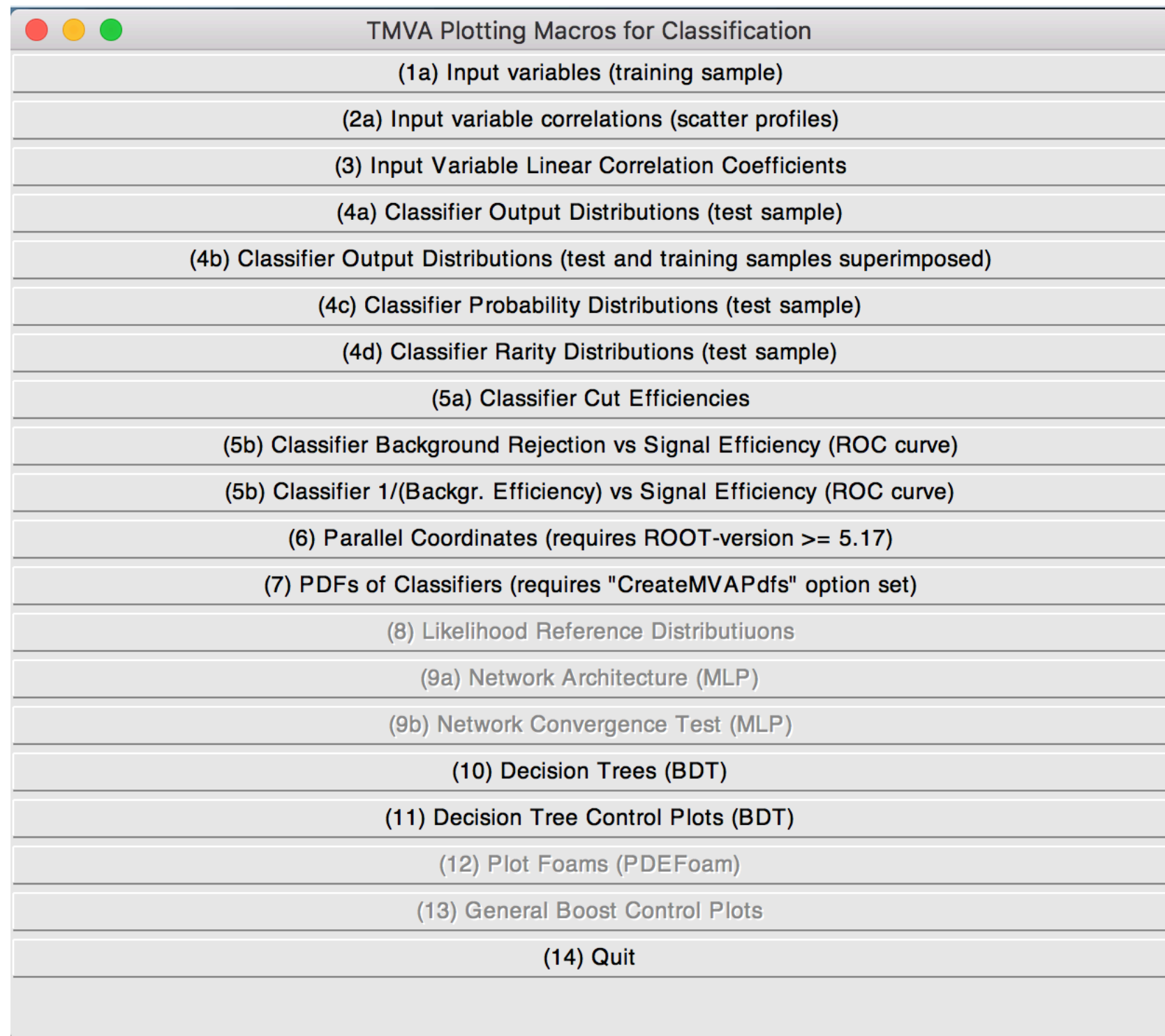


TMVA: BDT trained on RecoTk1IP from simulated ttbar samples

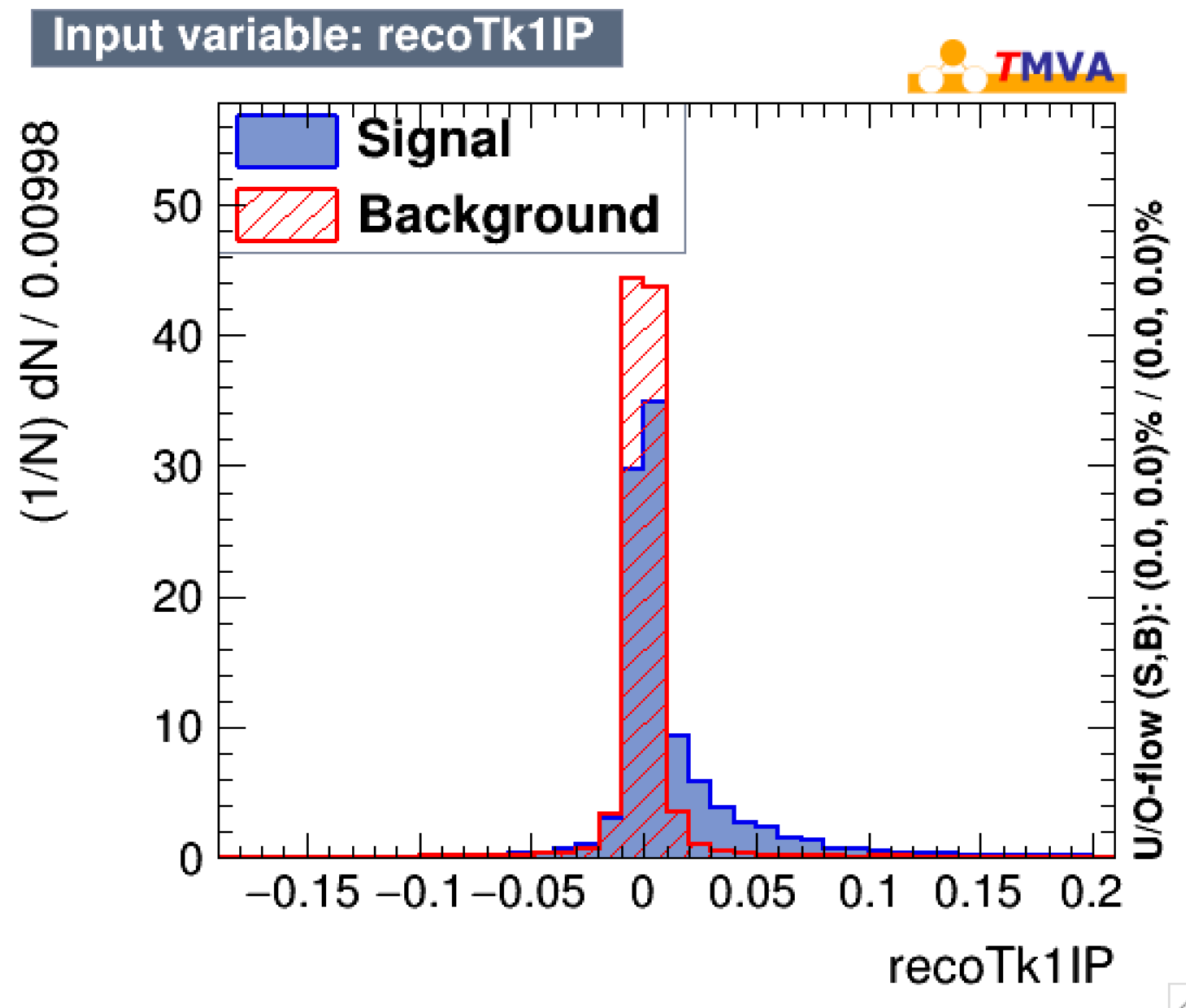
Aug 3, 2018

All plots were generated using the TMVA GUI (one click of a button!)

This slideshow just demonstrates how some of these plots look, for a BDT trained only on Track 1 2D IP.

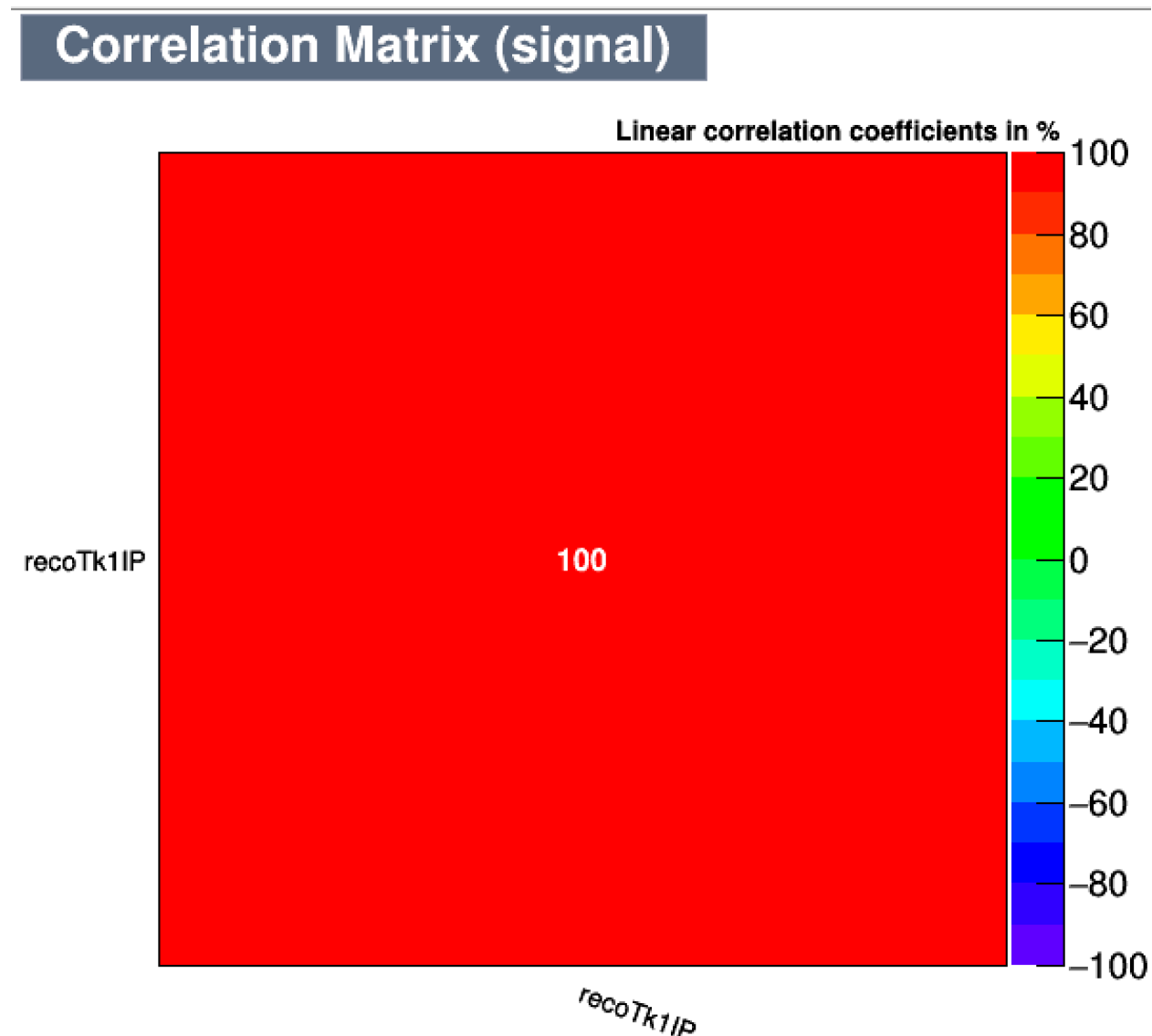


1 (a) Input variables (training sample)



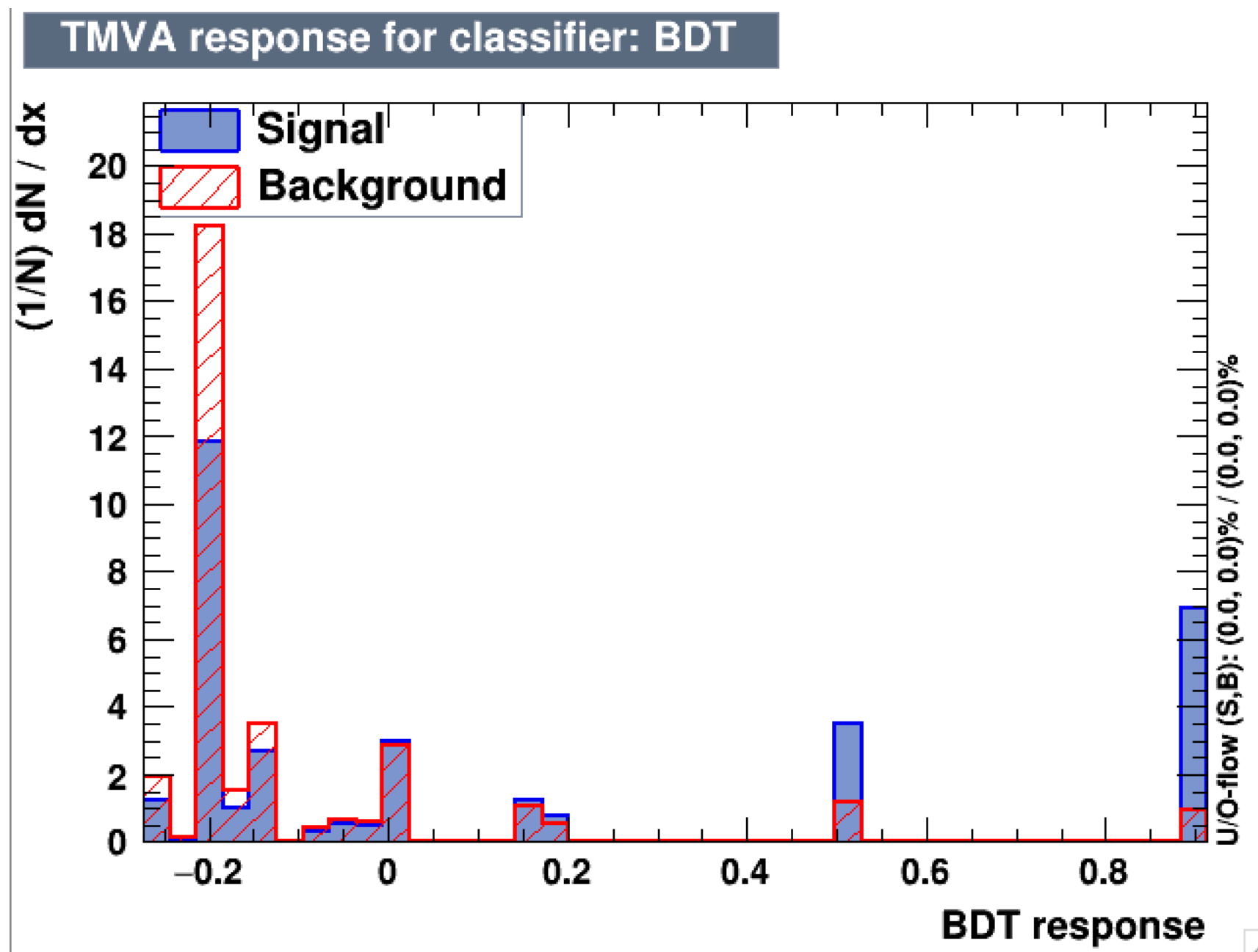
(3) Input Variable Linear Correlation Coefficients

- Only one input variable: correlation coefficients are N/A



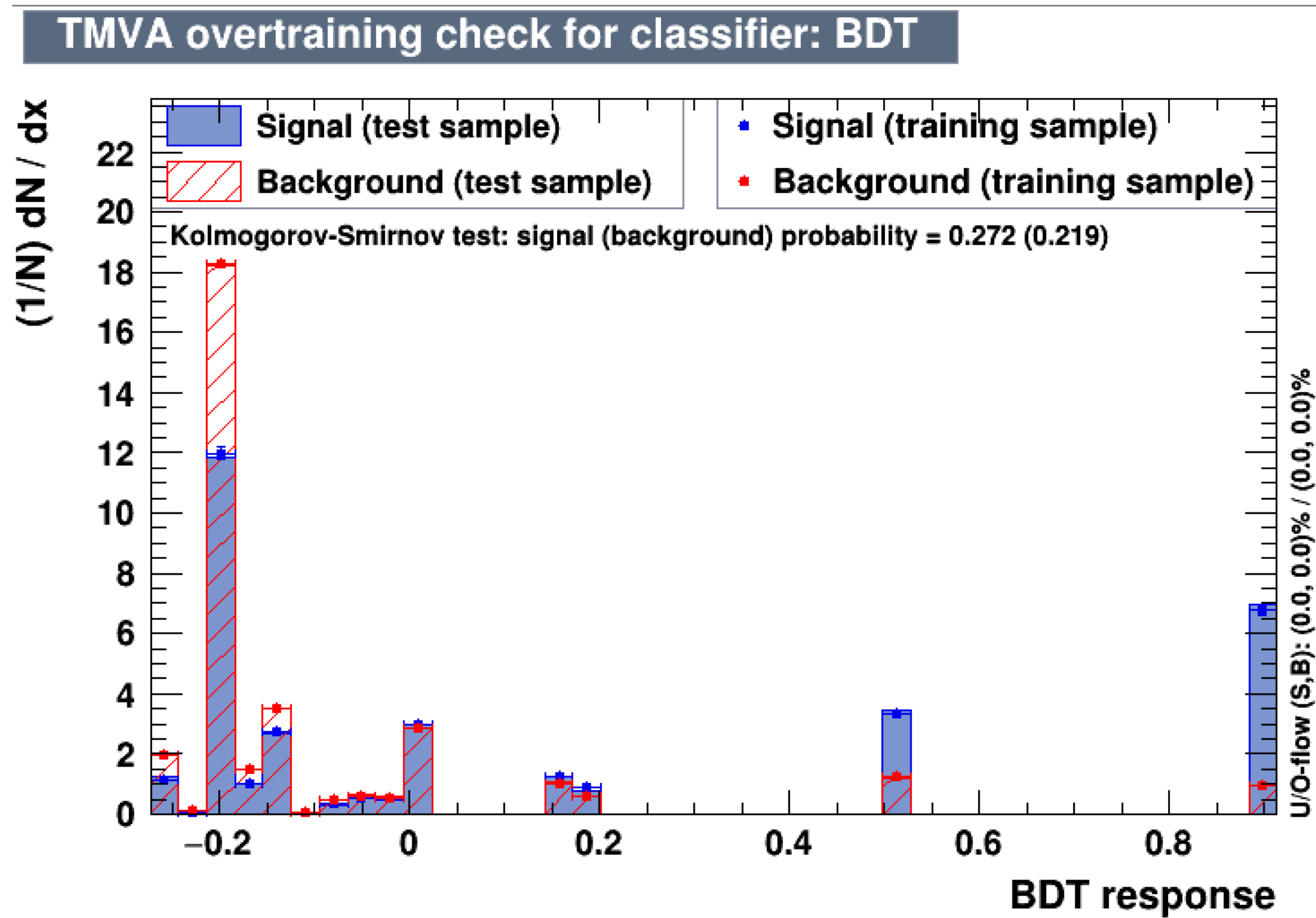
(4a) Classifier Output Distributions (test sample)

- More signal events have a higher BDT classifier value as expected

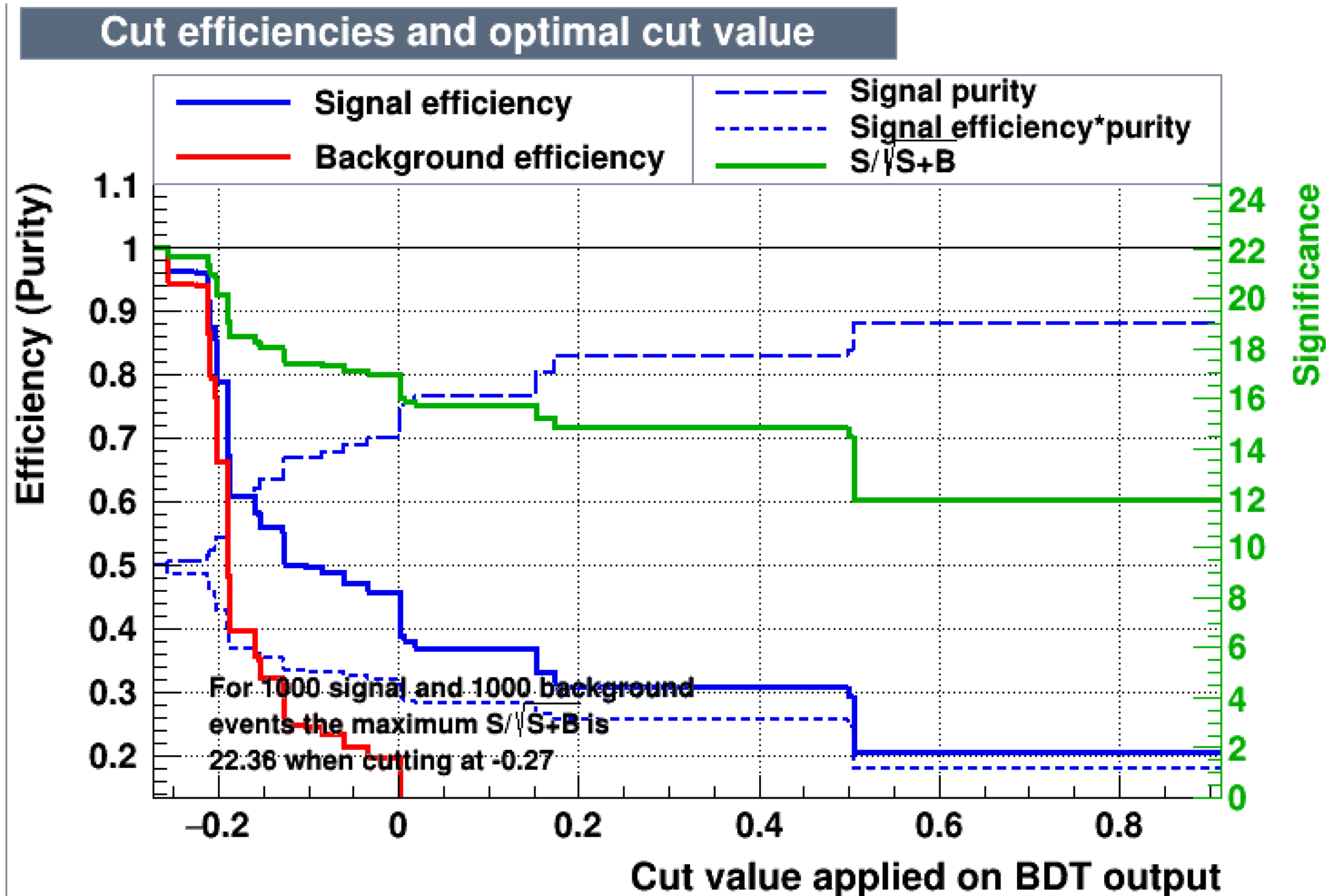


(4b) Classifier Output Distributions (test and training samples superimposed)

- A warning sign of overtraining is when the training/test BDT responses don't match up

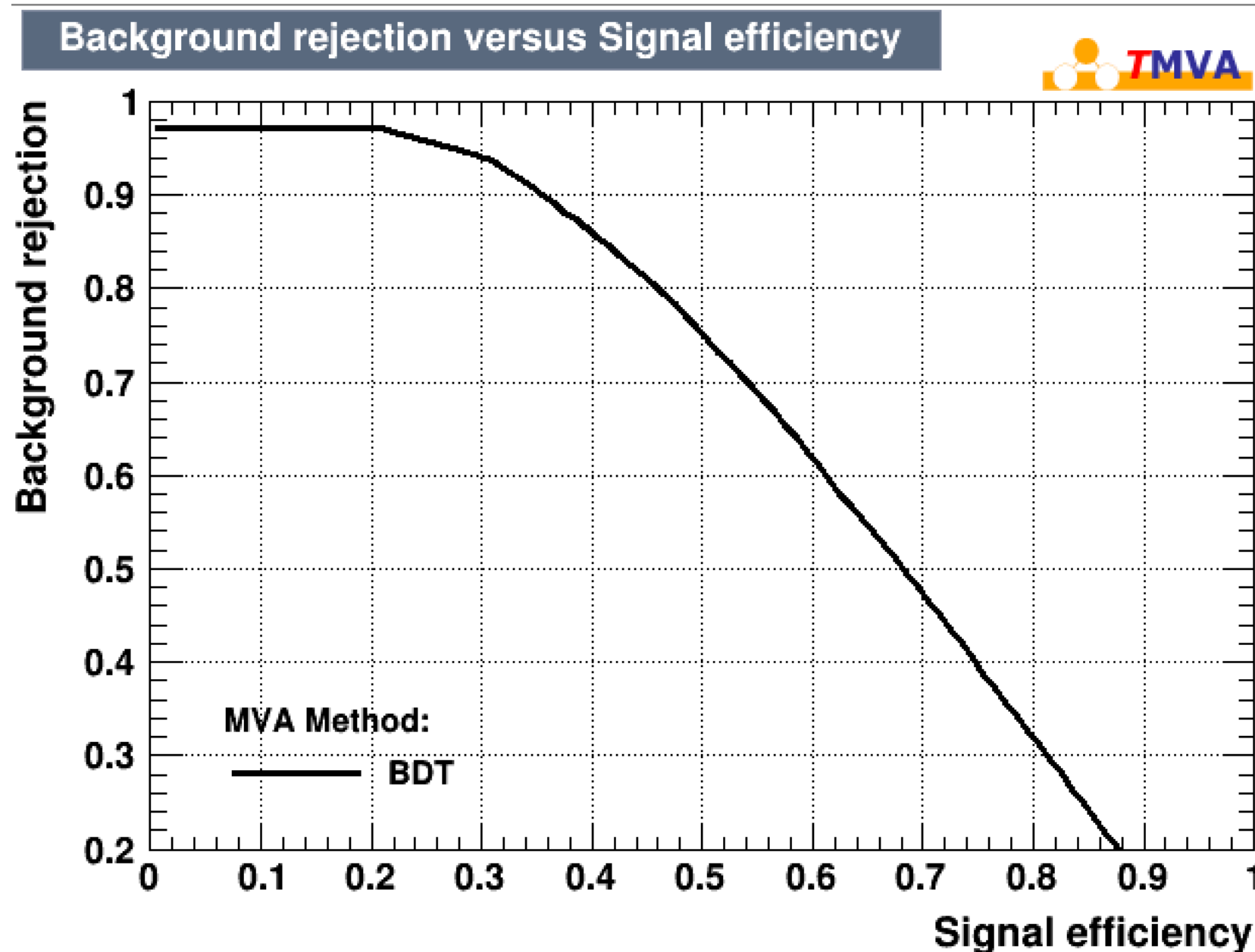


(5a) Classifier Cut Efficiencies



(5b) Classifier Background Rejection vs Signal Efficiency (ROC curve)

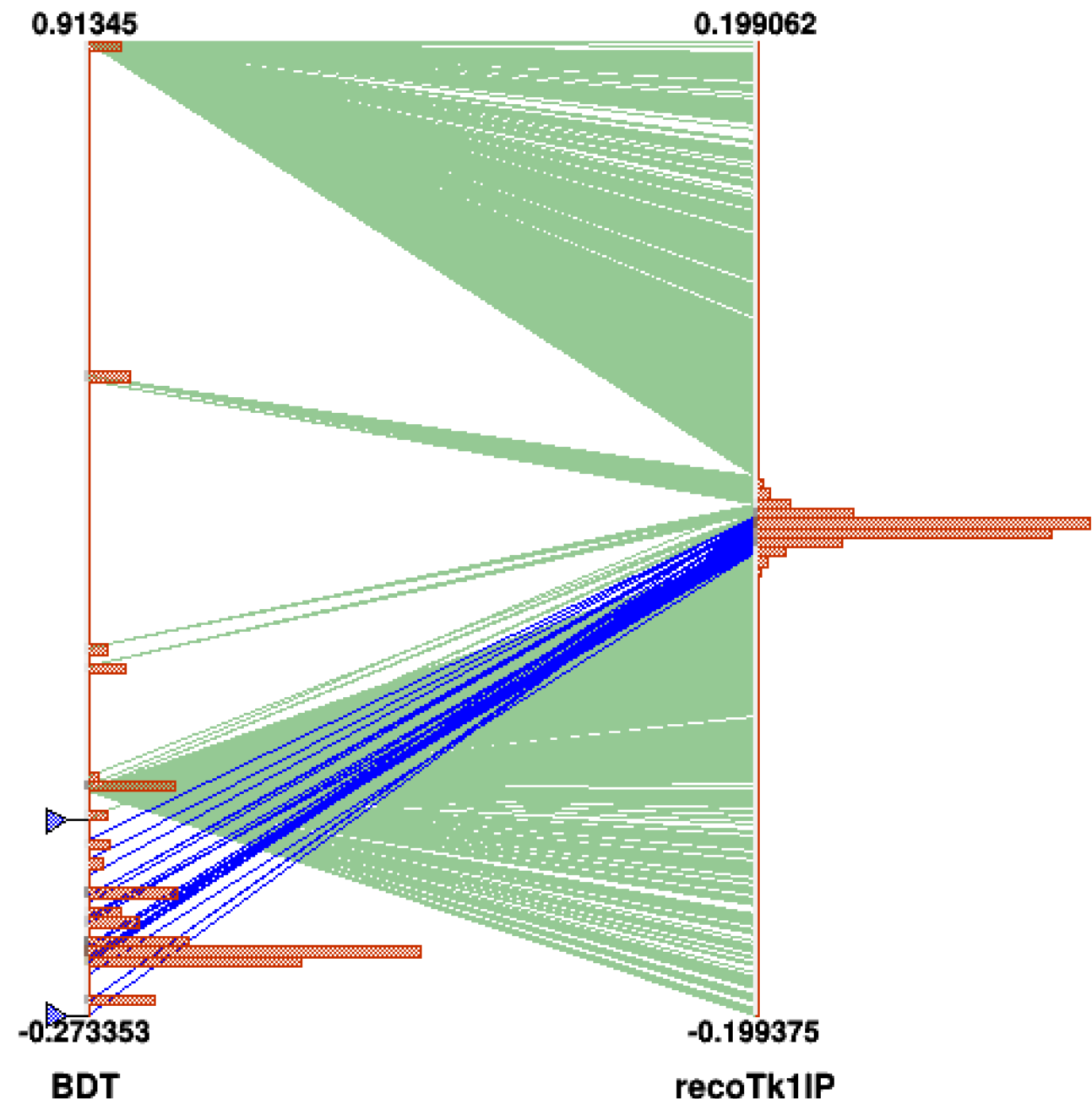
- More detailed metrics are in the logRun file



(6) Parallel Coordinate representation

BDT:recoTk1IP{classID==1}

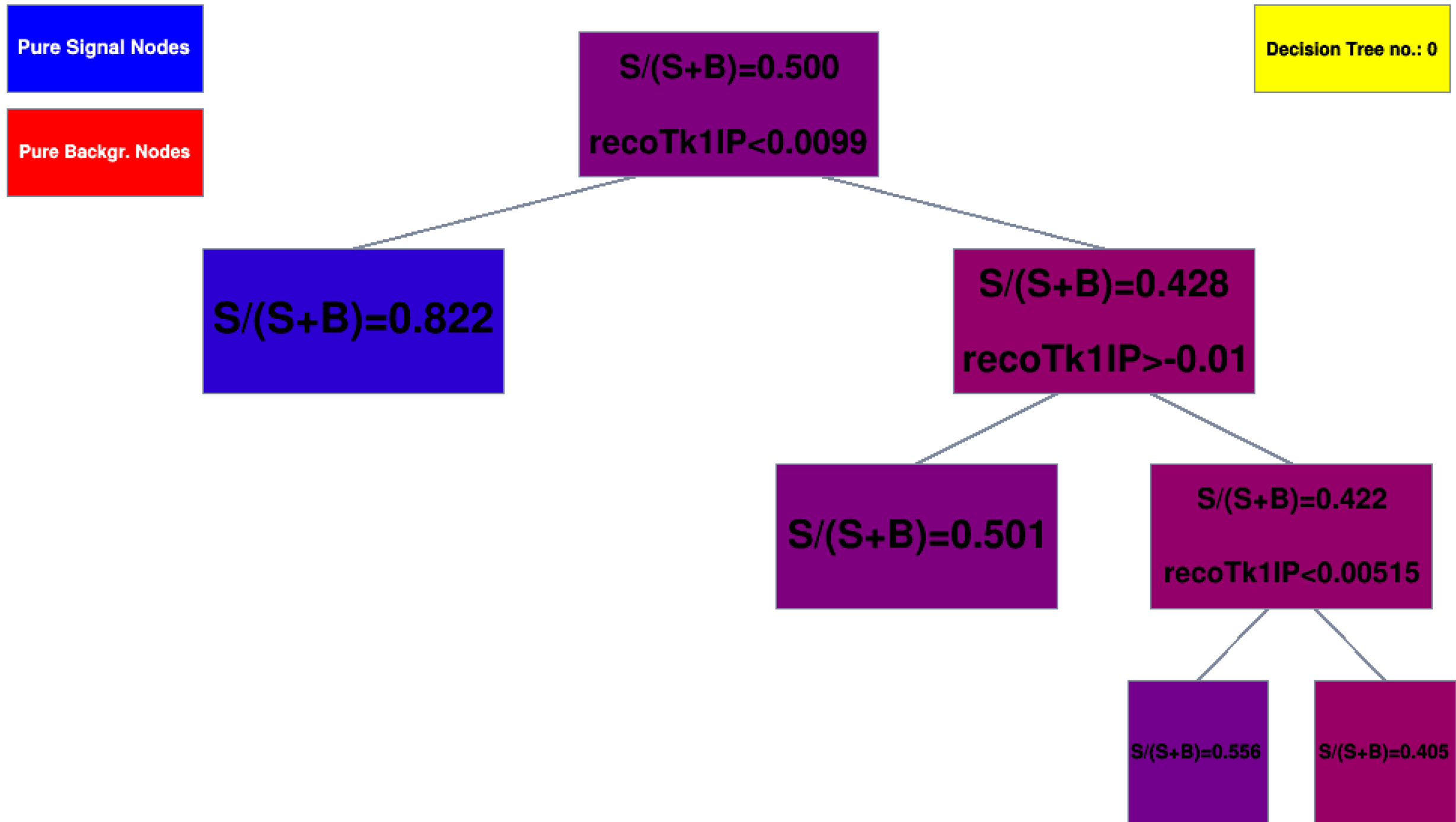
- Mapping of recoTk1IP values to BDT discriminator
- This gave me a segfault when I clicked on it :(



(7) PDFs of Classifiers (requires “CreateMVAPdfs” option set)

- (Still trying to set “CreateMVAPDFs” option)

(10) Decision Trees (BDT)



(11) Decision Tree Control Plots (BDT)

- got segfault when I ran this