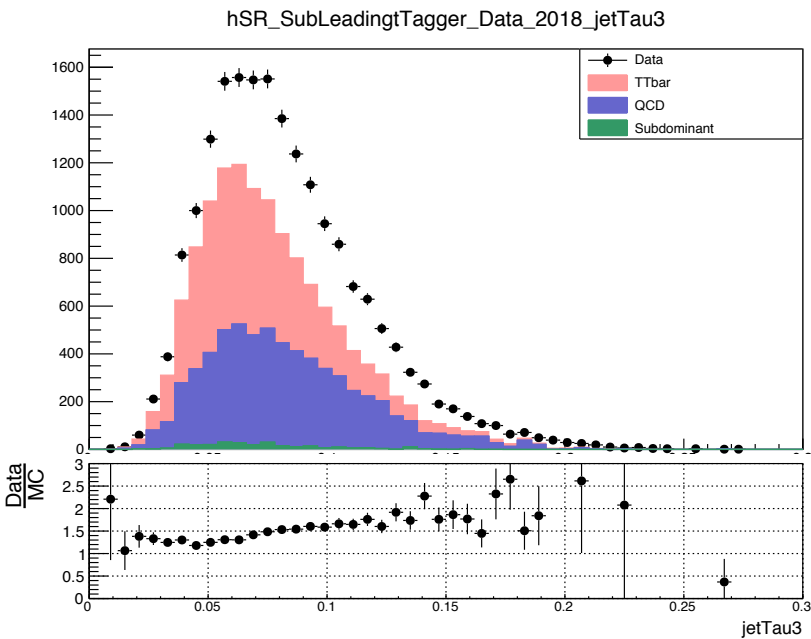
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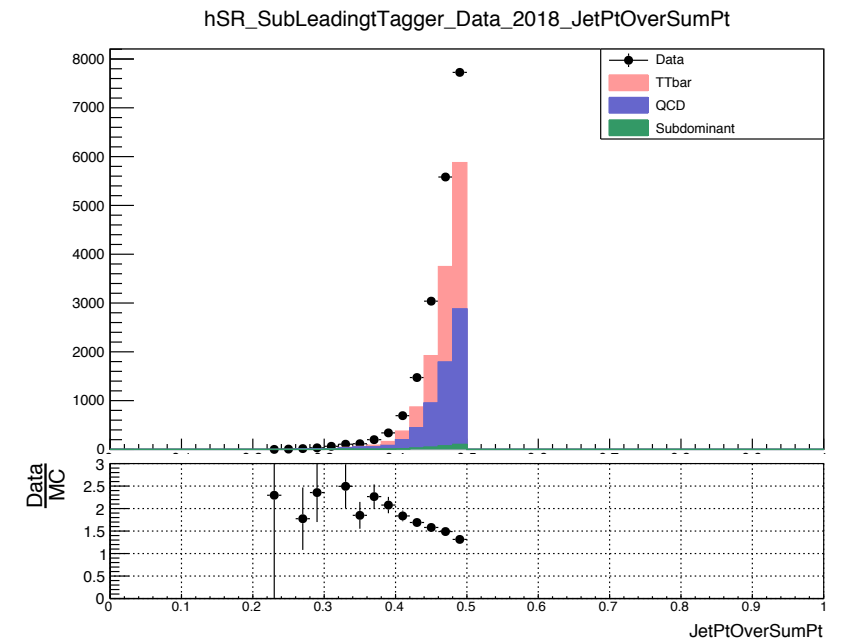
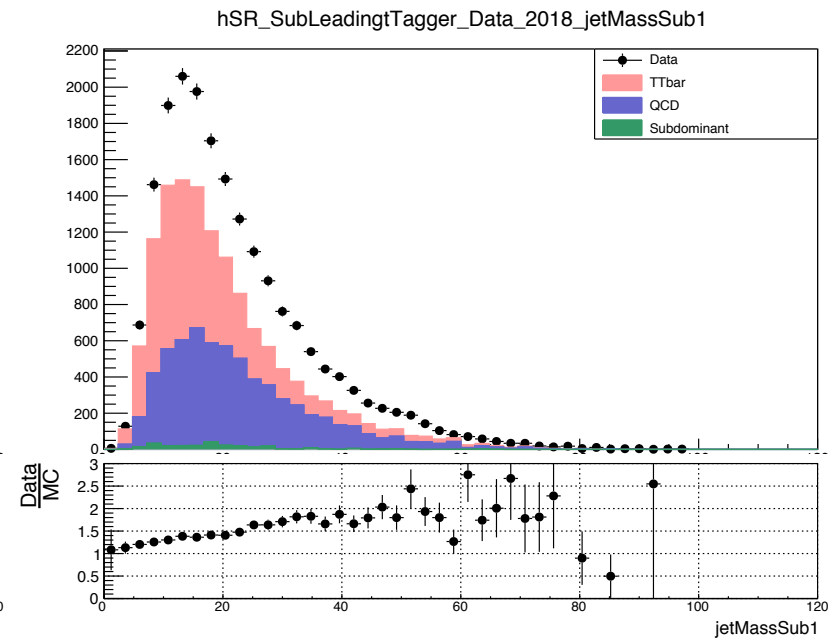
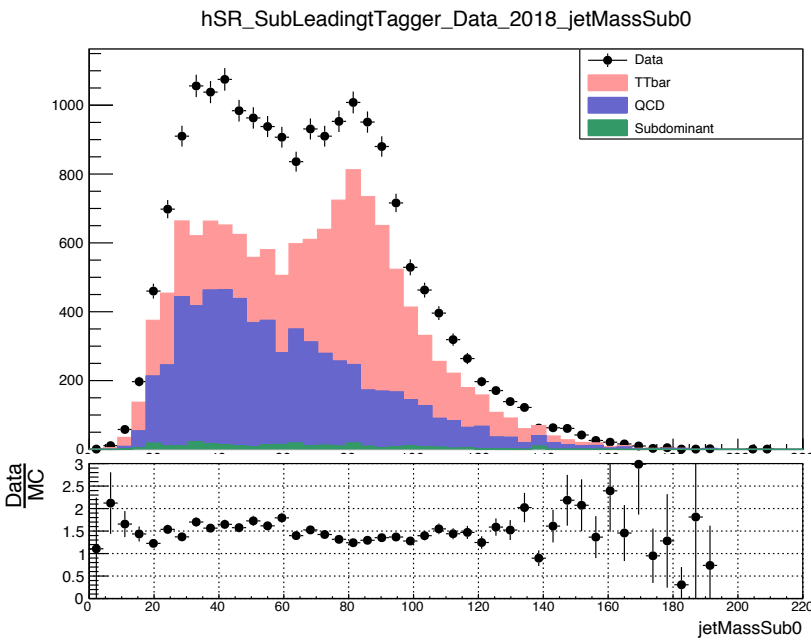
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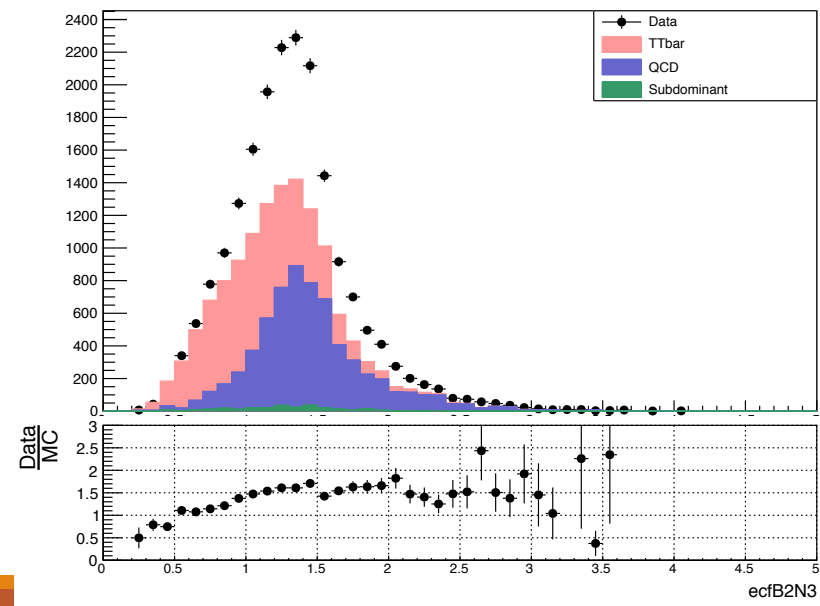
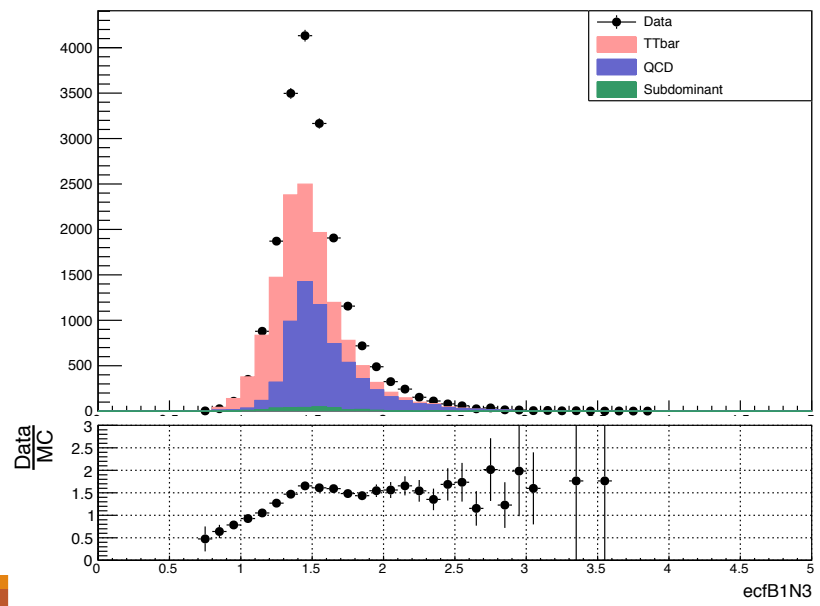
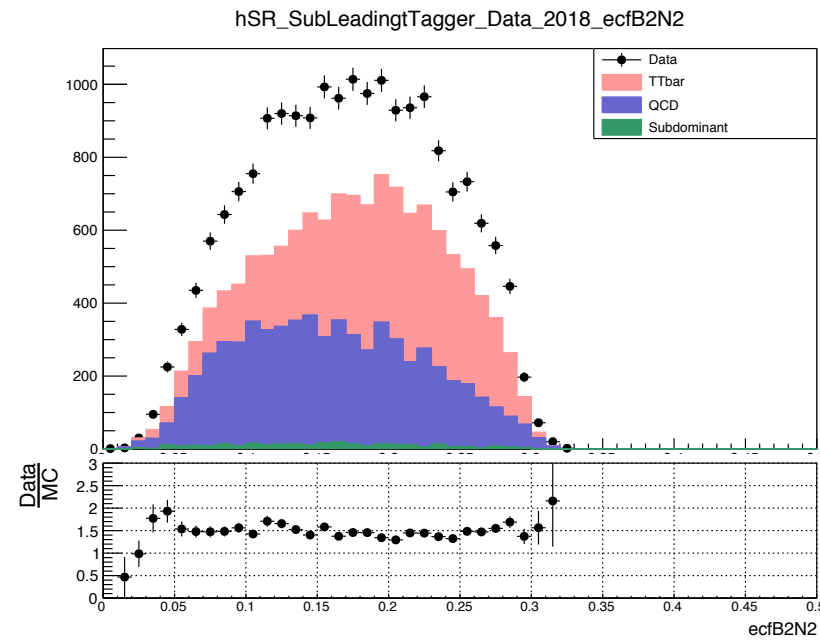
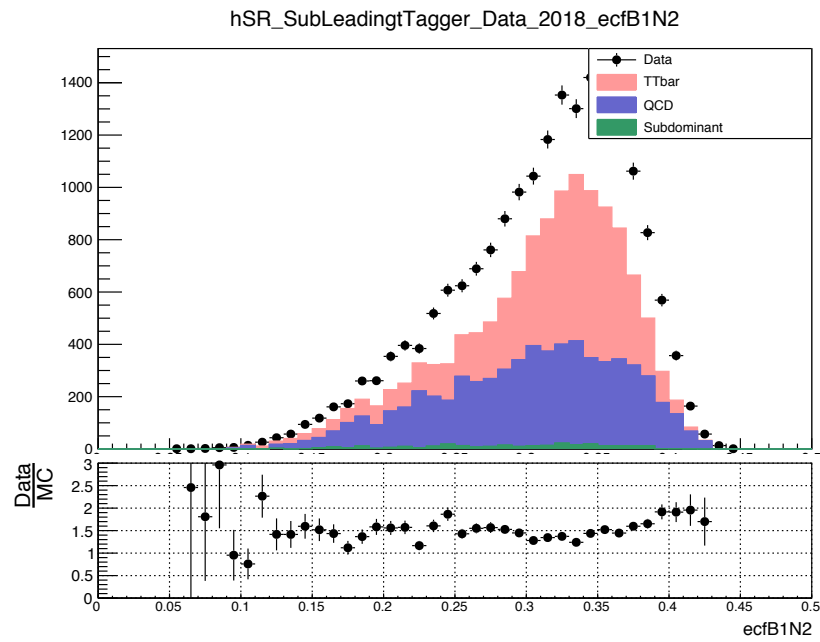
Stack of BDT input variables for subleading jet (2018)



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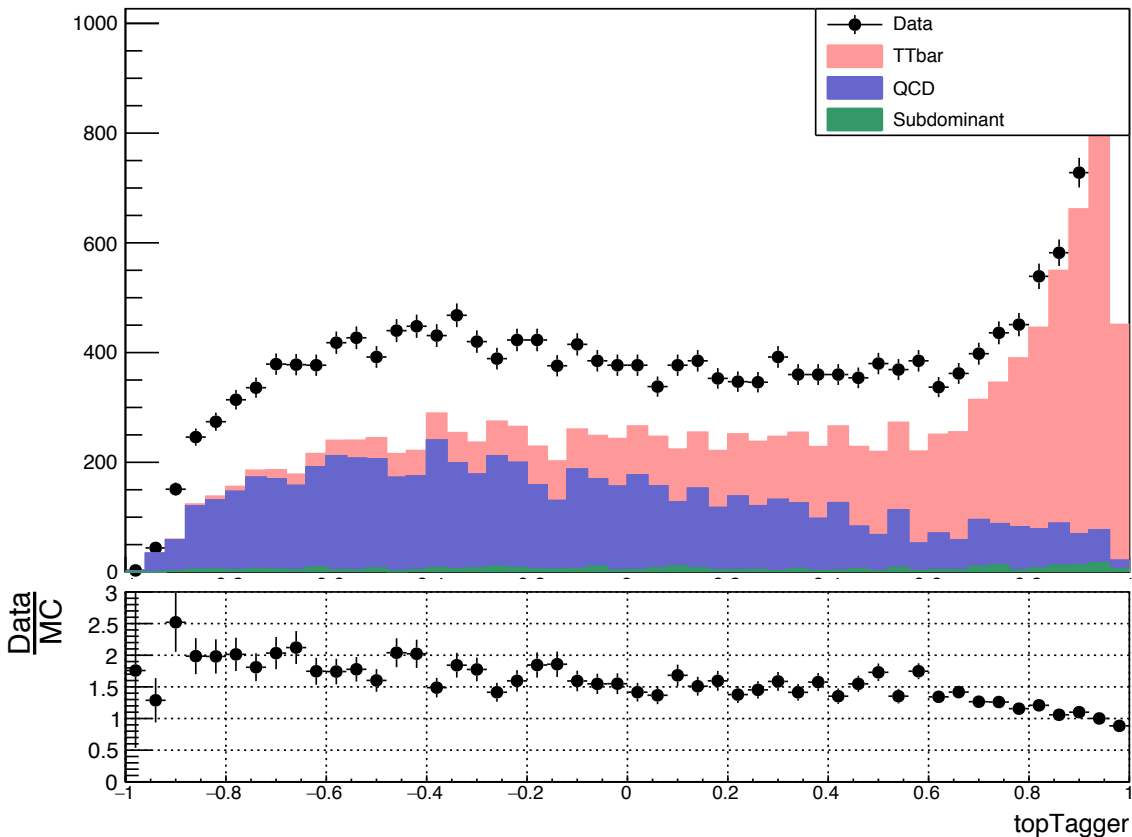
Stack of BDT input variables for subleading jet (2018)



Stack of BDT input variables for leading and subleading jet (2018)

Leading

hSR_Leading_tTagger_Data_2018_topTagger



Sub-Leading

hSR_SubLeadingtTagger_Data_2018_topTagger

