

TMVA Study Correlatin Using Based Method Part2(version 2)

Progress Report on Tau Final States of TTTT

Fabio Lemmi¹ Huiling Hua¹ Hongbo Liao¹ Hideki Okawa²
Yu Zhang²

¹IHEP

²Fudan University

IHEP Group Meeting, 2021

Outline

- 1 BDT Overall Strategy
- 2 1Tau1L
- 3 1Tau2L
- 4 2Tau1L
- 5 Event Yield
- 6 Variable list
 - 1tau1l
 - 1tau2l
 - 2tau1l

Outline

- 1 BDT Overall Strategy
- 2 1Tau1L
- 3 1Tau2L
- 4 2Tau1L
- 5 Event Yield
- 6 Variable list
 - 1tau1l
 - 1tau2l
 - 2tau1l

Bug fixed

- when removing one variable from a correlation pair, I wrongly removed the variable with higher SP
- Second bug is I used the $1\tau 1l$ correlation matrix for all channel when removing variables, this is causing the relatively large final input variable set for channels other than $1\tau 1l$

Correlation based optimization strategy

- Start with 50 leading input variables(50 variables with highest separation power)
- Remove bjetsL and bjetsT related variables
- Find the largest correlation pair and remove one variable with smaller separation power in the pair
- Repeat the last step until there is only one variable left
- Plot the AUC as a function of number of input variables

TMVA Setup

● ROOT version

- Switched to ROOT6.12/07, TMVA version 4.3.0
- New TMVA version comes with new feature

● Training setup

- Signal: TTTT_TuneCP5;
- Background: all bg except H and HH and minor ones
- 60% goes to training and 40% goes to testing
- Global weight and event weight same in event yield calculation
- have added more interesting variables:
 - sphericity, aplanarity
 - added some nonjets variables
- Dealing with negative weight events :InverseBoostNegWeights(Boost With inverse boostweight), Boost With inverse boostweight(Pair events with negative and positive weights in training sample and *annihilate* them)
- 4 boosting algorithm: BDT(A), BDTG, BDTB, BDTD (all use the default InverseBoostNegWeights)

● Hyperparameters

- Using the default

Outline

- 1 BDT Overall Strategy
- 2 1Tau1L**
- 3 1Tau2L
- 4 2Tau1L
- 5 Event Yield
- 6 Variable list
 - 1tau1l
 - 1tau2l
 - 2tau1l

Input variable sets

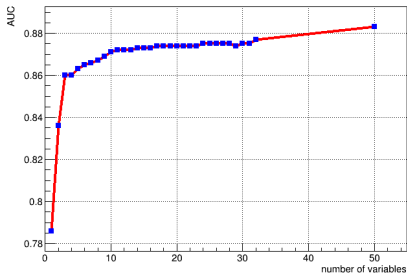
| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_4largestBscoreSum | 0.2611 |
| 3: bjetsM_num | 0.2373 |
| 4: bjetsM_3pt | 0.2363 |
| 5: bjetsL_num | 0.2265 |
| 6: bjetsL_3pt | 0.2079 |
| 7: bjetsL_4pt | 0.1936 |
| 8: jets_7pt | 0.1804 |
| 9: jets_number | 0.1791 |
| 10: toptagger_HT | 0.1697 |
| 11: bjetsL_HT | 0.1651 |
| 12: toptagger_transMass | 0.1635 |
| 13: bjetsL_invariantMass | 0.1567 |
| 14: bjetsL_transMass | 0.1515 |
| 15: bjetsM_invariantMass | 0.1477 |
| 16: jets_5pt | 0.1461 |
| 17: bjetsT_num | 0.1429 |
| 18: jets_8pt | 0.1405 |
| 19: bjetsT_3pt | 0.1393 |
| 20: toptagger_invariantMass | 0.1357 |
| 21: toptagger_num | 0.1351 |
| 22: bjetsM_HT | 0.1307 |
| 23: toptagger_2pt | 0.1295 |
| 24: toptagger_minDeltaR_v1 | 0.1195 |
| 25: jets_5pt | 0.1172 |
| 26: bjetsM_transMass | 0.1153 |
| 27: jets_transMass | 0.1116 |
| 28: jets_rationHT_4toRest | 0.1109 |
| 29: jets_HT | 0.1048 |
| 30: nonbjetsM_num | 0.1015 |
| 31: bjetsT_invariantMass | 0.09939 |
| 32: bjetsL_minDeltaR | 0.09777 |
| 33: bjetsM_4pt | 0.09661 |
| 34: bjetsL_2pt | 0.09659 |
| 35: jets_4pt | 0.09183 |
| 36: bjetsT_HT | 0.09058 |
| 37: jets_9pt | 0.08548 |
| 38: bjetsT_transMass | 0.08038 |
| 39: nonbjetsT_num | 0.07897 |
| 40: nonbjetsM_4pt | 0.07253 |
| 41: bjetsM_2pt | 0.07138 |
| 42: bjetsM_minDeltaR | 0.07062 |
| 43: nonbjetsT_4pt | 0.06607 |
| 44: jets_3pt | 0.06277 |
| 45: bjetsT_2pt | 0.06104 |
| 46: toptagger_3pt | 0.05575 |
| 47: bjetsL_1pt | 0.05548 |
| 48: bjetsT_minDeltaR | 0.05531 |
| 49: toptagger_MHT | 0.05152 |
| 50: bjetsM_1pt | 0.04679 |

| 1tau1l | |
|---------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_5pt | 0.1172 |
| 9: jets_transMass | 0.1116 |
| 10: jets_rationHT_4toRest | 0.1109 |
| 11: bjetsM_4pt | 0.09661 |
| 12: nonbjetsM_4pt | 0.07253 |
| 13: bjetsM_2pt | 0.07138 |
| 14: bjetsM_minDeltaR | 0.07062 |
| 15: toptagger_3pt | 0.05575 |
| 16: toptagger_MHT | 0.05152 |

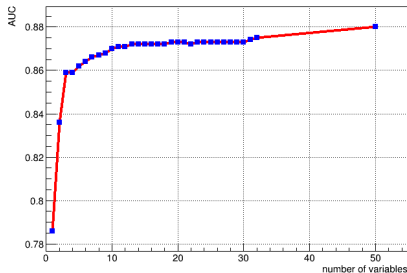
| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: jets_transMass | 0.1116 |
| 7: jets_rationHT_4toRest | 0.1109 |
| 8: nonbjetsM_4pt | 0.07253 |
| 9: bjetsM_minDeltaR | 0.07062 |
| 10: toptagger_3pt | 0.05575 |
| 11: toptagger_MHT | 0.05152 |

AUC results

AUC vs No. of Variables (BDT)

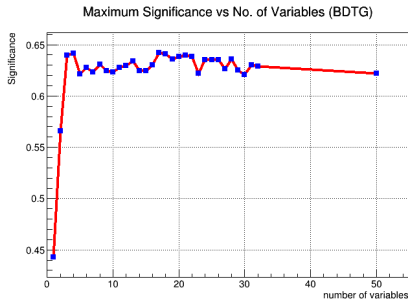
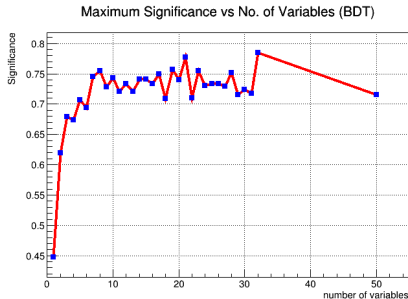


AUC vs No. of Variables (BDTG)



- BDTG and BDT has very similar performance and reached the about same plateau
- BDT has better performance than BDTG
- 11 input variables are both acceptable for AUC performance for BDT

Significance results

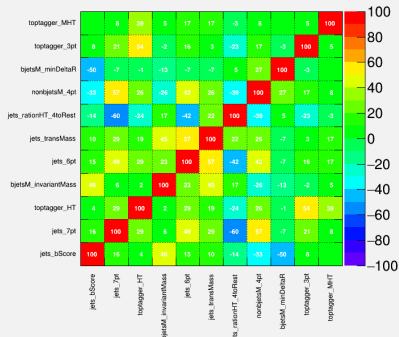


- the plateau of BDT is higher than that of BDTG. for BDT, the best significance is around 0.75
- Together with AUC results, 11 input variables are going to be our final input variable list for BDT
- because we lack statistic in the right end region of BDT score, to avoid fluctuation simply only consider the 1-30(40 in total) bin for BDT and 1-25 bin for BDTG

11 input variables set

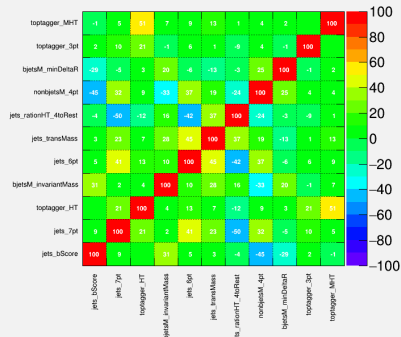
Correlation Matrix (signal)

(11 input variables)



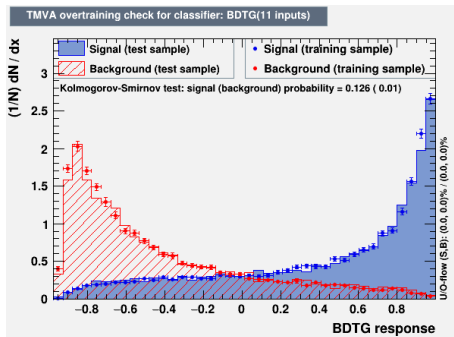
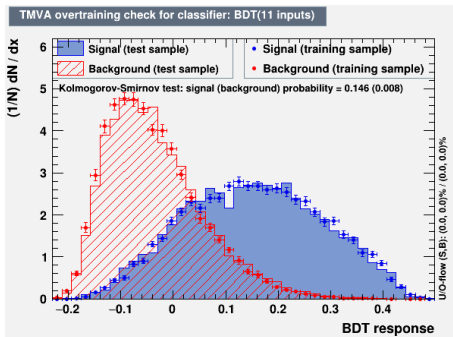
Correlation Matrix (background)

(11 input variables)



- in parentheses below the title is the number of input variable for training
- this is the correlation matrix for training with 11 input variables

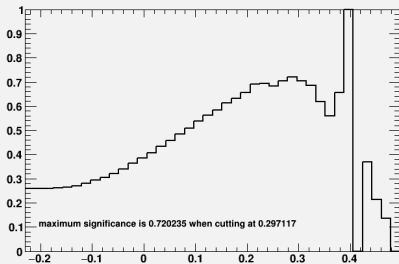
11 input variables set



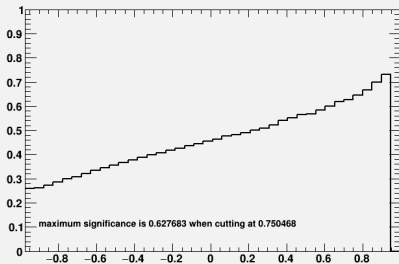
- number in the parenthese after the title indicates the number of input variables
- so this is the overtraining check plot for 11 input variables(which is the middle list in page 7)

11 input variables set

Significance of BDT(11 inputs)



Significance of BDTG(11 inputs)



- number in the parenthese after the title indicates the number of input variables
- so this is the overtraining check plot for 11 input variables

Outline

- 1 BDT Overall Strategy
- 2 1Tau1L
- 3 1Tau2L**
- 4 2Tau1L
- 5 Event Yield
- 6 Variable list
 - 1tau1l
 - 1tau2l
 - 2tau1l

Input variables

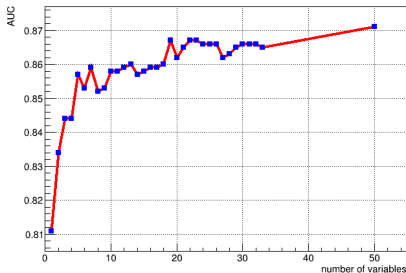
| 1tau2l | | |
|-----------------------------|---------|--|
| 1: jets_bScore | 0.2893 | |
| 2: jets_4largestBscoreSum | 0.2846 | |
| 3: bjetsM_3pt | 0.2719 | |
| 4: bjetsM_num | 0.269 | |
| 5: bjetsL_num | 0.2452 | |
| 6: bjetsL_3pt | 0.224 | |
| 7: bjetsL_4pt | 0.181 | |
| 8: jets_number | 0.1379 | |
| 9: bjetsL_minDeltaR | 0.1372 | |
| 10: jets_rationHT_4toRest | 0.1368 | |
| 11: bjetsT_3pt | 0.1358 | |
| 12: bjetsT_num | 0.1355 | |
| 13: jets_6pt | 0.1353 | |
| 14: toptagger_transMass | 0.1299 | |
| 15: bjetsL_invariantMass | 0.1234 | |
| 16: toptagger_HT | 0.1231 | |
| 17: jets_5pt | 0.1227 | |
| 18: toptagger_invariantMass | 0.1177 | |
| 19: bjetsM_minDeltaR | 0.1096 | |
| 20: toptagger_num | 0.1084 | |
| 21: bjetsM_invariantMass | 0.1081 | |
| 22: bjetsL_HT | 0.09973 | |
| 23: toptagger_minDeltaR v1 | 0.09191 | |
| 24: jets_7pt | 0.08982 | |
| 25: toptagger_MHT | 0.08903 | |
| 26: bjetsM_4pt | 0.08768 | |
| 27: toptagger_2pt | 0.08735 | |
| 28: bjetsL_transMass | 0.08473 | |
| 29: bjetsM_HT | 0.08392 | |
| 30: bjetsL_tausF_minDeltaR | 0.07759 | |
| 31: bjetsT_invariantMass | 0.07427 | |
| 32: jets_4pt | 0.07252 | |
| 33: bjetsM_transMass | 0.06931 | |
| 34: bjetsT_minDeltaR | 0.0649 | |
| 35: jets_transMass | 0.06168 | |
| 36: toptagger_1pt | 0.06153 | |
| 37: jets_aplanarity | 0.06027 | |
| 38: bjetsL_2pt | 0.05489 | |
| 39: bjetsT_HT | 0.05417 | |
| 40: jets_HT | 0.05394 | |
| 41: tausF_MHT | 0.05242 | |
| 42: nonbjetsM_num | 0.05151 | |
| 43: nonbjetsT_num | 0.05141 | |
| 44: jets_3pt | 0.04978 | |
| 45: nonbjetsM_1pt | 0.04972 | |
| 46: jets_tausF_minDeltaR | 0.04905 | |
| 47: tausL_MHT | 0.047 | |
| 48: jetL_minDeltaR | 0.04646 | |
| 49: bjetsT_2pt | 0.04554 | |
| 50: bjetsT_transMass | 0.04547 | |

| 1tau2l | | |
|----------------------------|---------|--|
| 1: jets_bScore | 0.2893 | |
| 2: bjetsM_3pt | 0.2719 | |
| 3: jets_number | 0.1379 | |
| 4: jets_rationHT_4toRest | 0.1368 | |
| 5: jets_6pt | 0.1353 | |
| 6: toptagger_transMass | 0.1299 | |
| 7: jets_5pt | 0.1227 | |
| 8: toptagger_invariantMass | 0.1177 | |
| 9: bjetsM_minDeltaR | 0.1096 | |
| 10: bjetsM_invariantMass | 0.1081 | |
| 11: toptagger_MHT | 0.08903 | |
| 12: bjetsM_4pt | 0.08768 | |
| 13: bjetsM_HT | 0.08392 | |
| 14: jets_4pt | 0.07252 | |
| 15: jets_transMass | 0.06168 | |
| 16: toptagger_1pt | 0.06153 | |
| 17: jets_aplanarity | 0.06027 | |
| 18: tausF_MHT | 0.05242 | |
| 19: jets_3pt | 0.04978 | |
| 20: nonbjetsM_1pt | 0.04972 | |
| 21: jets_tausF_minDeltaR | 0.04905 | |
| 22: jetL_minDeltaR | 0.04646 | |

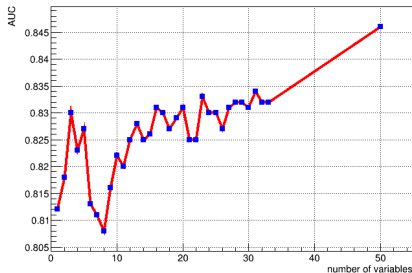
| 1tau2l | | |
|--------------------------|---------|--|
| 1: jets_bScore | 0.2893 | |
| 2: jets_number | 0.1379 | |
| 3: jets_rationHT_4toRest | 0.1368 | |
| 4: toptagger_transMass | 0.1299 | |
| 5: jets_4pt | 0.07252 | |
| 6: toptagger_1pt | 0.06153 | |
| 7: jets_aplanarity | 0.06027 | |
| 8: tausF_MHT | 0.05242 | |
| 9: jets_tausF_minDeltaR | 0.04905 | |
| 10: jetL_minDeltaR | 0.04646 | |

AUC results

AUC vs No. of Variables (BDT)



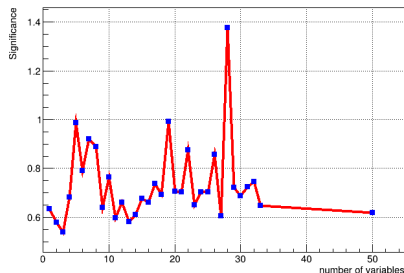
AUC vs No. of Variables (BDTG)



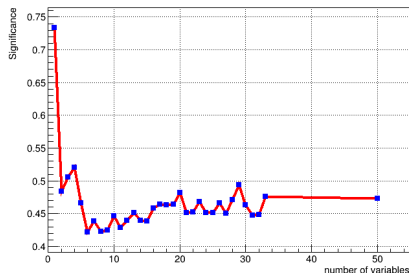
- for AUC performance, 1tau2l and 1tau2os has similar plateau, there is no advantage in splitting into 1tau2os in terms of AUC.
- 10 variables for 1tau2l channel

Significance results

Maximum Significance vs No. of Variables (BDT)



Maximum Significance vs No. of Variables (BDTG)

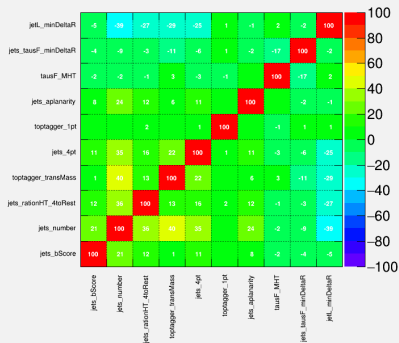


- only consider 1-28 bin for BDT(40 bins in total) when searching for maximum significance in all training
- the maximum significance we can get in 1tau2l is around 0.7

10 input variables set

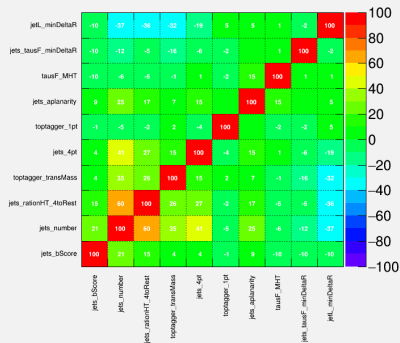
Correlation Matrix (signal)

(10 input variables)



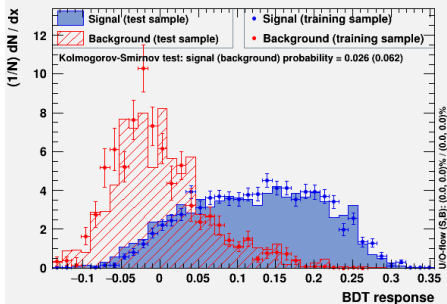
Correlation Matrix (background)

(10 input variables)

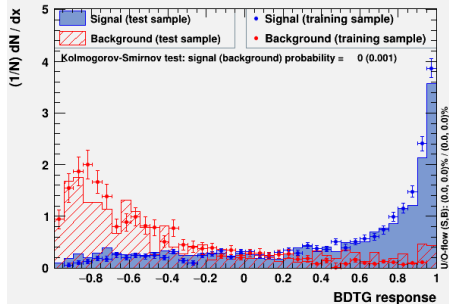


10 input variables set

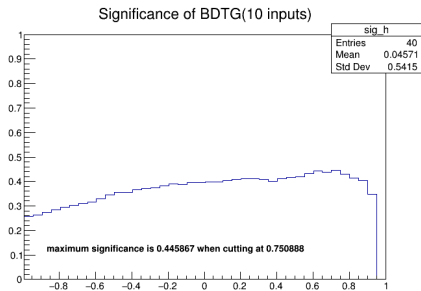
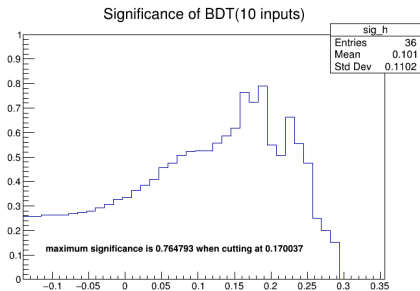
TMVA overtraining check for classifier: BDT(10 Inputs)



TMVA overtraining check for classifier: BDTG(10 inputs)



10 input variables set



Outline

- 1 BDT Overall Strategy
- 2 1Tau1L
- 3 1Tau2L
- 4 2Tau1L**
- 5 Event Yield
- 6 Variable list
 - 1tau1l
 - 1tau2l
 - 2tau1l

Input variables

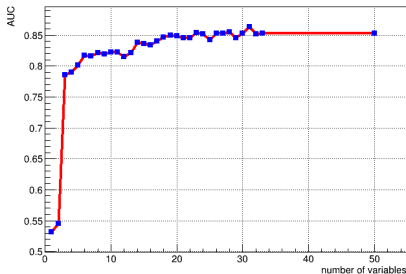
| 2tau1l | | |
|-----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: bjetsT_MHT | 0.9024 | |
| 3: tausT_MHT | 0.7956 | |
| 4: bjetsL_num | 0.3574 | |
| 5: bjetsL_3pt | 0.3491 | |
| 6: jets_bScore | 0.336 | |
| 7: jets_4largestBscoreSum | 0.3357 | |
| 8: bjetsM_3pt | 0.3061 | |
| 9: bjetsM_num | 0.2886 | |
| 10: bjetsL_4pt | 0.2544 | |
| 11: bjetsL_minDeltaR | 0.2301 | |
| 12: jets_6pt | 0.2216 | |
| 13: bjetsL_invariantMass | 0.207 | |
| 14: jets_number | 0.2023 | |
| 15: bjetsL_HT | 0.1904 | |
| 16: bjetsM_minDeltaR | 0.1883 | |
| 17: jets_rationHT_4toRest | 0.1849 | |
| 18: bjetsT_3pt | 0.1779 | |
| 19: bjetsT_num | 0.1727 | |
| 20: toptagger_invariantMass | 0.1664 | |
| 21: jets_5pt | 0.1664 | |
| 22: bjetsL_transMass | 0.1652 | |
| 23: toptagger_HT | 0.1573 | |
| 24: toptagger_transMass | 0.1465 | |
| 25: toptagger_2pt | 0.1457 | |
| 26: toptagger_num | 0.141 | |
| 27: bjetsT_HT | 0.141 | |
| 28: bjetsT_invariantMass | 0.137 | |
| 29: bjetsT_minDeltaR | 0.1364 | |
| 30: toptagger_minDeltaR_v1 | 0.1361 | |
| 31: bjetsM_invariantMass | 0.1349 | |
| 32: bjetsL_tausF_minDeltaR | 0.1348 | |
| 33: jets_7pt | 0.1294 | |
| 34: bjetsL_2pt | 0.1191 | |
| 35: bjetsT_transMass | 0.1169 | |
| 36: bjetsM_HT | 0.1163 | |
| 37: jets_4pt | 0.1153 | |
| 38: jets_HT | 0.1149 | |
| 39: bjetsM_2pt | 0.1085 | |
| 40: toptagger_1pt | 0.1043 | |
| 41: tausF_MHT | 0.1037 | |
| 42: jets_tausF_minDeltaR | 0.1033 | |
| 43: bjetsM_transMass | 0.1025 | |
| 44: jetL_minDeltaR | 0.09658 | |
| 45: jets_transMass | 0.09588 | |
| 46: bjetsT_2pt | 0.09391 | |
| 47: bjetsM_4pt | 0.09322 | |
| 48: jets_average_deltaR | 0.09153 | |
| 49: tausL_HT | 0.08771 | |
| 50: tausF_invariantMass | 0.08748 | |

| 2tau1l | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: jets_6pt | 0.2216 | |
| 5: bjetsM_minDeltaR | 0.1883 | |
| 6: jets_rationHT_4toRest | 0.1849 | |
| 7: toptagger_invariantMass | 0.1664 | |
| 8: bjetsM_invariantMass | 0.1349 | |
| 9: jets_4pt | 0.1153 | |
| 10: toptagger_1pt | 0.1043 | |
| 11: jets_tausF_minDeltaR | 0.1033 | |
| 12: jetL_minDeltaR | 0.09658 | |
| 13: jets_average_deltaR | 0.09153 | |
| 14: tausL_HT | 0.08771 | |

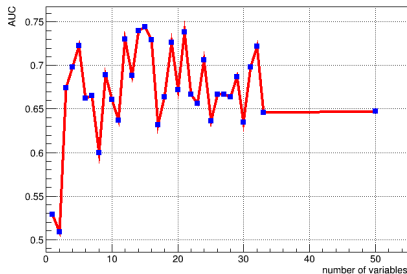
| 2tau1l | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: bjetsM_invariantMass | 0.1349 | |
| 11: jets_4pt | 0.1153 | |
| 12: jets_HT | 0.1149 | |
| 13: bjetsM_2pt | 0.1085 | |
| 14: toptagger_1pt | 0.1043 | |
| 15: jets_tausF_minDeltaR | 0.1033 | |
| 16: jetL_minDeltaR | 0.09658 | |
| 17: bjetsM_4pt | 0.09322 | |
| 18: jets_average_deltaR | 0.09153 | |
| 19: tausL_HT | 0.08771 | |
| 20: tausF_invariantMass | 0.08748 | |

AUC results

AUC vs No. of Variables (BDT)



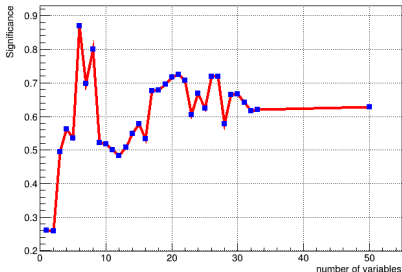
AUC vs No. of Variables (BDTG)



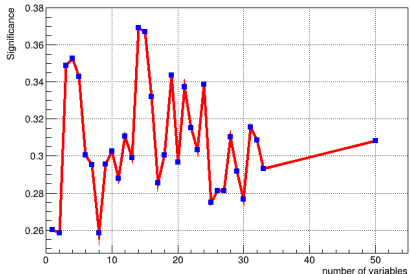
- 14 input variables is enough
- jets_HTDividedByMet and taus_MHT, their SP is abnormally high due to low statistic fluctuation, but it wouldn't impact BDT performance because BDT don't care about low SP variables at all

Significance results

Maximum Significance vs No. of Variables (BDT)

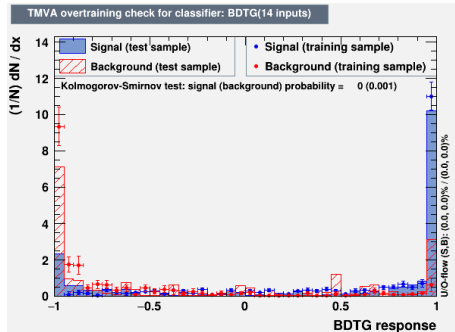
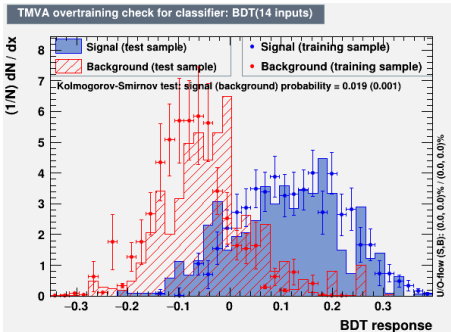


Maximum Significance vs No. of Variables (BDTG)



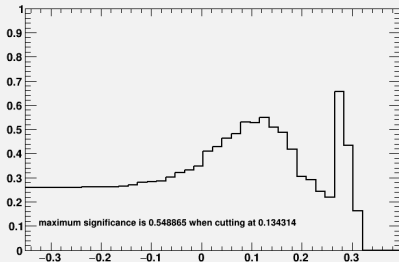
- only consider 1-28 bins for BDT(40 bins in total)
- we can not trust some high peak value due to low statistics
- but we can conclude that the maximum Significance we can achieve in 2tau1l is around 0.6

14 input variables

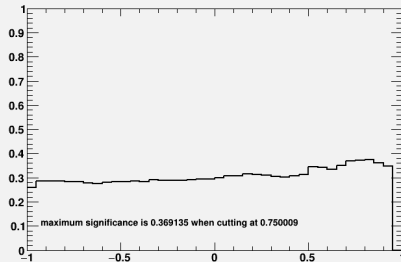


14 input variables set

Significance of BDT(14 inputs)



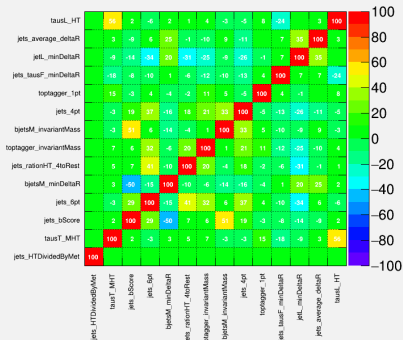
Significance of BDTG(14 inputs)



14 input variables set

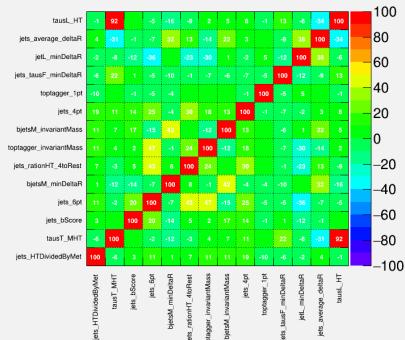
Correlation Matrix (signal)

(14 input variables)



Correlation Matrix (background)

(14 input variables)



Next Step

- Add more variables
- add various correction
- Hyperparameter optimization (SS AN)
- maybe loosen baseline selection for higher statistics

Backup

back up

Outline

- 1 BDT Overall Strategy
- 2 1Tau1L
- 3 1Tau2L
- 4 2Tau1L
- 5 Event Yield**
- 6 Variable list
 - 1tau1l
 - 1tau2l
 - 2tau1l

EventSelection

- MET fillters
- HLT requirements
 - `HLT_PFHT450_SixJet40_BTagCSV_p056==1,`
`HLT_PFHT400_SixJet30_DoubleBTagCSV_p056==1`
 - `HLT_PFJet450`
- loose preselection
 - `tausL.size()>0, jets.size()>2 (fixed here), bjetsL.size()>1`
 - `HT>400`
- Subchannel requirements

MC reweighting

- genWeight
- prefireWeight
- PileUp reweighting

Event Yield

1Tau0L

raw entries:

TTTT = 237121.000000
 TT = 45781.000000
 TTX = 59520.000000
 VV = 9.000000
 VVV = 100.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 3795.000000
 TX = 7749.000000
 QCD = 315.000000
 background = 7787.433668

1Tau0L

weighted:

TTTT = 1727.402161
 TT = 12808721.094352
 TTX = 76752.367739
 VV = 715.464884
 vvv = 13.558634
 WJets = 0.000000
 DY = 0.000000
 singleTop = 178.302566
 TX = 7694.366882
 QCD = 279.102358
 background = 13822.328266

1Tau0L

scaled to LUMI:

TTTT = 9.463674
 TT = 6151.841389
 TTX = 237.177114
 VV = 0.138518
 vvv = 1.103006
 WJets = 0.000000
 DY = 0.000000
 singleTop = 115.069084
 TX = 13.340787
 QCD = 7303.658368
 background = 13822.328266

1Tau2L

raw entries:

TTTT = 36053.000000
 TT = 670.000000
 TTX = 5439.000000
 VV = 0.000000
 VVV = 6.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 2286.000000
 TX = 800.000000
 QCD = 0.000000
 background = 21.088795

1Tau2L

weighted:

TTTT = 277.013738
 TT = 49317.260154
 TTX = 5682.610249
 VV = 0.000000
 vvv = 0.725201
 WJets = 0.000000
 DY = 0.000000
 singleTop = 114.770694
 TX = 799.258622
 QCD = 0.000000
 background = 46.837393

1Tau2L

scaled to LUMI:

TTTT = 1.517636
 TT = 31.243461
 TTX = 14.239847
 VV = 0.000000
 vvv = 0.106212
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.292115
 TX = 0.955757
 QCD = 0.000000
 background = 46.837393

1Tau3L

raw entries:

TTTT = 2215.000000
 TT = 0.000000
 TTX = 321.000000
 VV = 0.000000
 VVV = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 22.000000
 TX = 27.000000
 QCD = 0.000000
 background = 0.882240

1Tau3L

weighted:

TTTT = 16.702130
 TT = 0.000000
 TTX = 323.867294
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 1.096257
 TX = 27.411090
 QCD = 0.000000
 background = 0.840136

1Tau3L

scaled to LUMI:

TTTT = 0.091504
 TT = 0.000000
 TTX = 0.803764
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.002790
 TX = 0.033581
 QCD = 0.000000
 background = 0.840136

Event Yield

1Tau1Mu

raw entries:

TTTT = 96510.000000
 TT = 15790.000000
 TTX = 17317.000000
 VV = 6.000000
 VVV = 9.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 2222.000000
 TX = 2782.000000
 QCD = 0.000000
 background = 80.029567

1Tau1Mu

weighted:

TTTT = 750.823160
 TT = 1988643.247954
 TTX = 20245.956260
 VV = 465.543882
 vvv = 0.607881
 WJets = 0.000000
 DY = 0.000000
 singleTop = 114.866833
 TX = 2706.830801
 QCD = 0.000000
 background = 1081.337876

1Tau1Mu

scaled to LUMI:

TTTT = 4.113429
 TT = 1005.211880
 TTX = 56.540381
 VV = 0.078666
 vvv = 0.079142
 WJets = 0.000000
 DY = 0.000000
 singleTop = 15.823899
 TX = 3.603908
 QCD = 0.000000
 background = 1081.337876

1Tau1E

raw entries:

TTTT = 77566.000000
 TT = 13243.000000
 TTX = 14947.000000
 VV = 2.000000
 VVV = 19.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 2857.000000
 TX = 2322.000000
 QCD = 2.000000
 background = 82.771878

1Tau1E

weighted:

TTTT = 595.308610
 TT = 1714597.442319
 TTX = 17514.991634
 VV = 414.892860
 vvv = 1.584673
 WJets = 0.000000
 DY = 0.000000
 singleTop = 122.716495
 TX = 2319.020958
 QCD = 2.174466
 background = 939.704393

1Tau1E

scaled to LUMI:

TTTT = 3.261433
 TT = 864.721378
 TTX = 48.748242
 VV = 0.032859
 vvv = 0.214777
 WJets = 0.000000
 DY = 0.000000
 singleTop = 20.507983
 TX = 3.120045
 QCD = 2.359110
 background = 939.704393

1Tau1L

raw entries:

TTTT = 174076.000000
 TT = 29033.000000
 TTX = 32264.000000
 VV = 8.000000
 VVV = 28.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 5079.000000
 TX = 5104.000000
 QCD = 2.000000
 background = 162.801445

1Tau1L

weighted:

TTTT = 1346.131770
 TT = 3703240.690273
 TTX = 37760.947894
 VV = 880.436742
 vvv = 2.192554
 WJets = 0.000000
 DY = 0.000000
 singleTop = 237.583328
 TX = 5025.851758
 QCD = 2.174466
 background = 2021.042269

1Tau1L

scaled to LUMI:

TTTT = 7.374862
 TT = 1869.933258
 TTX = 105.288623
 VV = 0.111525
 vvv = 0.293919
 WJets = 0.000000
 DY = 0.000000
 singleTop = 36.331863
 TX = 6.723952
 QCD = 2.359110
 background = 2021.042269

Event Yield

1Tau2OS

raw entries:

TTTT = 23961.000000
 TT = 643.000000
 TTX = 4050.000000
 VV = 0.000000
 VVV = 4.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 1971.000000
 TX = 544.000000
 QCD = 0.000000
 background = 16.543800

1Tau2OS

weighted:

TTTT = 182.618180
 TT = 46463.399858
 TTX = 4118.349976
 VV = 0.000000
 vvv = 0.584920
 WJets = 0.000000
 DY = 0.000000
 singleTop = 99.430589
 TX = 545.692495
 QCD = 0.000000
 background = 40.979358

1Tau2OS

scaled to LUMI:

TTTT = 1.000484
 TT = 29.721410
 TTX = 10.264518
 VV = 0.000000
 vvv = 0.085810
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.253072
 TX = 0.654548
 QCD = 0.000000
 background = 40.979358

1Tau2SS

raw entries:

TTTT = 12092.000000
 TT = 27.000000
 TTX = 1389.000000
 VV = 0.000000
 VVV = 2.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 315.000000
 TX = 256.000000
 QCD = 0.000000
 background = 4.544995

1Tau2SS

weighted:

TTTT = 94.395558
 TT = 2853.860295
 TTX = 1564.260273
 VV = 0.000000
 vvv = 0.140281
 WJets = 0.000000
 DY = 0.000000
 singleTop = 15.340105
 TX = 253.566127
 QCD = 0.000000
 background = 5.858035

1Tau2SS

scaled to LUMI:

TTTT = 0.517152
 TT = 1.522051
 TTX = 3.975329
 VV = 0.000000
 vvv = 0.020403
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.039044
 TX = 0.301209
 QCD = 0.000000
 background = 5.858035

1Tau2L

raw entries:

TTTT = 36053.000000
 TT = 670.000000
 TTX = 5439.000000
 VV = 0.000000
 VVV = 6.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 2286.000000
 TX = 800.000000
 QCD = 0.000000
 background = 21.088795

1Tau2L

weighted:

TTTT = 277.013738
 TT = 49317.260154
 TTX = 5682.610249
 VV = 0.000000
 vvv = 0.725201
 WJets = 0.000000
 DY = 0.000000
 singleTop = 114.770694
 TX = 799.258622
 QCD = 0.000000
 background = 46.837393

1Tau2L

scaled to LUMI:

TTTT = 1.517636
 TT = 31.243461
 TTX = 14.239847
 VV = 0.000000
 vvv = 0.106212
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.292115
 TX = 0.955757
 QCD = 0.000000
 background = 46.837393

Event Yield

2Tau1E

raw entries:

TTTT = 2180.000000
 TT = 84.000000
 TTX = 1025.000000
 VV = 0.000000
 VVV = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 267.000000
 TX = 230.000000
 QCD = 0.000000
 background = 3.241680

2Tau1E

weighted:

TTTT = 16.596552
 TT = 8862.153584
 TTX = 1066.149400
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 27.158919
 TX = 225.444790
 QCD = 0.000000
 background = 7.559703

2Tau1E

scaled to LUMI:

TTTT = 0.090925
 TT = 4.823582
 TTX = 2.390926
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.069125
 TX = 0.276070
 QCD = 0.000000
 background = 7.559703

2Tau1Mu

raw entries:

TTTT = 2774.000000
 TT = 98.000000
 TTX = 1122.000000
 VV = 0.000000
 VVV = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 264.000000
 TX = 273.000000
 QCD = 0.000000
 background = 3.476008

2Tau1Mu

weighted:

TTTT = 21.142830
 TT = 11436.690755
 TTX = 1174.287908
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 12.408789
 TX = 262.325478
 QCD = 0.000000
 background = 8.960338

2Tau1Mu

scaled to LUMI:

TTTT = 0.115832
 TT = 5.929230
 TTX = 2.675061
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.031583
 TX = 0.324465
 QCD = 0.000000
 background = 8.960338

2Tau1L

raw entries:

TTTT = 4954.000000
 TT = 182.000000
 TTX = 2147.000000
 VV = 0.000000
 VVV = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 531.000000
 TX = 503.000000
 QCD = 0.000000
 background = 6.717688

2Tau1L

weighted:

TTTT = 37.739382
 TT = 20298.844339
 TTX = 2240.437308
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 39.567708
 TX = 487.770268
 QCD = 0.000000
 background = 16.520041

2Tau1L

scaled to LUMI:

TTTT = 0.206757
 TT = 10.752811
 TTX = 5.065987
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.100708
 TX = 0.600535
 QCD = 0.000000
 background = 16.520041

Event Yield

2Tau2OS

raw entries:

TTTT = 353.000000
 TT = 2.000000
 TTX = 119.000000
 VV = 0.000000
 VVV = 1.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 4.000000
 TX = 36.000000
 QCD = 0.000000
 background = 0.457729

2Tau2OS

weighted:

TTTT = 2.088281
 TT = 142.350423
 TTX = 117.081043
 VV = 0.000000
 vvv = 0.018778
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.869543
 TX = 36.226800
 QCD = 0.000000
 background = 0.395161

2Tau2OS

scaled to LUMI:

TTTT = 0.011441
 TT = 0.091864
 TTX = 0.259295
 VV = 0.000000
 vvv = 0.002693
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.002213
 TX = 0.039095
 QCD = 0.000000
 background = 0.395161

2Tau2SS

raw entries:

TTTT = 147.000000
 TT = 0.000000
 TTX = 16.000000
 VV = 0.000000
 VVV = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 3.000000
 TX = 5.000000
 QCD = 0.000000
 background = 0.041054

2Tau2SS

weighted:

TTTT = 1.359831
 TT = 0.000000
 TTX = 16.357750
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.158186
 TX = 4.815694
 QCD = 0.000000
 background = 0.033499

2Tau2SS

scaled to LUMI:

TTTT = 0.007450
 TT = 0.000000
 TTX = 0.028013
 VV = 0.000000
 vvv = 0.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.000403
 TX = 0.005083
 QCD = 0.000000
 background = 0.033499

2Tau2L

raw entries:

TTTT = 500.000000
 TT = 2.000000
 TTX = 135.000000
 VV = 0.000000
 VVV = 1.000000
 WJets = 0.000000
 DY = 0.000000
 singleTop = 7.000000
 TX = 41.000000
 QCD = 0.000000
 background = 0.498783

2Tau2L

weighted:

TTTT = 3.448112
 TT = 142.350423
 TTX = 133.438793
 VV = 0.000000
 vvv = 0.018778
 WJets = 0.000000
 DY = 0.000000
 singleTop = 1.027728
 TX = 41.042494
 QCD = 0.000000
 background = 0.428660

2Tau2L

scaled to LUMI:

TTTT = 0.018891
 TT = 0.091864
 TTX = 0.287308
 VV = 0.000000
 vvv = 0.002693
 WJets = 0.000000
 DY = 0.000000
 singleTop = 0.002616
 TX = 0.044179
 QCD = 0.000000
 background = 0.428660

Outline

- 1 BDT Overall Strategy
- 2 1Tau1L
- 3 1Tau2L
- 4 2Tau1L
- 5 Event Yield
- 6 Variable list**
 - 1tau1l
 - 1tau2l
 - 2tau1l

Input lists

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: jets_transMass | 0.1116 |
| 7: nonbjetsM_4pt | 0.07253 |
| 8: bjetsM_minDeltaR | 0.07062 |
| 9: toptagger_3pt | 0.05575 |
| 10: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: jets_transMass | 0.1116 |
| 7: jets_ratioHT_4toRest | 0.1109 |
| 8: nonbjetsM_4pt | 0.07253 |
| 9: bjetsM_minDeltaR | 0.07062 |
| 10: toptagger_3pt | 0.05575 |
| 11: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: jets_transMass | 0.1116 |
| 7: jets_ratioHT_4toRest | 0.1109 |
| 8: bjetsM_4pt | 0.09661 |
| 9: nonbjetsM_4pt | 0.07253 |
| 10: bjetsM_minDeltaR | 0.07062 |
| 11: toptagger_3pt | 0.05575 |
| 12: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: toptagger_HT | 0.1697 |
| 5: bjetsM_invariantMass | 0.1477 |
| 6: jets_6pt | 0.1461 |
| 7: jets_transMass | 0.1116 |
| 8: jets_ratioHT_4toRest | 0.1109 |
| 9: bjetsM_4pt | 0.09661 |
| 10: nonbjetsM_4pt | 0.07253 |
| 11: bjetsM_minDeltaR | 0.07062 |
| 12: toptagger_3pt | 0.05575 |
| 13: toptagger_MHT | 0.05152 |

Input lists

| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_transMass | 0.1116 |
| 9: jets_rationHT_4toRest | 0.1109 |
| 10: bjetsM_4pt | 0.09661 |
| 11: nonbjetsM_4pt | 0.07253 |
| 12: bjetsM_minDeltaR | 0.07062 |
| 13: toptagger_3pt | 0.05575 |
| 14: toptagger_MHT | 0.05152 |

| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_transMass | 0.1116 |
| 9: jets_rationHT_4toRest | 0.1109 |
| 10: bjetsM_4pt | 0.09661 |
| 11: nonbjetsM_4pt | 0.07253 |
| 12: bjetsM_2pt | 0.07138 |
| 13: bjetsM_minDeltaR | 0.07062 |
| 14: toptagger_3pt | 0.05575 |
| 15: toptagger_MHT | 0.05152 |

| 1tau1l | |
|---------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_5pt | 0.1172 |
| 9: jets_transMass | 0.1116 |
| 10: jets_rationHT_4toRest | 0.1109 |
| 11: bjetsM_4pt | 0.09661 |
| 12: nonbjetsM_4pt | 0.07253 |
| 13: bjetsM_2pt | 0.07138 |
| 14: bjetsM_minDeltaR | 0.07062 |
| 15: toptagger_3pt | 0.05575 |
| 16: toptagger_MHT | 0.05152 |

| 1tau1l | |
|---------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_5pt | 0.1172 |
| 9: jets_transMass | 0.1116 |
| 10: jets_rationHT_4toRest | 0.1109 |
| 11: bjetsM_4pt | 0.09661 |
| 12: jets_4pt | 0.09183 |
| 13: nonbjetsM_4pt | 0.07253 |
| 14: bjetsM_2pt | 0.07138 |
| 15: bjetsM_minDeltaR | 0.07062 |
| 16: toptagger_3pt | 0.05575 |
| 17: toptagger_MHT | 0.05152 |

Input lists

| 1tau1l | |
|---------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: toptagger_num | 0.1351 |
| 9: jets_5pt | 0.1172 |
| 10: jets_transMass | 0.1116 |
| 11: jets_rationHT_4toRest | 0.1109 |
| 12: bjetsM_4pt | 0.09661 |
| 13: jets_4pt | 0.09183 |
| 14: nonbjetsM_4pt | 0.07253 |
| 15: bjetsM_2pt | 0.07138 |
| 16: bjetsM_minDeltaR | 0.07062 |
| 17: toptagger_3pt | 0.05575 |
| 18: toptagger_MHT | 0.05152 |

| 1tau1l | |
|---------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: toptagger_num | 0.1351 |
| 9: jets_5pt | 0.1172 |
| 10: jets_transMass | 0.1116 |
| 11: jets_rationHT_4toRest | 0.1109 |
| 12: bjetsM_4pt | 0.09661 |
| 13: jets_4pt | 0.09183 |
| 14: nonbjetsM_4pt | 0.07253 |
| 15: bjetsM_2pt | 0.07138 |
| 16: bjetsM_minDeltaR | 0.07062 |
| 17: jets_3pt | 0.06277 |
| 18: toptagger_3pt | 0.05575 |
| 19: toptagger_MHT | 0.05152 |

| 1tau1l | |
|----------------|--------|
| 1: jets_bScore | 0.2761 |

| 1tau1l | |
|---------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: toptagger_num | 0.1351 |
| 9: jets_5pt | 0.1172 |
| 10: jets_transMass | 0.1116 |
| 11: jets_rationHT_4toRest | 0.1109 |
| 12: bjetsM_4pt | 0.09661 |
| 13: jets_4pt | 0.09183 |
| 14: jets_9pt | 0.08548 |
| 15: nonbjetsM_4pt | 0.07253 |
| 16: bjetsM_2pt | 0.07138 |
| 17: bjetsM_minDeltaR | 0.07062 |
| 18: jets_3pt | 0.06277 |
| 19: toptagger_3pt | 0.05575 |
| 20: toptagger_MHT | 0.05152 |

Input lists

| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: toptagger_num | 0.1351 |
| 9: toptagger_2pt | 0.1295 |
| 10: jets_5pt | 0.1172 |
| 11: jets_transMass | 0.1116 |
| 12: jets_ratioHT_4toRest | 0.1109 |
| 13: bjetsM_4pt | 0.09661 |
| 14: jets_4pt | 0.09183 |
| 15: jets_9pt | 0.08548 |
| 16: nonbjetsM_4pt | 0.07253 |
| 17: bjetsM_2pt | 0.07138 |
| 18: bjetsM_minDeltaR | 0.07062 |
| 19: jets_3pt | 0.06277 |
| 20: toptagger_3pt | 0.05575 |
| 21: toptagger_MHT | 0.05152 |

| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: toptagger_num | 0.1351 |
| 9: toptagger_2pt | 0.1295 |
| 10: jets_5pt | 0.1172 |
| 11: jets_transMass | 0.1116 |
| 12: jets_ratioHT_4toRest | 0.1109 |
| 13: nonbjetsM_num | 0.1015 |
| 14: bjetsM_4pt | 0.09661 |
| 15: jets_4pt | 0.09183 |
| 16: jets_9pt | 0.08548 |
| 17: nonbjetsM_4pt | 0.07253 |
| 18: bjetsM_2pt | 0.07138 |
| 19: bjetsM_minDeltaR | 0.07062 |
| 20: jets_3pt | 0.06277 |
| 21: toptagger_3pt | 0.05575 |
| 22: toptagger_MHT | 0.05152 |

| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: toptagger_num | 0.1351 |
| 9: bjetsM_HT | 0.1307 |
| 10: toptagger_2pt | 0.1295 |
| 11: jets_5pt | 0.1172 |
| 12: jets_transMass | 0.1116 |
| 13: jets_ratioHT_4toRest | 0.1109 |
| 14: nonbjetsM_num | 0.1015 |
| 15: bjetsM_4pt | 0.09661 |
| 16: jets_4pt | 0.09183 |
| 17: jets_9pt | 0.08548 |
| 18: nonbjetsM_4pt | 0.07253 |
| 19: bjetsM_2pt | 0.07138 |
| 20: bjetsM_minDeltaR | 0.07062 |
| 21: jets_3pt | 0.06277 |
| 22: toptagger_3pt | 0.05575 |
| 23: toptagger_MHT | 0.05152 |

| 1tau1l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_8pt | 0.1405 |
| 9: toptagger_num | 0.1351 |
| 10: bjetsM_HT | 0.1307 |
| 11: toptagger_2pt | 0.1295 |
| 12: jets_5pt | 0.1172 |
| 13: jets_transMass | 0.1116 |
| 14: jets_ratioHT_4toRest | 0.1109 |
| 15: nonbjetsM_num | 0.1015 |
| 16: bjetsM_4pt | 0.09661 |
| 17: jets_4pt | 0.09183 |
| 18: jets_9pt | 0.08548 |
| 19: nonbjetsM_4pt | 0.07253 |
| 20: bjetsM_2pt | 0.07138 |
| 21: bjetsM_minDeltaR | 0.07062 |
| 22: jets_3pt | 0.06277 |
| 23: toptagger_3pt | 0.05575 |
| 24: toptagger_MHT | 0.05152 |

Input lists

| 1tau1l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_3pt | 0.2363 |
| 3: jets_7pt | 0.1804 |
| 4: jets_number | 0.1791 |
| 5: toptagger_HT | 0.1697 |
| 6: bjetsM_invariantMass | 0.1477 |
| 7: jets_6pt | 0.1461 |
| 8: jets_8pt | 0.1405 |
| 9: toptagger_invariantMass | 0.1357 |
| 10: toptagger_num | 0.1351 |
| 11: bjetsM_HT | 0.1307 |
| 12: toptagger_2pt | 0.1295 |
| 13: jets_5pt | 0.1172 |
| 14: jets_transMass | 0.1116 |
| 15: jets_rationHT_4toRest | 0.1109 |
| 16: nonbjetsM_num | 0.1015 |
| 17: bjetsM_4pt | 0.09661 |
| 18: jets_4pt | 0.09183 |
| 19: jets_9pt | 0.08548 |
| 20: nonbjetsM_4pt | 0.07253 |
| 21: bjetsM_2pt | 0.07138 |
| 22: bjetsM_minDeltaR | 0.07062 |
| 23: jets_3pt | 0.06277 |
| 24: toptagger_3pt | 0.05575 |
| 25: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_num | 0.2373 |
| 3: bjetsM_3pt | 0.2363 |
| 4: jets_7pt | 0.1804 |
| 5: jets_number | 0.1791 |
| 6: toptagger_HT | 0.1697 |
| 7: bjetsM_invariantMass | 0.1477 |
| 8: jets_6pt | 0.1461 |
| 9: jets_8pt | 0.1405 |
| 10: toptagger_invariantMass | 0.1357 |
| 11: toptagger_num | 0.1351 |
| 12: bjetsM_HT | 0.1307 |
| 13: toptagger_2pt | 0.1295 |
| 14: jets_5pt | 0.1172 |
| 15: jets_transMass | 0.1116 |
| 16: jets_rationHT_4toRest | 0.1109 |
| 17: nonbjetsM_num | 0.1015 |
| 18: bjetsM_4pt | 0.09661 |
| 19: jets_4pt | 0.09183 |
| 20: jets_9pt | 0.08548 |
| 21: nonbjetsM_4pt | 0.07253 |
| 22: bjetsM_2pt | 0.07138 |
| 23: bjetsM_minDeltaR | 0.07062 |
| 24: jets_3pt | 0.06277 |
| 25: toptagger_3pt | 0.05575 |
| 26: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_num | 0.2373 |
| 3: bjetsM_3pt | 0.2363 |
| 4: jets_7pt | 0.1804 |
| 5: jets_number | 0.1791 |
| 6: toptagger_HT | 0.1697 |
| 7: bjetsM_invariantMass | 0.1477 |
| 8: jets_6pt | 0.1461 |
| 9: jets_8pt | 0.1405 |
| 10: toptagger_invariantMass | 0.1357 |
| 11: toptagger_num | 0.1351 |
| 12: bjetsM_HT | 0.1307 |
| 13: toptagger_2pt | 0.1295 |
| 14: jets_5pt | 0.1172 |
| 15: jets_transMass | 0.1116 |
| 16: jets_rationHT_4toRest | 0.1109 |
| 17: nonbjetsM_num | 0.1015 |
| 18: bjetsM_4pt | 0.09661 |
| 19: jets_4pt | 0.09183 |
| 20: jets_9pt | 0.08548 |
| 21: nonbjetsM_4pt | 0.07253 |
| 22: bjetsM_2pt | 0.07138 |
| 23: bjetsM_minDeltaR | 0.07062 |
| 24: jets_3pt | 0.06277 |
| 25: toptagger_3pt | 0.05575 |
| 26: toptagger_MHT | 0.05152 |
| 27: bjetsM_1pt | 0.04679 |

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_num | 0.2373 |
| 3: bjetsM_3pt | 0.2363 |
| 4: jets_7pt | 0.1804 |
| 5: jets_number | 0.1791 |
| 6: toptagger_HT | 0.1697 |
| 7: bjetsM_invariantMass | 0.1477 |
| 8: jets_6pt | 0.1461 |
| 9: jets_8pt | 0.1405 |
| 10: toptagger_invariantMass | 0.1357 |
| 11: toptagger_num | 0.1351 |
| 12: bjetsM_HT | 0.1307 |
| 13: toptagger_2pt | 0.1295 |
| 14: toptagger_minDeltaR_v1 | 0.1195 |
| 15: jets_5pt | 0.1172 |
| 16: jets_transMass | 0.1116 |
| 17: jets_rationHT_4toRest | 0.1109 |
| 18: nonbjetsM_num | 0.1015 |
| 19: bjetsM_4pt | 0.09661 |
| 20: jets_4pt | 0.09183 |
| 21: jets_9pt | 0.08548 |
| 22: nonbjetsM_4pt | 0.07253 |
| 23: bjetsM_2pt | 0.07138 |
| 24: bjetsM_minDeltaR | 0.07062 |
| 25: jets_3pt | 0.06277 |
| 26: toptagger_3pt | 0.05575 |
| 27: toptagger_MHT | 0.05152 |
| 28: bjetsM_1pt | 0.04679 |

Input lists

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_num | 0.2373 |
| 3: bjetsM_3pt | 0.2363 |
| 4: jets_7pt | 0.1804 |
| 5: jets_number | 0.1791 |
| 6: toptagger_HT | 0.1697 |
| 7: toptagger_transMass | 0.1635 |
| 8: bjetsM_invariantMass | 0.1477 |
| 9: jets_6pt | 0.1461 |
| 10: jets_8pt | 0.1405 |
| 11: toptagger_invariantMass | 0.1357 |
| 12: toptagger_num | 0.1351 |
| 13: bjetsM_HT | 0.1307 |
| 14: toptagger_2pt | 0.1295 |
| 15: toptagger_minDeltaR_v1 | 0.1195 |
| 16: jets_5pt | 0.1172 |
| 17: jets_transMass | 0.1116 |
| 18: jets_rationHT_4toRest | 0.1109 |
| 19: nonbjetsM_num | 0.1015 |
| 20: bjetsM_4pt | 0.09661 |
| 21: jets_4pt | 0.09183 |
| 22: jets_9pt | 0.08548 |
| 23: nonbjetsM_4pt | 0.07253 |
| 24: bjetsM_2pt | 0.07138 |
| 25: bjetsM_minDeltaR | 0.07062 |
| 26: jets_3pt | 0.06277 |
| 27: toptagger_3pt | 0.05575 |
| 28: toptagger_MHT | 0.05152 |
| 29: bjetsM_1pt | 0.04679 |

| 1tau1l | |
|----------------|--------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: bjetsM_num | 0.2373 |
| 3: bjetsM_3pt | 0.2363 |
| 4: jets_7pt | 0.1804 |
| 5: jets_number | 0.1791 |
| 6: toptagger_HT | 0.1697 |
| 7: toptagger_transMass | 0.1635 |
| 8: bjetsM_invariantMass | 0.1477 |
| 9: jets_6pt | 0.1461 |
| 10: jets_8pt | 0.1405 |
| 11: toptagger_invariantMass | 0.1357 |
| 12: toptagger_num | 0.1351 |
| 13: bjetsM_HT | 0.1307 |
| 14: toptagger_2pt | 0.1295 |
| 15: toptagger_minDeltaR_v1 | 0.1195 |
| 16: jets_5pt | 0.1172 |
| 17: bjetsM_transMass | 0.1153 |
| 18: jets_transMass | 0.1116 |
| 19: jets_rationHT_4toRest | 0.1109 |
| 20: nonbjetsM_num | 0.1015 |
| 21: bjetsM_4pt | 0.09661 |
| 22: jets_4pt | 0.09183 |
| 23: jets_9pt | 0.08548 |
| 24: nonbjetsM_4pt | 0.07253 |
| 25: bjetsM_2pt | 0.07138 |
| 26: bjetsM_minDeltaR | 0.07062 |
| 27: jets_3pt | 0.06277 |
| 28: toptagger_3pt | 0.05575 |
| 29: toptagger_MHT | 0.05152 |
| 30: bjetsM_1pt | 0.04679 |

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_4largestBScoreSum | 0.2611 |
| 3: bjetsM_num | 0.2373 |
| 4: bjetsM_3pt | 0.2363 |
| 5: jets_7pt | 0.1804 |
| 6: jets_number | 0.1791 |
| 7: toptagger_HT | 0.1697 |
| 8: toptagger_transMass | 0.1635 |
| 9: bjetsM_invariantMass | 0.1477 |
| 10: jets_6pt | 0.1461 |
| 11: jets_8pt | 0.1405 |
| 12: toptagger_invariantMass | 0.1357 |
| 13: toptagger_num | 0.1351 |
| 14: bjetsM_HT | 0.1307 |
| 15: toptagger_2pt | 0.1295 |
| 16: toptagger_minDeltaR_v1 | 0.1195 |
| 17: jets_5pt | 0.1172 |
| 18: bjetsM_transMass | 0.1153 |
| 19: jets_transMass | 0.1116 |
| 20: jets_rationHT_4toRest | 0.1109 |
| 21: nonbjetsM_num | 0.1015 |
| 22: bjetsM_4pt | 0.09661 |
| 23: jets_4pt | 0.09183 |
| 24: jets_9pt | 0.08548 |
| 25: nonbjetsM_4pt | 0.07253 |
| 26: bjetsM_2pt | 0.07138 |
| 27: bjetsM_minDeltaR | 0.07062 |
| 28: jets_3pt | 0.06277 |
| 29: toptagger_3pt | 0.05575 |
| 30: toptagger_MHT | 0.05152 |
| 31: bjetsM_1pt | 0.04679 |

Input lists

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_4largestBscoreSum | 0.2611 |
| 3: bjetsM_num | 0.2373 |
| 4: bjetsM_3pt | 0.2363 |
| 5: jets_7pt | 0.1804 |
| 6: jets_number | 0.1791 |
| 7: toptagger_HT | 0.1697 |
| 8: toptagger_transMass | 0.1635 |
| 9: bjetsM_invariantMass | 0.1477 |
| 10: jets_6pt | 0.1461 |
| 11: jets_8pt | 0.1405 |
| 12: toptagger_invariantMass | 0.1357 |
| 13: toptagger_num | 0.1351 |
| 14: bjetsM_HT | 0.1307 |
| 15: toptagger_2pt | 0.1295 |
| 16: toptagger_minDeltaR_v1 | 0.1195 |
| 17: jets_5pt | 0.1172 |
| 18: bjetsM_transMass | 0.1153 |
| 19: jets_transMass | 0.1116 |
| 20: jets_ratioHT_4toRest | 0.1109 |
| 21: jets_HT | 0.1048 |
| 22: nonbjetsM_num | 0.1015 |
| 23: bjetsM_4pt | 0.09661 |
| 24: jets_4pt | 0.09183 |
| 25: jets_9pt | 0.08548 |
| 26: nonbjetsM_4pt | 0.07253 |
| 27: bjetsM_2pt | 0.07138 |
| 28: bjetsM_minDeltaR | 0.07062 |
| 29: jets_3pt | 0.06277 |
| 30: toptagger_3pt | 0.05575 |
| 31: toptagger_MHT | 0.05152 |
| 32: bjetsM_1pt | 0.04679 |

| 1tau1l | |
|-----------------|--------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |

| 1tau1l | |
|------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_4largestBscoreSum | 0.2611 |
| 3: bjetsM_num | 0.2373 |
| 4: bjetsM_3pt | 0.2363 |
| 5: bjetsL_num | 0.2265 |
| 6: bjetsL_3pt | 0.2079 |
| 7: bjetsL_4pt | 0.1936 |
| 8: jets_7pt | 0.1804 |
| 9: jets_number | 0.1791 |
| 10: toptagger_HT | 0.1697 |
| 11: bjetsL_HT | 0.1651 |
| 12: toptagger_transMass | 0.1635 |
| 13: bjetsL_invariantMass | 0.1567 |
| 14: bjetsL_transMass | 0.1515 |
| 15: bjetsM_invariantMass | 0.1477 |
| 16: jets_6pt | 0.1461 |
| 17: bjetsT_num | 0.1429 |
| 18: jets_8pt | 0.1405 |
| 19: bjetsT_3pt | 0.1393 |
| 20: toptagger_invariantMass | 0.1357 |
| 21: toptagger_num | 0.1351 |
| 22: bjetsM_HT | 0.1307 |
| 23: toptagger_2pt | 0.1295 |
| 24: toptagger_minDeltaR_v1 | 0.1195 |
| 25: jets_5pt | 0.1172 |
| 26: bjetsM_transMass | 0.1153 |
| 27: jets_transMass | 0.1116 |
| 28: jets_ratioHT_4toRest | 0.1109 |
| 29: jets_HT | 0.1048 |
| 30: nonbjetsM_num | 0.1015 |
| 31: bjetsT_invariantMass | 0.09939 |
| 32: bjetsL_minDeltaR | 0.09777 |
| 33: bjetsM_4pt | 0.09661 |
| 34: bjets_2pt | 0.09659 |
| 35: jets_6pt | 0.09183 |
| 36: bjetsT_HT | 0.09058 |
| 37: jets_9pt | 0.08548 |
| 38: bjetsT_transMass | 0.08038 |
| 39: nonbjetsT_num | 0.07897 |
| 40: nonbjetsM_4pt | 0.07253 |
| 41: bjetsM_2pt | 0.07138 |
| 42: bjetsM_minDeltaR | 0.07062 |
| 43: nonbjetsT_4pt | 0.06607 |
| 44: jets_3pt | 0.06277 |
| 45: bjetsT_2pt | 0.06104 |
| 46: toptagger_3pt | 0.05575 |
| 47: bjetsL_1pt | 0.05548 |
| 48: bjetsT_minDeltaR | 0.05531 |
| 49: toptagger_MHT | 0.05152 |
| 50: bjetsM_1pt | 0.04679 |

Input lists

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: bjetsM_minDeltaR | 0.07062 |
| 7: toptagger_MHT | 0.05152 |

| 1tau1l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2761 |
| 2: jets_7pt | 0.1804 |
| 3: toptagger_HT | 0.1697 |
| 4: bjetsM_invariantMass | 0.1477 |
| 5: jets_6pt | 0.1461 |
| 6: bjetsM_minDeltaR | 0.07062 |
| 7: toptagger_3pt | 0.05575 |
| 8: toptagger_MHT | 0.05152 |

Input lists

| 1tau2l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: jets_4pt | 0.07252 |
| 6: toptagger_1pt | 0.06153 |
| 7: jets_aplanarity | 0.06027 |
| 8: tausF_MHT | 0.05242 |
| 9: jets_tausF_minDeltaR | 0.04905 |
| 10: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: bjetsM_invariantMass | 0.1081 |
| 6: jets_4pt | 0.07252 |
| 7: toptagger_1pt | 0.06153 |
| 8: jets_aplanarity | 0.06027 |
| 9: tausF_MHT | 0.05242 |
| 10: jets_tausF_minDeltaR | 0.04905 |
| 11: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: bjetsM_minDeltaR | 0.1096 |
| 6: bjetsM_invariantMass | 0.1081 |
| 7: jets_4pt | 0.07252 |
| 8: toptagger_1pt | 0.06153 |
| 9: jets_aplanarity | 0.06027 |
| 10: tausF_MHT | 0.05242 |
| 11: jets_tausF_minDeltaR | 0.04905 |
| 12: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: bjetsM_minDeltaR | 0.1096 |
| 6: bjetsM_invariantMass | 0.1081 |
| 7: jets_4pt | 0.07252 |
| 8: jets_transMass | 0.06168 |
| 9: toptagger_1pt | 0.06153 |
| 10: jets_aplanarity | 0.06027 |
| 11: tausF_MHT | 0.05242 |
| 12: jets_tausF_minDeltaR | 0.04905 |
| 13: jetL_minDeltaR | 0.04646 |

Input lists

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: bjetsM_minDeltaR | 0.1096 |
| 6: bjetsM_invariantMass | 0.1081 |
| 7: jets_4pt | 0.07252 |
| 8: jets_transMass | 0.06168 |
| 9: toptagger_1pt | 0.06153 |
| 10: jets_aplanarity | 0.06027 |
| 11: tausF_MHT | 0.05242 |
| 12: nonbjetsM_1pt | 0.04972 |
| 13: jets_tausF_minDeltaR | 0.04905 |
| 14: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: bjetsM_minDeltaR | 0.1096 |
| 6: bjetsM_invariantMass | 0.1081 |
| 7: bjetsM_4pt | 0.08768 |
| 8: jets_4pt | 0.07252 |
| 9: jets_transMass | 0.06168 |
| 10: toptagger_1pt | 0.06153 |
| 11: jets_aplanarity | 0.06027 |
| 12: tausF_MHT | 0.05242 |
| 13: nonbjetsM_1pt | 0.04972 |
| 14: jets_tausF_minDeltaR | 0.04905 |
| 15: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_ratioHT_4toRest | 0.1368 |
| 4: toptagger_transMass | 0.1299 |
| 5: bjetsM_minDeltaR | 0.1096 |
| 6: bjetsM_invariantMass | 0.1081 |
| 7: toptagger_MHT | 0.08903 |
| 8: bjetsM_4pt | 0.08768 |
| 9: jets_4pt | 0.07252 |
| 10: jets_transMass | 0.06168 |
| 11: toptagger_1pt | 0.06153 |
| 12: jets_aplanarity | 0.06027 |
| 13: tausF_MHT | 0.05242 |
| 14: nonbjetsM_1pt | 0.04972 |
| 15: jets_tausF_minDeltaR | 0.04905 |
| 16: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|--------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_ratioHT_4toRest | 0.1368 |
| 5: toptagger_transMass | 0.1299 |
| 6: bjetsM_minDeltaR | 0.1096 |
| 7: bjetsM_invariantMass | 0.1081 |
| 8: toptagger_MHT | 0.08903 |
| 9: bjetsM_4pt | 0.08768 |
| 10: jets_4pt | 0.07252 |
| 11: jets_transMass | 0.06168 |
| 12: toptagger_1pt | 0.06153 |
| 13: jets_aplanarity | 0.06027 |
| 14: tausF_MHT | 0.05242 |
| 15: nonbjetsM_1pt | 0.04972 |
| 16: jets_tausF_minDeltaR | 0.04905 |
| 17: jetL_minDeltaR | 0.04646 |

Input lists

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_rationHT_4toRest | 0.1368 |
| 5: toptagger_transMass | 0.1299 |
| 6: toptagger_invariantMass | 0.1177 |
| 7: bjetsM_minDeltaR | 0.1096 |
| 8: bjetsM_invariantMass | 0.1081 |
| 9: toptagger_MHT | 0.08903 |
| 10: bjetsM_4pt | 0.08768 |
| 11: jets_4pt | 0.07252 |
| 12: jets_transMass | 0.06168 |
| 13: toptagger_1pt | 0.06153 |
| 14: jets_aplanarity | 0.06027 |
| 15: tausF_MHT | 0.05242 |
| 16: nonbjetsM_1pt | 0.04972 |
| 17: jets_tausF_minDeltaR | 0.04905 |
| 18: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_rationHT_4toRest | 0.1368 |
| 5: toptagger_transMass | 0.1299 |
| 6: toptagger_invariantMass | 0.1177 |
| 7: bjetsM_minDeltaR | 0.1096 |
| 8: bjetsM_invariantMass | 0.1081 |
| 9: toptagger_MHT | 0.08903 |
| 10: bjetsM_4pt | 0.08768 |
| 11: jets_4pt | 0.07252 |
| 12: jets_transMass | 0.06168 |
| 13: toptagger_1pt | 0.06153 |
| 14: jets_aplanarity | 0.06027 |
| 15: tausF_MHT | 0.05242 |
| 16: jets_3pt | 0.04978 |
| 17: nonbjetsM_1pt | 0.04972 |
| 18: jets_tausF_minDeltaR | 0.04905 |
| 19: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------|--------|
| 1: jets_bScore | 0.2893 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_rationHT_4toRest | 0.1368 |
| 5: jets_6pt | 0.1353 |
| 6: toptagger_transMass | 0.1299 |
| 7: toptagger_invariantMass | 0.1177 |
| 8: bjetsM_minDeltaR | 0.1096 |
| 9: bjetsM_invariantMass | 0.1081 |
| 10: toptagger_MHT | 0.08903 |
| 11: bjetsM_4pt | 0.08768 |
| 12: jets_4pt | 0.07252 |
| 13: jets_transMass | 0.06168 |
| 14: toptagger_1pt | 0.06153 |
| 15: jets_aplanarity | 0.06027 |
| 16: tausF_MHT | 0.05242 |
| 17: jets_3pt | 0.04978 |
| 18: nonbjetsM_1pt | 0.04972 |
| 19: jets_tausF_minDeltaR | 0.04905 |
| 20: jetL_minDeltaR | 0.04646 |

Input lists

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_ratioHT_4toRest | 0.1368 |
| 5: jets_6pt | 0.1353 |
| 6: toptagger_transMass | 0.1299 |
| 7: toptagger_invariantMass | 0.1177 |
| 8: bjetsM_minDeltaR | 0.1096 |
| 9: bjetsM_invariantMass | 0.1081 |
| 10: toptagger_MHT | 0.08903 |
| 11: bjetsM_4pt | 0.08768 |
| 12: bjetsM_HT | 0.08392 |
| 13: jets_4pt | 0.07252 |
| 14: jets_transMass | 0.06168 |
| 15: toptagger_1pt | 0.06153 |
| 16: jets_aplanarity | 0.06027 |
| 17: tausF_MHT | 0.05242 |
| 18: jets_3pt | 0.04978 |
| 19: nonbjetsM_1pt | 0.04972 |
| 20: jets_tausF_minDeltaR | 0.04905 |
| 21: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_ratioHT_4toRest | 0.1368 |
| 5: jets_6pt | 0.1353 |
| 6: toptagger_transMass | 0.1299 |
| 7: jets_5pt | 0.1227 |
| 8: toptagger_invariantMass | 0.1177 |
| 9: bjetsM_minDeltaR | 0.1096 |
| 10: bjetsM_invariantMass | 0.1081 |
| 11: toptagger_MHT | 0.08903 |
| 12: bjetsM_4pt | 0.08768 |
| 13: bjetsM_HT | 0.08392 |
| 14: jets_4pt | 0.07252 |
| 15: jets_transMass | 0.06168 |
| 16: toptagger_1pt | 0.06153 |
| 17: jets_aplanarity | 0.06027 |
| 18: tausF_MHT | 0.05242 |
| 19: jets_3pt | 0.04978 |
| 20: nonbjetsM_1pt | 0.04972 |
| 21: jets_tausF_minDeltaR | 0.04905 |
| 22: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_ratioHT_4toRest | 0.1368 |
| 5: jets_6pt | 0.1353 |
| 6: toptagger_transMass | 0.1299 |
| 7: jets_5pt | 0.1227 |
| 8: toptagger_invariantMass | 0.1177 |
| 9: bjetsM_minDeltaR | 0.1096 |
| 10: toptagger_num | 0.1084 |
| 11: bjetsM_invariantMass | 0.1081 |
| 12: toptagger_MHT | 0.08903 |
| 13: bjetsM_4pt | 0.08768 |
| 14: bjetsM_HT | 0.08392 |
| 15: jets_4pt | 0.07252 |
| 16: jets_transMass | 0.06168 |
| 17: toptagger_1pt | 0.06153 |
| 18: jets_aplanarity | 0.06027 |
| 19: tausF_MHT | 0.05242 |
| 20: jets_3pt | 0.04978 |
| 21: nonbjetsM_1pt | 0.04972 |
| 22: jets_tausF_minDeltaR | 0.04905 |
| 23: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: jets_number | 0.1379 |
| 4: jets_ratioHT_4toRest | 0.1368 |
| 5: jets_6pt | 0.1353 |
| 6: toptagger_transMass | 0.1299 |
| 7: jets_5pt | 0.1227 |
| 8: toptagger_invariantMass | 0.1177 |
| 9: bjetsM_minDeltaR | 0.1096 |
| 10: toptagger_num | 0.1084 |
| 11: bjetsM_invariantMass | 0.1081 |
| 12: jets_7pt | 0.08982 |
| 13: toptagger_MHT | 0.08903 |
| 14: bjetsM_4pt | 0.08768 |
| 15: bjetsM_HT | 0.08392 |
| 16: jets_4pt | 0.07252 |
| 17: jets_transMass | 0.06168 |
| 18: toptagger_1pt | 0.06153 |
| 19: jets_aplanarity | 0.06027 |
| 20: tausF_MHT | 0.05242 |
| 21: jets_3pt | 0.04978 |
| 22: nonbjetsM_1pt | 0.04972 |
| 23: jets_tausF_minDeltaR | 0.04905 |
| 24: jetL_minDeltaR | 0.04646 |

Input lists

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: jets_5pt | 0.1227 |
| 9: toptagger_invariantMass | 0.1177 |
| 10: bjetsM_minDeltaR | 0.1096 |
| 11: toptagger_num | 0.1084 |
| 12: bjetsM_invariantMass | 0.1081 |
| 13: jets_7pt | 0.08982 |
| 14: toptagger_MHT | 0.08903 |
| 15: bjetsM_4pt | 0.08768 |
| 16: bjetsM_HT | 0.08392 |
| 17: jets_4pt | 0.07252 |
| 18: jets_transMass | 0.06168 |
| 19: toptagger_1pt | 0.06153 |
| 20: jets_aplanarity | 0.06027 |
| 21: tausF_MHT | 0.05242 |
| 22: jets_3pt | 0.04978 |
| 23: nonbjetsM_1pt | 0.04972 |
| 24: jets_tausF_minDeltaR | 0.04905 |
| 25: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: jets_5pt | 0.1227 |
| 9: toptagger_invariantMass | 0.1177 |
| 10: bjetsM_minDeltaR | 0.1096 |
| 11: toptagger_num | 0.1084 |
| 12: bjetsM_invariantMass | 0.1081 |
| 13: jets_7pt | 0.08982 |
| 14: toptagger_MHT | 0.08903 |
| 15: bjetsM_4pt | 0.08768 |
| 16: bjetsM_HT | 0.08392 |
| 17: jets_4pt | 0.07252 |
| 18: jets_transMass | 0.06168 |
| 19: toptagger_1pt | 0.06153 |
| 20: jets_aplanarity | 0.06027 |
| 21: tausF_MHT | 0.05242 |
| 22: nonbjetsM_num | 0.05151 |
| 23: jets_3pt | 0.04978 |
| 24: nonbjetsM_1pt | 0.04972 |
| 25: jets_tausF_minDeltaR | 0.04905 |
| 26: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: jets_5pt | 0.1227 |
| 9: toptagger_invariantMass | 0.1177 |
| 10: bjetsM_minDeltaR | 0.1096 |
| 11: toptagger_num | 0.1084 |
| 12: bjetsM_invariantMass | 0.1081 |
| 13: toptagger_minDeltaR_v1 | 0.09191 |
| 14: jets_7pt | 0.08982 |
| 15: toptagger_MHT | 0.08903 |
| 16: bjetsM_4pt | 0.08768 |
| 17: bjetsM_HT | 0.08392 |
| 18: jets_4pt | 0.07252 |
| 19: jets_transMass | 0.06168 |
| 20: toptagger_1pt | 0.06153 |
| 21: jets_aplanarity | 0.06027 |
| 22: tausF_MHT | 0.05242 |
| 23: nonbjetsM_num | 0.05151 |
| 24: jets_3pt | 0.04978 |
| 25: nonbjetsM_1pt | 0.04972 |
| 26: jets_tausF_minDeltaR | 0.04905 |
| 27: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: jets_5pt | 0.1227 |
| 9: toptagger_invariantMass | 0.1177 |
| 10: bjetsM_minDeltaR | 0.1096 |
| 11: toptagger_num | 0.1084 |
| 12: bjetsM_invariantMass | 0.1081 |
| 13: toptagger_minDeltaR_v1 | 0.09191 |
| 14: jets_7pt | 0.08982 |
| 15: toptagger_MHT | 0.08903 |
| 16: bjetsM_4pt | 0.08768 |
| 17: toptagger_2pt | 0.08735 |
| 18: bjetsM_HT | 0.08392 |
| 19: jets_4pt | 0.07252 |
| 20: jets_transMass | 0.06168 |
| 21: toptagger_1pt | 0.06153 |
| 22: jets_aplanarity | 0.06027 |
| 23: tausF_MHT | 0.05242 |
| 24: nonbjetsM_num | 0.05151 |
| 25: jets_3pt | 0.04978 |
| 26: nonbjetsM_1pt | 0.04972 |
| 27: jets_tausF_minDeltaR | 0.04905 |
| 28: jetL_minDeltaR | 0.04646 |

Input lists

| 1tau2l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: toptagger_HT | 0.1231 |
| 9: jets_5pt | 0.1227 |
| 10: toptagger_invariantMass | 0.1177 |
| 11: bjetsM_minDeltaR | 0.1096 |
| 12: toptagger_num | 0.1084 |
| 13: bjetsM_invariantMass | 0.1061 |
| 14: toptagger_minDeltaR_v1 | 0.09191 |
| 15: jets_7pt | 0.08982 |
| 16: toptagger_MHT | 0.08903 |
| 17: bjetsM_4pt | 0.08768 |
| 18: toptagger_2pt | 0.08735 |
| 19: bjetsM_HT | 0.08392 |
| 20: jets_4pt | 0.07252 |
| 21: jets_transMass | 0.06168 |
| 22: toptagger_1pt | 0.06153 |
| 23: jets_aplanarity | 0.06027 |
| 24: tausF_MHT | 0.05242 |
| 25: nonbjetsM_num | 0.05151 |
| 26: jets_3pt | 0.04978 |
| 27: nonbjetsM_1pt | 0.04972 |
| 28: jets_tausF_minDeltaR | 0.04905 |
| 29: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: toptagger_1pt | 0.06153 |

| 1tau2l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: toptagger_HT | 0.1231 |
| 9: jets_5pt | 0.1227 |
| 10: toptagger_invariantMass | 0.1177 |
| 11: bjetsM_minDeltaR | 0.1096 |
| 12: toptagger_num | 0.1084 |
| 13: bjetsM_invariantMass | 0.1061 |
| 14: toptagger_minDeltaR_v1 | 0.09191 |
| 15: jets_7pt | 0.08982 |
| 16: toptagger_MHT | 0.08903 |
| 17: bjetsM_4pt | 0.08768 |
| 18: toptagger_2pt | 0.08735 |
| 19: bjetsM_HT | 0.08392 |
| 20: jets_4pt | 0.07252 |
| 21: bjetsM_transMass | 0.06931 |
| 22: jets_transMass | 0.06168 |
| 23: toptagger_1pt | 0.06153 |
| 24: jets_aplanarity | 0.06027 |
| 25: tausF_MHT | 0.05242 |
| 26: nonbjetsM_num | 0.05151 |
| 27: jets_3pt | 0.04978 |
| 28: nonbjetsM_1pt | 0.04972 |
| 29: jets_tausF_minDeltaR | 0.04905 |
| 30: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: bjetsM_3pt | 0.2719 |
| 3: bjetsM_num | 0.269 |
| 4: jets_number | 0.1379 |
| 5: jets_ratioHT_4toRest | 0.1368 |
| 6: jets_6pt | 0.1353 |
| 7: toptagger_transMass | 0.1299 |
| 8: toptagger_HT | 0.1231 |
| 9: jets_5pt | 0.1227 |
| 10: toptagger_invariantMass | 0.1177 |
| 11: bjetsM_minDeltaR | 0.1096 |
| 12: toptagger_num | 0.1084 |
| 13: bjetsM_invariantMass | 0.1061 |
| 14: toptagger_minDeltaR_v1 | 0.09191 |
| 15: jets_7pt | 0.08982 |
| 16: toptagger_MHT | 0.08903 |
| 17: bjetsM_4pt | 0.08768 |
| 18: toptagger_2pt | 0.08735 |
| 19: bjetsM_HT | 0.08392 |
| 20: jets_4pt | 0.07252 |
| 21: bjetsM_transMass | 0.06931 |
| 22: jets_transMass | 0.06168 |
| 23: toptagger_1pt | 0.06153 |
| 24: jets_aplanarity | 0.06027 |
| 25: tausF_MHT | 0.05242 |
| 26: nonbjetsM_num | 0.05151 |
| 27: jets_3pt | 0.04978 |
| 28: nonbjetsM_1pt | 0.04972 |
| 29: jets_tausF_minDeltaR | 0.04905 |
| 30: tausL_MHT | 0.047 |
| 31: jetL_minDeltaR | 0.04646 |

Input lists

| 1tau2l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_4largestBscoreSum | 0.2846 |
| 3: bjetsM_3pt | 0.2719 |
| 4: bjetsM_num | 0.269 |
| 5: jets_number | 0.1379 |
| 6: jets_ratioHT_4toRest | 0.1368 |
| 7: jets_6pt | 0.1353 |
| 8: toptagger_transMass | 0.1299 |
| 9: toptagger_HT | 0.1231 |
| 10: jets_5pt | 0.1227 |
| 11: toptagger_invariantMass | 0.1177 |
| 12: bjetsM_minDeltaR | 0.1096 |
| 13: toptagger_num | 0.1084 |
| 14: bjetsM_invariantMass | 0.1061 |
| 15: toptagger_minDeltaR_v1 | 0.09191 |
| 16: jets_7pt | 0.09982 |
| 17: toptagger_MHT | 0.08903 |
| 18: bjetsM_4pt | 0.08768 |
| 19: toptagger_2pt | 0.08735 |
| 20: bjetsM_HT | 0.08392 |
| 21: jets_4pt | 0.07252 |
| 22: bjetsM_transMass | 0.06931 |
| 23: jets_transMass | 0.06168 |
| 24: toptagger_1pt | 0.06153 |
| 25: jets_aplanarity | 0.06027 |
| 26: tausF_MHT | 0.05242 |
| 27: nonbjetsM_num | 0.05151 |
| 28: jets_3pt | 0.04978 |
| 29: nonbjetsM_1pt | 0.04972 |
| 30: jets_tausF_minDeltaR | 0.04905 |
| 31: tausL_MHT | 0.047 |
| 32: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_4largestBscoreSum | 0.2846 |
| 3: bjetsM_3pt | 0.2719 |
| 4: bjetsM_num | 0.269 |
| 5: jets_number | 0.1379 |
| 6: jets_ratioHT_4toRest | 0.1368 |
| 7: jets_6pt | 0.1353 |
| 8: toptagger_transMass | 0.1299 |
| 9: toptagger_HT | 0.1231 |
| 10: jets_5pt | 0.1227 |
| 11: toptagger_invariantMass | 0.1177 |
| 12: bjetsM_minDeltaR | 0.1096 |
| 13: toptagger_num | 0.1084 |
| 14: bjetsM_invariantMass | 0.1061 |
| 15: toptagger_minDeltaR_v1 | 0.09191 |
| 16: jets_7pt | 0.09982 |
| 17: toptagger_MHT | 0.08903 |
| 18: bjetsM_4pt | 0.08768 |
| 19: toptagger_2pt | 0.08735 |
| 20: bjetsM_HT | 0.08392 |
| 21: jets_4pt | 0.07252 |
| 22: bjetsM_transMass | 0.06931 |
| 23: jets_transMass | 0.06168 |
| 24: toptagger_1pt | 0.06153 |
| 25: jets_aplanarity | 0.06027 |
| 26: jets_HT | 0.05394 |
| 27: tausF_MHT | 0.05242 |
| 28: nonbjetsM_num | 0.05151 |
| 29: jets_3pt | 0.04978 |
| 30: nonbjetsM_1pt | 0.04972 |
| 31: jets_tausF_minDeltaR | 0.04905 |
| 32: tausL_MHT | 0.047 |
| 33: jetL_minDeltaR | 0.04646 |

| 1tau2l | |
|------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: toptagger_1pt | 0.06153 |
| 3: tausF_MHT | 0.05242 |

| 1tau2l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: toptagger_1pt | 0.06153 |
| 3: tausF_MHT | 0.05242 |
| 4: jets_tausF_minDeltaR | 0.04905 |

Input lists

| 1tau2l | |
|-----------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_dIargestBscoreSum | 0.2846 |
| 3: bjetsM_3pt | 0.2719 |
| 4: bjetsM_num | 0.269 |
| 5: bjetsL_num | 0.2452 |
| 6: bjetsL_3pt | 0.224 |
| 7: bjetsL_4pt | 0.181 |
| 8: jets_number | 0.1379 |
| 9: bjetsL_minDeltaR | 0.1372 |
| 10: jets_rationHT_4toRest | 0.1368 |
| 11: bjetsT_3pt | 0.1358 |
| 12: bjetsT_num | 0.1355 |
| 13: jets_6pt | 0.1353 |
| 14: toptagger_transMass | 0.1299 |
| 15: bjetsL_invariantMass | 0.1234 |
| 16: toptagger_HT | 0.1231 |
| 17: jets_5pt | 0.1227 |
| 18: toptagger_invariantMass | 0.1177 |
| 19: bjetsM_minDeltaR | 0.1096 |
| 20: toptagger_num | 0.1084 |
| 21: bjetsM_invariantMass | 0.1081 |
| 22: bjetsL_HT | 0.09973 |
| 23: toptagger_minDeltaR_v1 | 0.09191 |
| 24: jets_7pt | 0.08982 |
| 25: toptagger_MHT | 0.08903 |
| 26: bjetsM_4pt | 0.08768 |
| 27: toptagger_2pt | 0.08735 |
| 28: bjetsL_transMass | 0.08473 |
| 29: bjetsM_HT | 0.08392 |
| 30: bjetsL_tausF_minDeltaR | 0.07759 |
| 31: bjetsT_invariantMass | 0.07427 |
| 32: jets_4pt | 0.07252 |
| 33: bjetsM_transMass | 0.06931 |
| 34: bjetsT_minDeltaR | 0.0649 |
| 35: jets_transMass | 0.06168 |
| 36: toptagger_1pt | 0.06153 |
| 37: jets_aplanarity | 0.06027 |
| 38: bjetsL_2pt | 0.05489 |
| 39: bjetsT_HT | 0.05417 |
| 40: jets_HT | 0.05394 |
| 41: tausF_MHT | 0.05242 |
| 42: nonbjetsM_num | 0.05151 |
| 43: nonbjetsT_num | 0.05141 |
| 44: jets_3pt | 0.04978 |
| 45: nonbjetsM_1pt | 0.04972 |
| 46: jets_tausF_minDeltaR | 0.04905 |
| 47: tausL_MHT | 0.047 |
| 48: jetL_minDeltaR | 0.04646 |
| 49: bjetsT_2pt | 0.04554 |
| 50: bjetsT_transMass | 0.04547 |

| 1tau2l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: toptagger_1pt | 0.06153 |
| 4: tausF_MHT | 0.05242 |
| 5: jets_tausF_minDeltaR | 0.04905 |

| 1tau2l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: toptagger_1pt | 0.06153 |
| 4: jets_aplanarity | 0.06027 |
| 5: tausF_MHT | 0.05242 |
| 6: jets_tausF_minDeltaR | 0.04905 |

| 1tau2l | |
|-------------------------|---------|
| 1: jets_bScore | 0.2893 |
| 2: jets_number | 0.1379 |
| 3: jets_4pt | 0.07252 |
| 4: toptagger_1pt | 0.06153 |
| 5: jets_aplanarity | 0.06027 |
| 6: tausF_MHT | 0.05242 |
| 7: jets_tausF_minDeltaR | 0.04905 |

Input lists

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: toptagger_invariantMass | 0.1664 |
| 6: jets_4pt | 0.1153 |
| 7: toptagger_1pt | 0.1043 |
| 8: jets_tausF_minDeltaR | 0.1033 |
| 9: jetL_minDeltaR | 0.09658 |
| 10: jets_average_deltaR | 0.09153 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: jets_rationHT_4toRest | 0.1849 |
| 6: toptagger_invariantMass | 0.1664 |
| 7: jets_4pt | 0.1153 |
| 8: toptagger_1pt | 0.1043 |
| 9: jets_tausF_minDeltaR | 0.1033 |
| 10: jetL_minDeltaR | 0.09658 |
| 11: jets_average_deltaR | 0.09153 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_rationHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: jets_4pt | 0.1153 |
| 9: toptagger_1pt | 0.1043 |
| 10: jets_tausF_minDeltaR | 0.1033 |
| 11: jetL_minDeltaR | 0.09658 |
| 12: jets_average_deltaR | 0.09153 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_rationHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: bjetsM_invariantMass | 0.1349 |
| 9: jets_4pt | 0.1153 |
| 10: toptagger_1pt | 0.1043 |
| 11: jets_tausF_minDeltaR | 0.1033 |
| 12: jetL_minDeltaR | 0.09658 |
| 13: jets_average_deltaR | 0.09153 |

Input lists

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_rationHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: bjetsM_invariantMass | 0.1349 |
| 9: jets_4pt | 0.1153 |
| 10: toptagger_1pt | 0.1043 |
| 11: jets_tausF_minDeltaR | 0.1033 |
| 12: jetL_minDeltaR | 0.09658 |
| 13: jets_average_deltaR | 0.09153 |
| 14: tausL_HT | 0.08771 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_rationHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: bjetsM_invariantMass | 0.1349 |
| 9: jets_4pt | 0.1153 |
| 10: jets_HT | 0.1149 |
| 11: toptagger_1pt | 0.1043 |
| 12: jets_tausF_minDeltaR | 0.1033 |
| 13: jetL_minDeltaR | 0.09658 |
| 14: jets_average_deltaR | 0.09153 |
| 15: tausL_HT | 0.08771 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_rationHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: bjetsM_invariantMass | 0.1349 |
| 9: jets_4pt | 0.1153 |
| 10: jets_HT | 0.1149 |
| 11: toptagger_1pt | 0.1043 |
| 12: jets_tausF_minDeltaR | 0.1033 |
| 13: jetL_minDeltaR | 0.09658 |
| 14: bjetsM_4pt | 0.09322 |
| 15: jets_average_deltaR | 0.09153 |
| 16: tausL_HT | 0.08771 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_rationHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: bjetsM_invariantMass | 0.1349 |
| 9: jets_4pt | 0.1153 |
| 10: jets_HT | 0.1149 |
| 11: toptagger_1pt | 0.1043 |
| 12: jets_tausF_minDeltaR | 0.1033 |
| 13: jetL_minDeltaR | 0.09658 |
| 14: bjetsM_4pt | 0.09322 |
| 15: jets_average_deltaR | 0.09153 |
| 16: tausL_HT | 0.08771 |
| 17: tausF_invariantMass | 0.08748 |

Input lists

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: bjetsM_minDeltaR | 0.1883 |
| 6: jets_ratioHT_4toRest | 0.1849 |
| 7: toptagger_invariantMass | 0.1664 |
| 8: bjetsM_invariantMass | 0.1349 |
| 9: jets_4pt | 0.1153 |
| 10: jets_HT | 0.1149 |
| 11: bjetsM_2pt | 0.1085 |
| 12: toptagger_1pt | 0.1043 |
| 13: jets_tausF_minDeltaR | 0.1033 |
| 14: jetL_minDeltaR | 0.09658 |
| 15: bjetsM_4pt | 0.09322 |
| 16: jets_average_deltaR | 0.09153 |
| 17: tausL_HT | 0.08771 |
| 18: tausF_invariantMass | 0.08748 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: bjetsM_3pt | 0.3061 |
| 5: jets_6pt | 0.2216 |
| 6: bjetsM_minDeltaR | 0.1883 |
| 7: jets_ratioHT_4toRest | 0.1849 |
| 8: toptagger_invariantMass | 0.1664 |
| 9: bjetsM_invariantMass | 0.1349 |
| 10: jets_4pt | 0.1153 |
| 11: jets_HT | 0.1149 |
| 12: bjetsM_2pt | 0.1085 |
| 13: toptagger_1pt | 0.1043 |
| 14: jets_tausF_minDeltaR | 0.1033 |
| 15: jetL_minDeltaR | 0.09658 |
| 16: bjetsM_4pt | 0.09322 |
| 17: jets_average_deltaR | 0.09153 |
| 18: tausL_HT | 0.08771 |
| 19: tausF_invariantMass | 0.08748 |

| 2tau11 | |
|------------------------|--------|
| 1: jets_HTDividedByMet | 0.9937 |

| 2tau11 | |
|----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: bjetsM_3pt | 0.3061 |
| 5: jets_6pt | 0.2216 |
| 6: jets_number | 0.2023 |
| 7: bjetsM_minDeltaR | 0.1883 |
| 8: jets_ratioHT_4toRest | 0.1849 |
| 9: toptagger_invariantMass | 0.1664 |
| 10: bjetsM_invariantMass | 0.1349 |
| 11: jets_4pt | 0.1153 |
| 12: jets_HT | 0.1149 |
| 13: bjetsM_2pt | 0.1085 |
| 14: toptagger_1pt | 0.1043 |
| 15: jets_tausF_minDeltaR | 0.1033 |
| 16: jetL_minDeltaR | 0.09658 |
| 17: bjetsM_4pt | 0.09322 |
| 18: jets_average_deltaR | 0.09153 |
| 19: tausL_HT | 0.08771 |
| 20: tausF_invariantMass | 0.08748 |

Input lists

| 2tau11 | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: bjetsM_invariantMass | 0.1349 | |
| 11: bjetsM_HT | 0.1163 | |
| 12: jets_4pt | 0.1153 | |
| 13: jets_HT | 0.1149 | |
| 14: bjetsM_2pt | 0.1085 | |
| 15: toptagger_1pt | 0.1043 | |
| 16: jets_tausF_minDeltaR | 0.1033 | |
| 17: jetL_minDeltaR | 0.09658 | |
| 18: bjetsM_4pt | 0.09322 | |
| 19: jets_average_deltaR | 0.09153 | |
| 20: tausL_HT | 0.08771 | |
| 21: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: bjetsM_invariantMass | 0.1349 | |
| 11: jets_7pt | 0.1294 | |
| 12: bjetsM_HT | 0.1163 | |
| 13: jets_4pt | 0.1153 | |
| 14: jets_HT | 0.1149 | |
| 15: bjetsM_2pt | 0.1085 | |
| 16: toptagger_1pt | 0.1043 | |
| 17: jets_tausF_minDeltaR | 0.1033 | |
| 18: jetL_minDeltaR | 0.09658 | |
| 19: bjetsM_4pt | 0.09322 | |
| 20: jets_average_deltaR | 0.09153 | |
| 21: tausL_HT | 0.08771 | |
| 22: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: toptagger_num | 0.141 | |
| 11: bjetsM_invariantMass | 0.1349 | |
| 12: jets_7pt | 0.1294 | |
| 13: bjetsM_HT | 0.1163 | |
| 14: jets_4pt | 0.1153 | |
| 15: jets_HT | 0.1149 | |
| 16: bjetsM_2pt | 0.1085 | |
| 17: toptagger_1pt | 0.1043 | |
| 18: jets_tausF_minDeltaR | 0.1033 | |
| 19: jetL_minDeltaR | 0.09658 | |
| 20: bjetsM_4pt | 0.09322 | |
| 21: jets_average_deltaR | 0.09153 | |
| 22: tausL_HT | 0.08771 | |
| 23: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: toptagger_2pt | 0.1457 | |
| 11: toptagger_num | 0.141 | |
| 12: bjetsM_invariantMass | 0.1349 | |
| 13: jets_7pt | 0.1294 | |
| 14: bjetsM_HT | 0.1163 | |
| 15: jets_4pt | 0.1153 | |
| 16: jets_HT | 0.1149 | |
| 17: bjetsM_2pt | 0.1085 | |
| 18: toptagger_1pt | 0.1043 | |
| 19: jets_tausF_minDeltaR | 0.1033 | |
| 20: jetL_minDeltaR | 0.09658 | |
| 21: bjetsM_4pt | 0.09322 | |
| 22: jets_average_deltaR | 0.09153 | |
| 23: tausL_HT | 0.08771 | |
| 24: tausF_invariantMass | 0.08748 | |

Input lists

| 2tau11 | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: jets_5pt | 0.1664 | |
| 11: toptagger_2pt | 0.1457 | |
| 12: toptagger_num | 0.141 | |
| 13: bjetsM_invariantMass | 0.1349 | |
| 14: jets_7pt | 0.1294 | |
| 15: bjetsM_HT | 0.1163 | |
| 16: jets_4pt | 0.1153 | |
| 17: jets_HT | 0.1149 | |
| 18: bjetsM_2pt | 0.1085 | |
| 19: toptagger_1pt | 0.1043 | |
| 20: jets_tausF_minDeltaR | 0.1033 | |
| 21: jetL_minDeltaR | 0.09658 | |
| 22: bjetsM_4pt | 0.09322 | |
| 23: jets_average_deltaR | 0.09153 | |
| 24: tausL_HT | 0.08771 | |
| 25: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: jets_6pt | 0.2216 | |
| 6: jets_number | 0.2023 | |
| 7: bjetsM_minDeltaR | 0.1883 | |
| 8: jets_rationHT_4toRest | 0.1849 | |
| 9: toptagger_invariantMass | 0.1664 | |
| 10: jets_5pt | 0.1664 | |
| 11: toptagger_HT | 0.1573 | |
| 12: toptagger_2pt | 0.1457 | |
| 13: toptagger_num | 0.141 | |
| 14: bjetsM_invariantMass | 0.1349 | |
| 15: jets_7pt | 0.1294 | |
| 16: bjetsM_HT | 0.1163 | |
| 17: jets_4pt | 0.1153 | |
| 18: jets_HT | 0.1149 | |
| 19: bjetsM_2pt | 0.1085 | |
| 20: toptagger_1pt | 0.1043 | |
| 21: jets_tausF_minDeltaR | 0.1033 | |
| 22: jetL_minDeltaR | 0.09658 | |
| 23: bjetsM_4pt | 0.09322 | |
| 24: jets_average_deltaR | 0.09153 | |
| 25: tausL_HT | 0.08771 | |
| 26: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|-----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: bjetsM_num | 0.2886 | |
| 6: jets_6pt | 0.2216 | |
| 7: jets_number | 0.2023 | |
| 8: bjetsM_minDeltaR | 0.1883 | |
| 9: jets_rationHT_4toRest | 0.1849 | |
| 10: toptagger_invariantMass | 0.1664 | |
| 11: jets_5pt | 0.1664 | |
| 12: toptagger_HT | 0.1573 | |
| 13: toptagger_2pt | 0.1457 | |
| 14: toptagger_num | 0.141 | |
| 15: bjetsM_invariantMass | 0.1349 | |
| 16: jets_7pt | 0.1294 | |
| 17: bjetsM_HT | 0.1163 | |
| 18: jets_4pt | 0.1153 | |
| 19: jets_HT | 0.1149 | |
| 20: bjetsM_2pt | 0.1085 | |
| 21: toptagger_1pt | 0.1043 | |
| 22: jets_tausF_minDeltaR | 0.1033 | |
| 23: jetL_minDeltaR | 0.09658 | |
| 24: bjetsM_4pt | 0.09322 | |
| 25: jets_average_deltaR | 0.09153 | |
| 26: tausL_HT | 0.08771 | |
| 27: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|-----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: bjetsM_num | 0.2886 | |
| 6: jets_6pt | 0.2216 | |
| 7: jets_number | 0.2023 | |
| 8: bjetsM_minDeltaR | 0.1883 | |
| 9: jets_rationHT_4toRest | 0.1849 | |
| 10: toptagger_invariantMass | 0.1664 | |
| 11: jets_5pt | 0.1664 | |
| 12: toptagger_HT | 0.1573 | |
| 13: toptagger_2pt | 0.1457 | |
| 14: toptagger_num | 0.141 | |
| 15: toptagger_minDeltaR_v1 | 0.1361 | |
| 16: bjetsM_invariantMass | 0.1349 | |
| 17: jets_7pt | 0.1294 | |
| 18: bjetsM_HT | 0.1163 | |
| 19: jets_4pt | 0.1153 | |
| 20: jets_HT | 0.1149 | |
| 21: bjetsM_2pt | 0.1085 | |
| 22: toptagger_1pt | 0.1043 | |
| 23: jets_tausF_minDeltaR | 0.1033 | |
| 24: jetL_minDeltaR | 0.09658 | |
| 25: bjetsM_4pt | 0.09322 | |
| 26: jets_average_deltaR | 0.09153 | |
| 27: tausL_HT | 0.08771 | |
| 28: tausF_invariantMass | 0.08748 | |

Input lists

| 2tau11 | | |
|-----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: bjetsM_num | 0.2886 | |
| 6: jets_6pt | 0.2216 | |
| 7: jets_number | 0.2023 | |
| 8: bjetsM_minDeltaR | 0.1883 | |
| 9: jets_rationHT_4toRest | 0.1849 | |
| 10: toptagger_invariantMass | 0.1664 | |
| 11: jets_5pt | 0.1664 | |
| 12: toptagger_HT | 0.1573 | |
| 13: toptagger_transMass | 0.1465 | |
| 14: toptagger_2pt | 0.1457 | |
| 15: toptagger_num | 0.141 | |
| 16: toptagger_minDeltaR_v1 | 0.1361 | |
| 17: bjetsM_invariantMass | 0.1349 | |
| 18: jets_7pt | 0.1294 | |
| 19: bjetsM_HT | 0.1163 | |
| 20: jets_4pt | 0.1153 | |
| 21: jets_HT | 0.1149 | |
| 22: bjetsM_2pt | 0.1085 | |
| 23: toptagger_1pt | 0.1043 | |
| 24: jets_tausF_minDeltaR | 0.1033 | |
| 25: jetL_minDeltaR | 0.09658 | |
| 26: bjetsM_4pt | 0.09322 | |
| 27: jets_average_deltaR | 0.09153 | |
| 28: tausL_HT | 0.08771 | |
| 29: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|------------------------|--------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |

| 2tau11 | | |
|-----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: bjetsM_num | 0.2886 | |
| 6: jets_6pt | 0.2216 | |
| 7: jets_number | 0.2023 | |
| 8: bjetsM_minDeltaR | 0.1883 | |
| 9: jets_rationHT_4toRest | 0.1849 | |
| 10: toptagger_invariantMass | 0.1664 | |
| 11: jets_5pt | 0.1664 | |
| 12: toptagger_HT | 0.1573 | |
| 13: toptagger_transMass | 0.1465 | |
| 14: toptagger_2pt | 0.1457 | |
| 15: toptagger_num | 0.141 | |
| 16: toptagger_minDeltaR_v1 | 0.1361 | |
| 17: bjetsM_invariantMass | 0.1349 | |
| 18: jets_7pt | 0.1294 | |
| 19: bjetsM_HT | 0.1163 | |
| 20: jets_4pt | 0.1153 | |
| 21: jets_HT | 0.1149 | |
| 22: bjetsM_2pt | 0.1085 | |
| 23: toptagger_1pt | 0.1043 | |
| 24: tausF_MHT | 0.1037 | |
| 25: jets_tausF_minDeltaR | 0.1033 | |
| 26: jetL_minDeltaR | 0.09658 | |
| 27: bjetsM_4pt | 0.09322 | |
| 28: jets_average_deltaR | 0.09153 | |
| 29: tausL_HT | 0.08771 | |
| 30: tausF_invariantMass | 0.08748 | |

| 2tau11 | | |
|-----------------------------|---------|--|
| 1: jets_HTDividedByMet | 0.9937 | |
| 2: tausT_MHT | 0.7956 | |
| 3: jets_bScore | 0.336 | |
| 4: bjetsM_3pt | 0.3061 | |
| 5: bjetsM_num | 0.2886 | |
| 6: jets_6pt | 0.2216 | |
| 7: jets_number | 0.2023 | |
| 8: bjetsM_minDeltaR | 0.1883 | |
| 9: jets_rationHT_4toRest | 0.1849 | |
| 10: toptagger_invariantMass | 0.1664 | |
| 11: jets_5pt | 0.1664 | |
| 12: toptagger_HT | 0.1573 | |
| 13: toptagger_transMass | 0.1465 | |
| 14: toptagger_2pt | 0.1457 | |
| 15: toptagger_num | 0.141 | |
| 16: toptagger_minDeltaR_v1 | 0.1361 | |
| 17: bjetsM_invariantMass | 0.1349 | |
| 18: jets_7pt | 0.1294 | |
| 19: bjetsM_HT | 0.1163 | |
| 20: jets_4pt | 0.1153 | |
| 21: jets_HT | 0.1149 | |
| 22: bjetsM_2pt | 0.1085 | |
| 23: toptagger_1pt | 0.1043 | |
| 24: tausF_MHT | 0.1037 | |
| 25: jets_tausF_minDeltaR | 0.1033 | |
| 26: bjetsM_transMass | 0.1025 | |
| 27: jetL_minDeltaR | 0.09658 | |
| 28: bjetsM_4pt | 0.09322 | |
| 29: jets_average_deltaR | 0.09153 | |
| 30: tausL_HT | 0.08771 | |
| 31: tausF_invariantMass | 0.08748 | |

Input lists

| 2tau11 | |
|-----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_4largestBscoreSum | 0.3357 |
| 5: bjetsM_3pt | 0.3061 |
| 6: bjetsM_num | 0.2886 |
| 7: jets_6pt | 0.2216 |
| 8: jets_number | 0.2023 |
| 9: bjetsM_minDeltaR | 0.1883 |
| 10: jets_rationHT_4toRest | 0.1849 |
| 11: toptagger_invariantMass | 0.1664 |
| 12: jets_5pt | 0.1664 |
| 13: toptagger_HT | 0.1573 |
| 14: toptagger_transMass | 0.1465 |
| 15: toptagger_2pt | 0.1457 |
| 16: toptagger_num | 0.141 |
| 17: toptagger_minDeltaR_v1 | 0.1361 |
| 18: bjetsM_invariantMass | 0.1349 |
| 19: jets_7pt | 0.1294 |
| 20: bjetsM_HT | 0.1163 |
| 21: jets_4pt | 0.1153 |
| 22: jets_HT | 0.1149 |
| 23: bjetsM_2pt | 0.1085 |
| 24: toptagger_1pt | 0.1043 |
| 25: tausF_MHT | 0.1037 |
| 26: jets_tausF_minDeltaR | 0.1033 |
| 27: bjetsM_transMass | 0.1025 |
| 28: jetL_minDeltaR | 0.09658 |
| 29: bjetsM_4pt | 0.09322 |
| 30: jets_average_deltaR | 0.09153 |
| 31: tausL_HT | 0.08771 |
| 32: tausF_invariantMass | 0.08748 |

| 2tau11 | |
|-----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_4largestBscoreSum | 0.3357 |
| 5: bjetsM_3pt | 0.3061 |
| 6: bjetsM_num | 0.2886 |
| 7: jets_6pt | 0.2216 |
| 8: jets_number | 0.2023 |
| 9: bjetsM_minDeltaR | 0.1883 |
| 10: jets_rationHT_4toRest | 0.1849 |
| 11: toptagger_invariantMass | 0.1664 |
| 12: jets_5pt | 0.1664 |
| 13: toptagger_HT | 0.1573 |
| 14: toptagger_transMass | 0.1465 |
| 15: toptagger_2pt | 0.1457 |
| 16: toptagger_num | 0.141 |
| 17: toptagger_minDeltaR_v1 | 0.1361 |
| 18: bjetsM_invariantMass | 0.1349 |
| 19: jets_7pt | 0.1294 |
| 20: bjetsM_HT | 0.1163 |
| 21: jets_4pt | 0.1153 |
| 22: jets_HT | 0.1149 |
| 23: bjetsM_2pt | 0.1085 |
| 24: toptagger_1pt | 0.1043 |
| 25: tausF_MHT | 0.1037 |
| 26: jets_tausF_minDeltaR | 0.1033 |
| 27: bjetsM_transMass | 0.1025 |
| 28: jetL_minDeltaR | 0.09658 |
| 29: jets_transMass | 0.09588 |
| 30: bjetsM_4pt | 0.09322 |
| 31: jets_average_deltaR | 0.09153 |
| 32: tausL_HT | 0.08771 |
| 33: tausF_invariantMass | 0.08748 |

| 2tau11 | |
|------------------------|--------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |

| 2tau11 | |
|------------------------|--------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: toptagger_1pt | 0.1043 |

Input lists

| 2tau11 | |
|-----------------------------|---------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: bjetsT_MHT | 0.9024 |
| 3: tausT_MHT | 0.7956 |
| 4: bjetsL_num | 0.3574 |
| 5: bjetsL_3pt | 0.3491 |
| 6: jets_bScore | 0.336 |
| 7: jets_4largestBscoreSum | 0.3357 |
| 8: bjetsM_3pt | 0.3061 |
| 9: bjetsM_num | 0.2886 |
| 10: bjetsL_4pt | 0.2544 |
| 11: bjetsL_minDeltaR | 0.2301 |
| 12: jets_6pt | 0.2216 |
| 13: bjetsL_invariantMass | 0.207 |
| 14: jets_number | 0.2023 |
| 15: bjetsL_HT | 0.1904 |
| 16: bjetsM_minDeltaR | 0.1883 |
| 17: jets_ratioHT_4toRest | 0.1849 |
| 18: bjetsT_3pt | 0.1779 |
| 19: bjetsT_num | 0.1727 |
| 20: toptagger_invariantMass | 0.1664 |
| 21: jets_5pt | 0.1664 |
| 22: bjetsL_transMass | 0.1652 |
| 23: toptagger_HT | 0.1573 |
| 24: toptagger_transMass | 0.1465 |
| 25: toptagger_2pt | 0.1457 |
| 26: toptagger_num | 0.141 |
| 27: bjetsT_HT | 0.141 |
| 28: bjetsT_invariantMass | 0.137 |
| 29: bjetsT_minDeltaR | 0.1364 |
| 30: toptagger_minDeltaR_v1 | 0.1361 |
| 31: bjetsM_invariantMass | 0.1349 |
| 32: bjetsL_tausF_minDeltaR | 0.1348 |
| 33: jets_7pt | 0.1294 |
| 34: bjetsL_2pt | 0.1191 |
| 35: bjetsT_transMass | 0.1169 |
| 36: bjetsM_HT | 0.1163 |
| 37: jets_4pt | 0.1153 |
| 38: jets_HT | 0.1149 |
| 39: bjetsM_2pt | 0.1085 |
| 40: toptagger_1pt | 0.1043 |
| 41: tausF_MHT | 0.1037 |
| 42: jets_tausF_minDeltaR | 0.1033 |
| 43: bjetsM_transMass | 0.1025 |
| 44: jetL_minDeltaR | 0.0958 |
| 45: jets_transMass | 0.09588 |
| 46: bjetsT_2pt | 0.09391 |
| 47: bjetsM_4pt | 0.09322 |
| 48: jets_average_deltaR | 0.09153 |
| 49: tausL_HT | 0.08771 |
| 50: tausF_invariantMass | 0.08748 |

| 2tau11 | |
|-------------------------|--------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: toptagger_1pt | 0.1043 |
| 5: jets_tausF_minDeltaR | 0.1033 |

| 2tau11 | |
|-------------------------|--------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: toptagger_1pt | 0.1043 |
| 6: jets_tausF_minDeltaR | 0.1033 |

| 2tau11 | |
|----------------------------|--------|
| 1: jets_HTDividedByMet | 0.9937 |
| 2: tausT_MHT | 0.7956 |
| 3: jets_bScore | 0.336 |
| 4: jets_6pt | 0.2216 |
| 5: toptagger_invariantMass | 0.1664 |
| 6: toptagger_1pt | 0.1043 |
| 7: jets_tausF_minDeltaR | 0.1033 |