Finalizing BDT Input and Training in 1tau0l

Search for Four top in Tau Final States

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[1]IHEP

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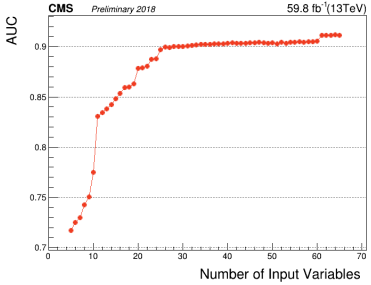
Outline

BDT for 1tau0l

- Training 2017 and 2018 samples
- 2016 and 2017 application with 2018 training
- 2018 application with 2017 training
- MC correction, careful
  - Faketau from data driven
  - Other MC samples requiring gen tau and b-tag shape correction

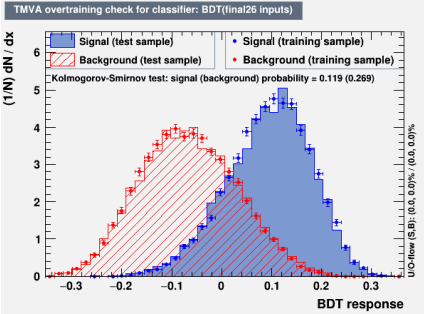
AUC Vs input variables

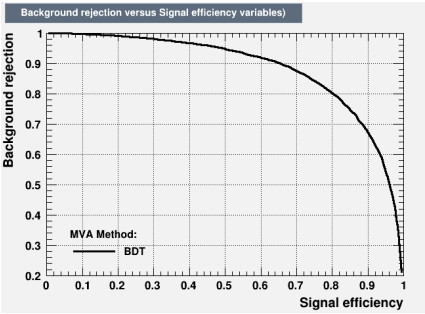


jets_num	
jets_bScore	
jets_centrality	
jets_rationHT_4toRest	
jets_minDeltaR	
jets_HTDivideMET	
jets_1btag	
jets_8btag	
jets_4btag	
jets_2btag	
jets_3btag	
jets_7btag	
jets_5btag	
jets_6btag	
jets_7pt	
bjetsM_invariantMass	
bjetsM_2MET_stransMass	
bjetsM_minDeltaR	
bjetsT_minDeltaR	
bjetsT_HT	
bjetsT_MHT	
tausF_1jetEtaAbs	
tausF_1pt	
tausF_1Met_transMass	
tausF_invariantMass	
MET_pt	

- Take the variables in which there's jump in AUC curve
- 25 variable: the one jump in the end

Training performance with the 26 variables





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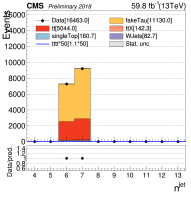

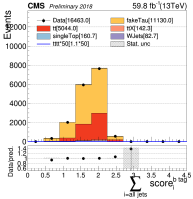

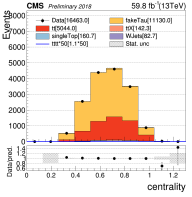

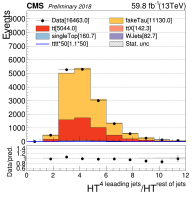

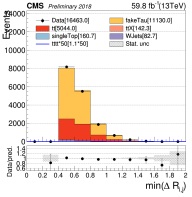

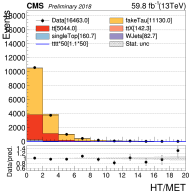

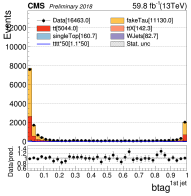

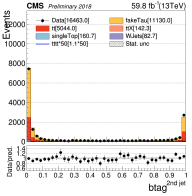

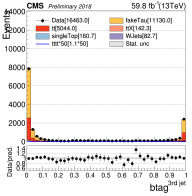

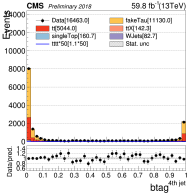

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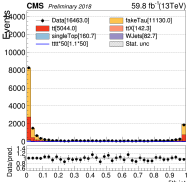

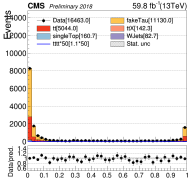

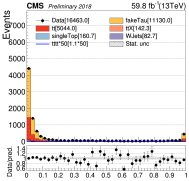

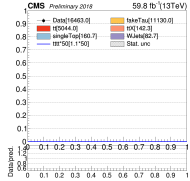

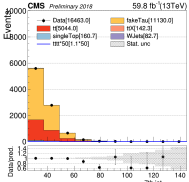

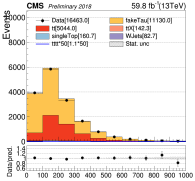

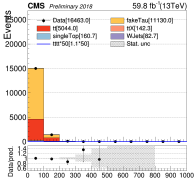

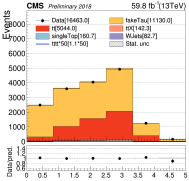

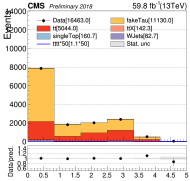

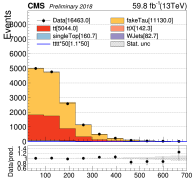

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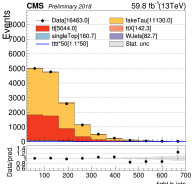

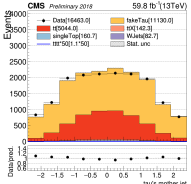

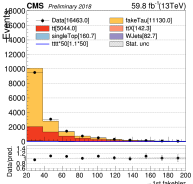

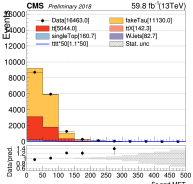

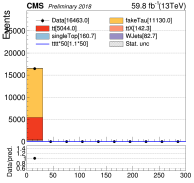

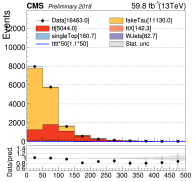

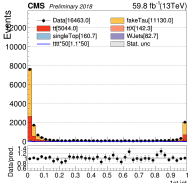

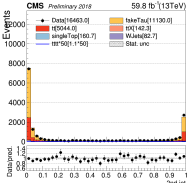

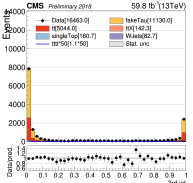

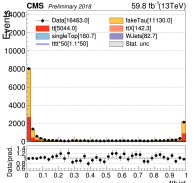

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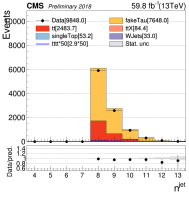

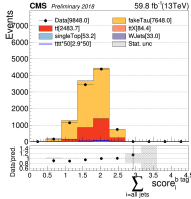

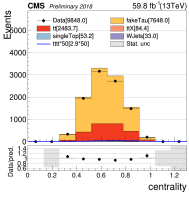

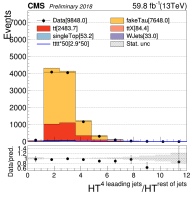

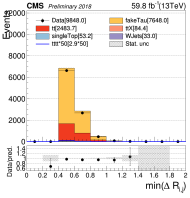

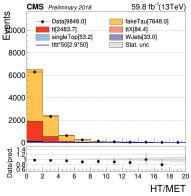

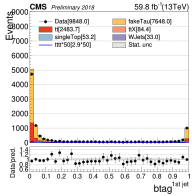

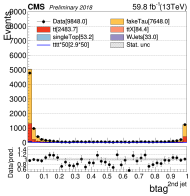

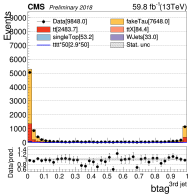

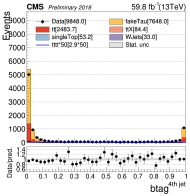

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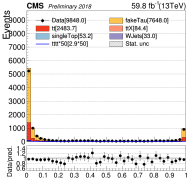

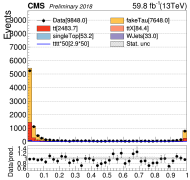

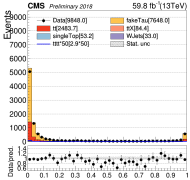

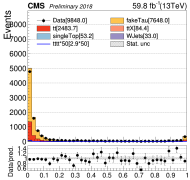

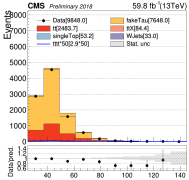

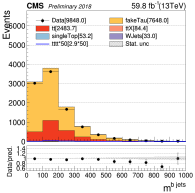

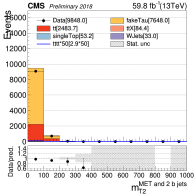

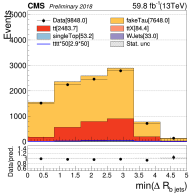

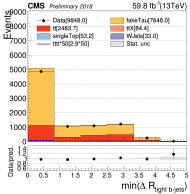

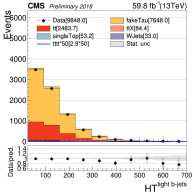

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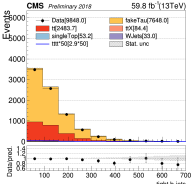

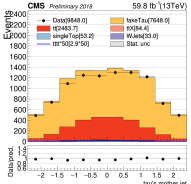

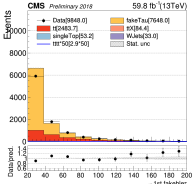

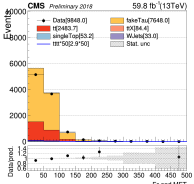

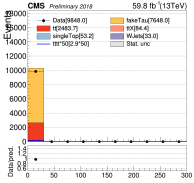

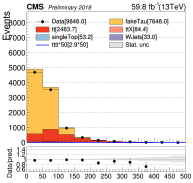

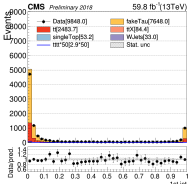

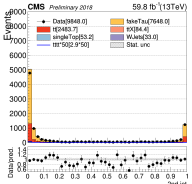

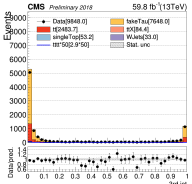

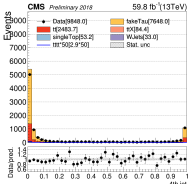

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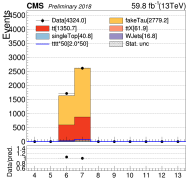

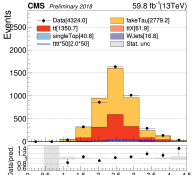

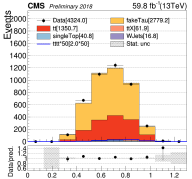

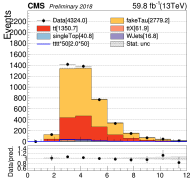

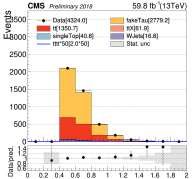

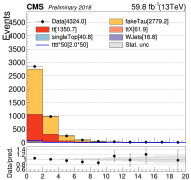

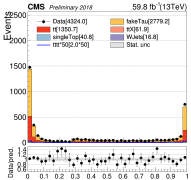

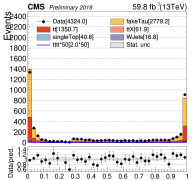

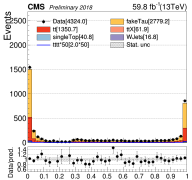

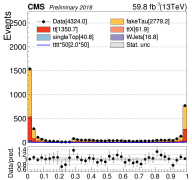

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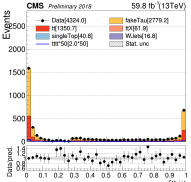

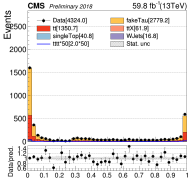

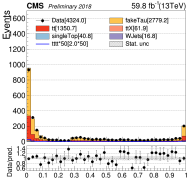

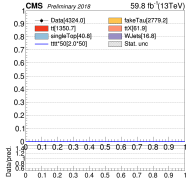

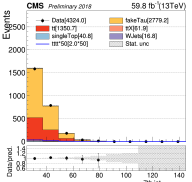

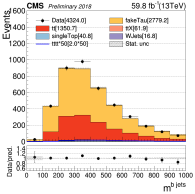

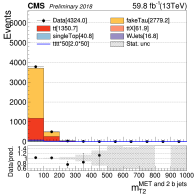

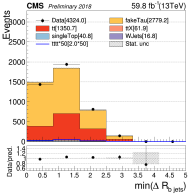

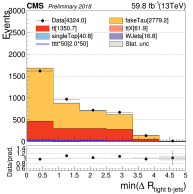

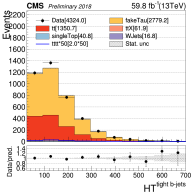

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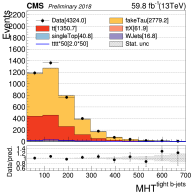

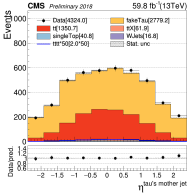

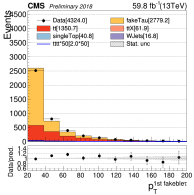

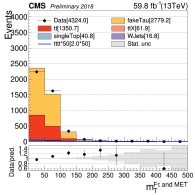

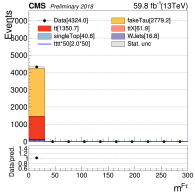

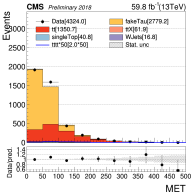

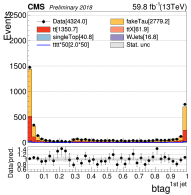

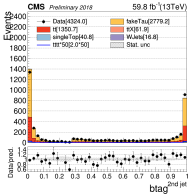

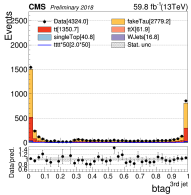

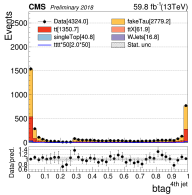

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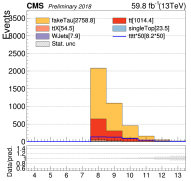

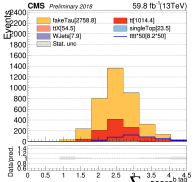

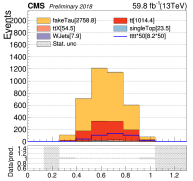

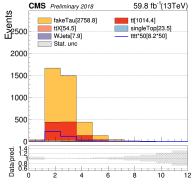

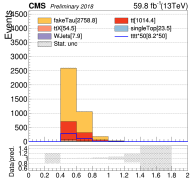

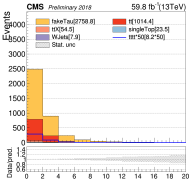

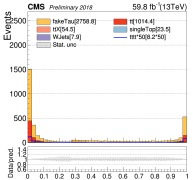

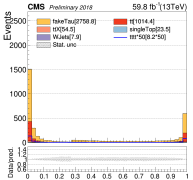

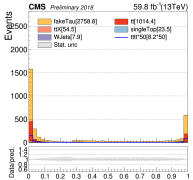

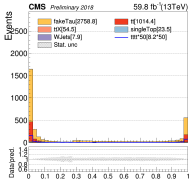

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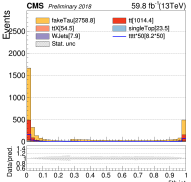
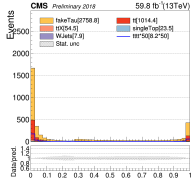
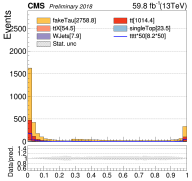
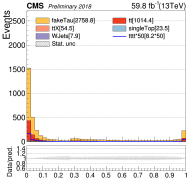
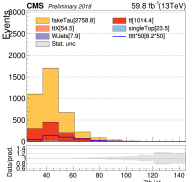
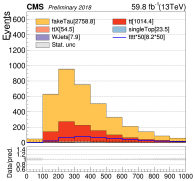


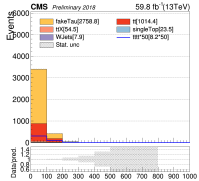


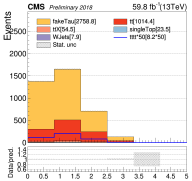


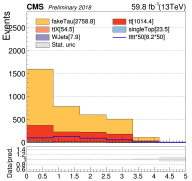


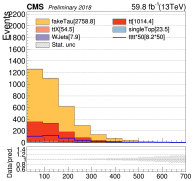




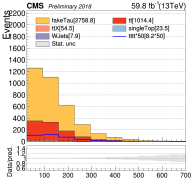


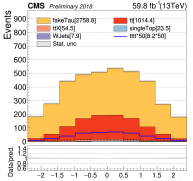


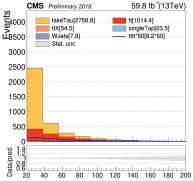


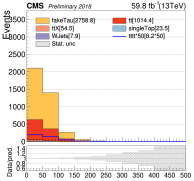


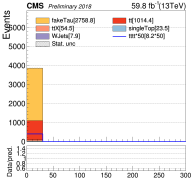
Input variable validation: SR

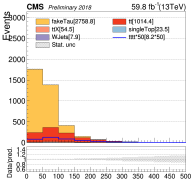


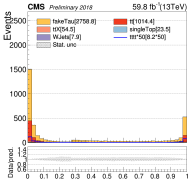


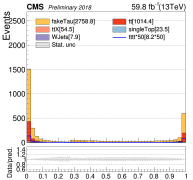


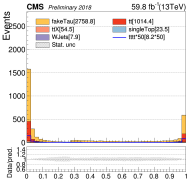


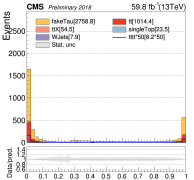












BDT in SR and control regions

Section 1

Back up