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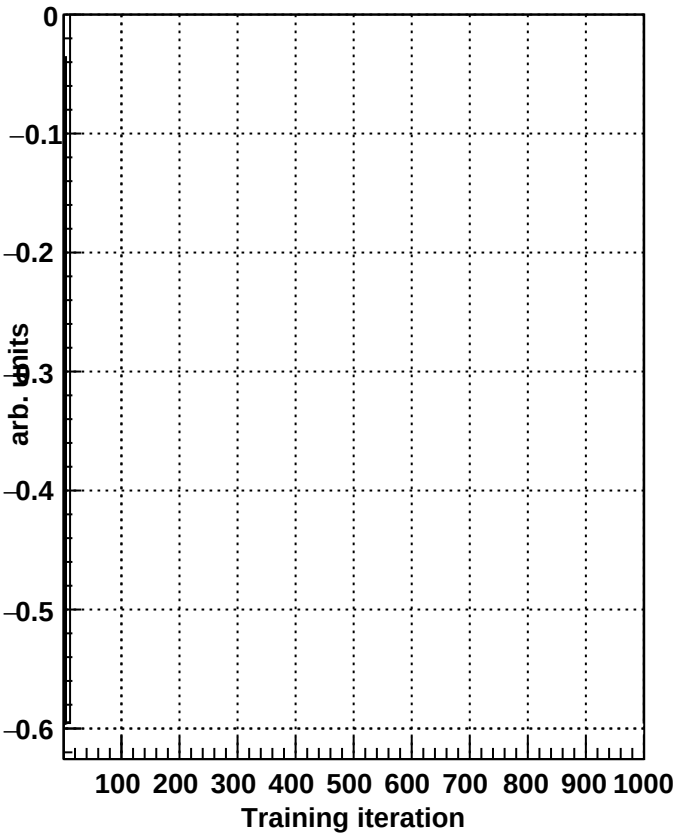
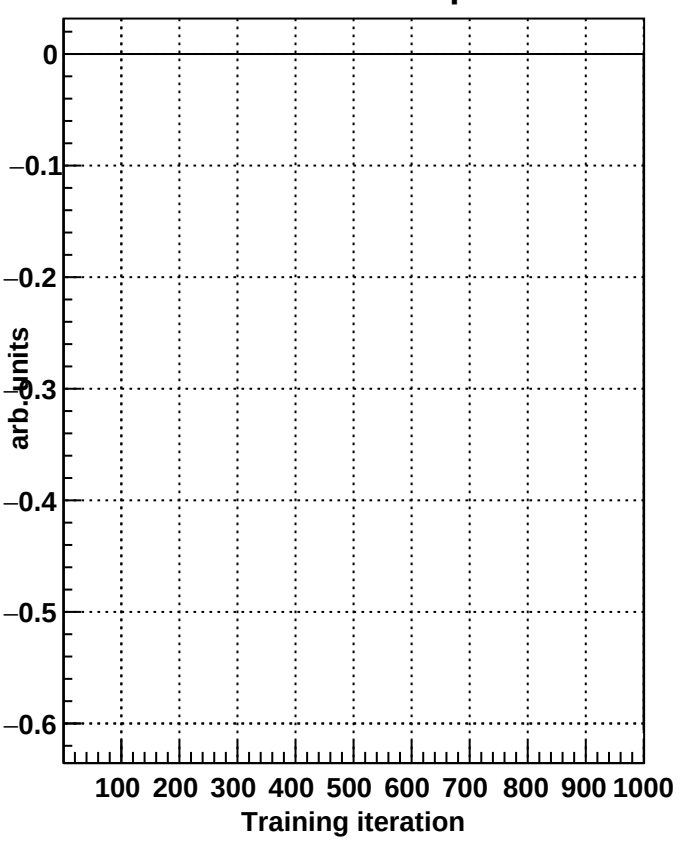
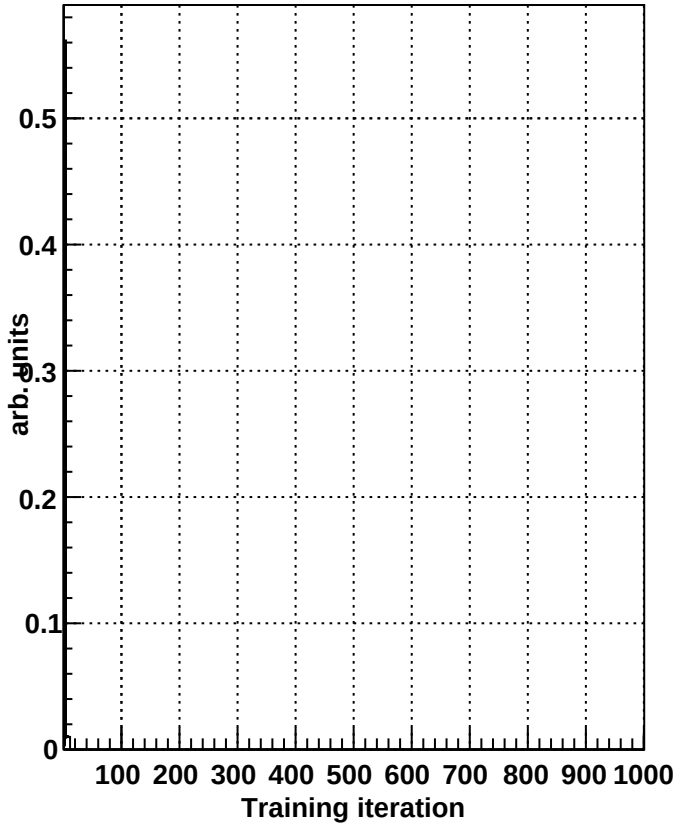
Error



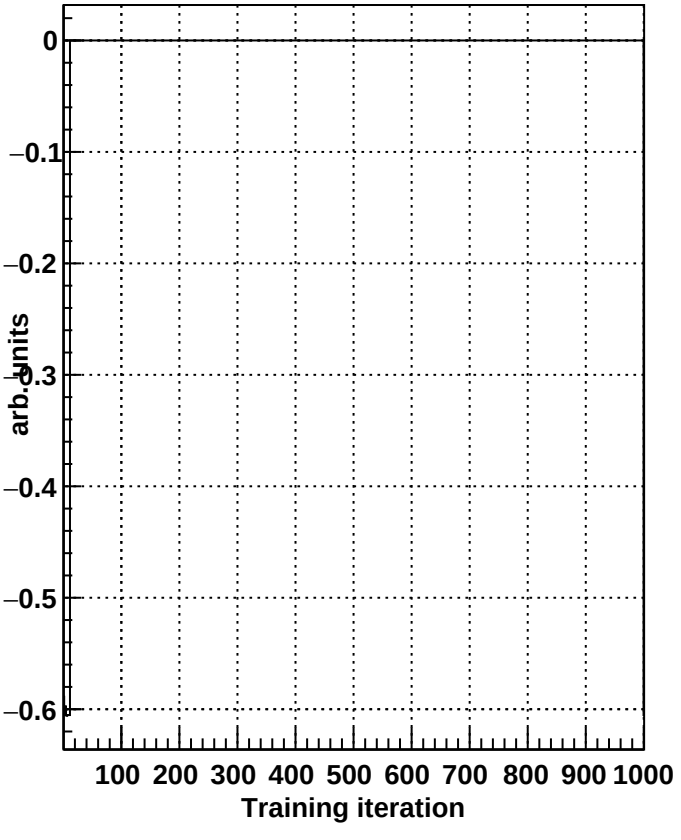
Error Testsample

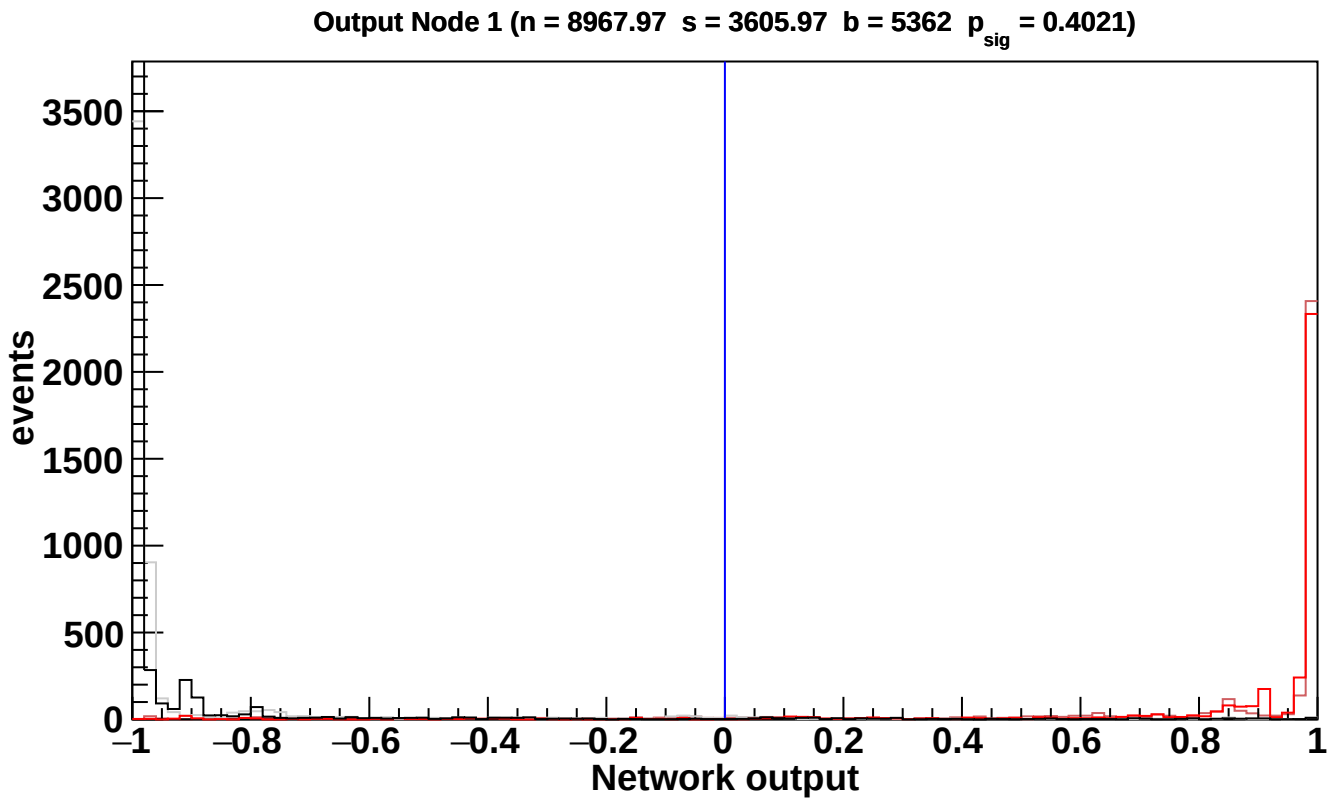


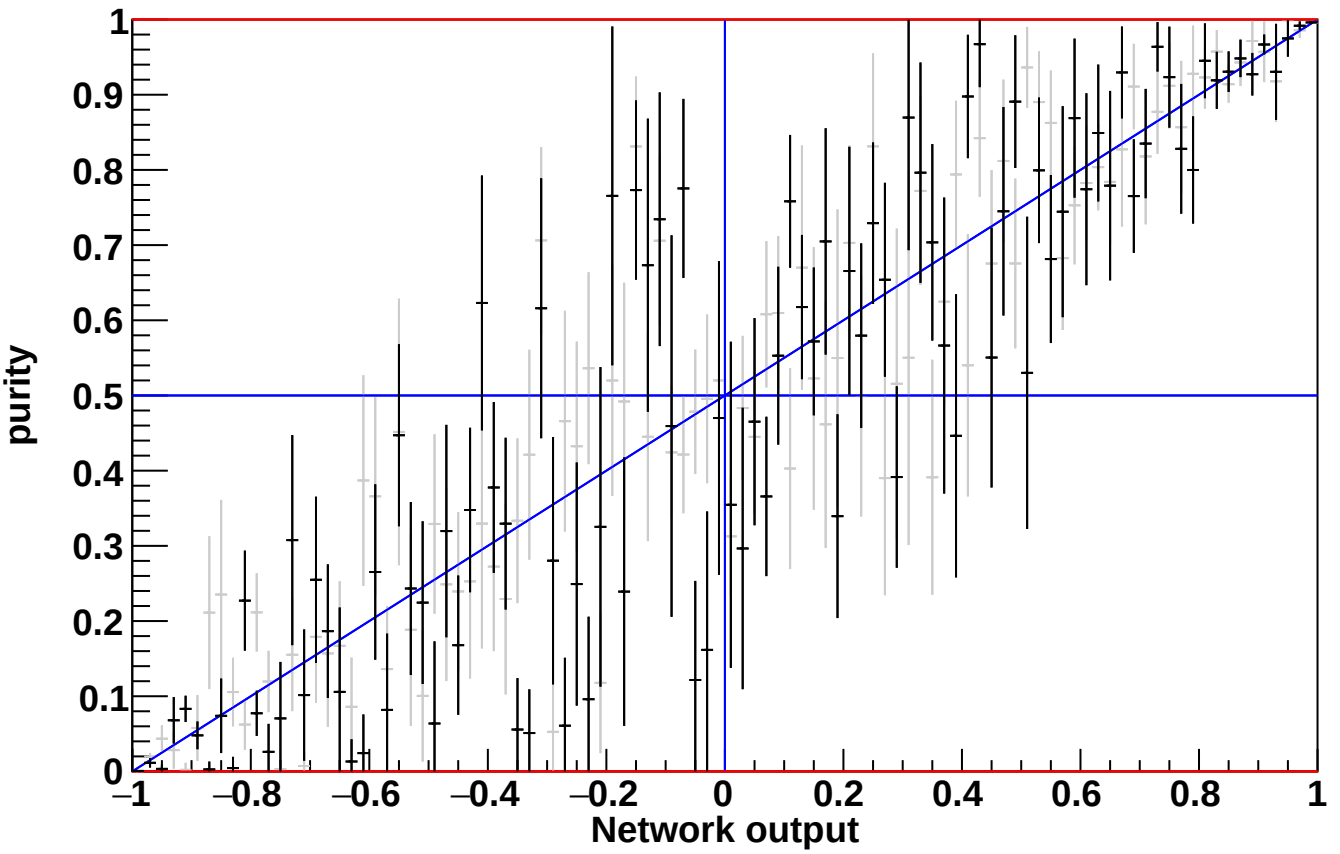
regularisation param. * weights

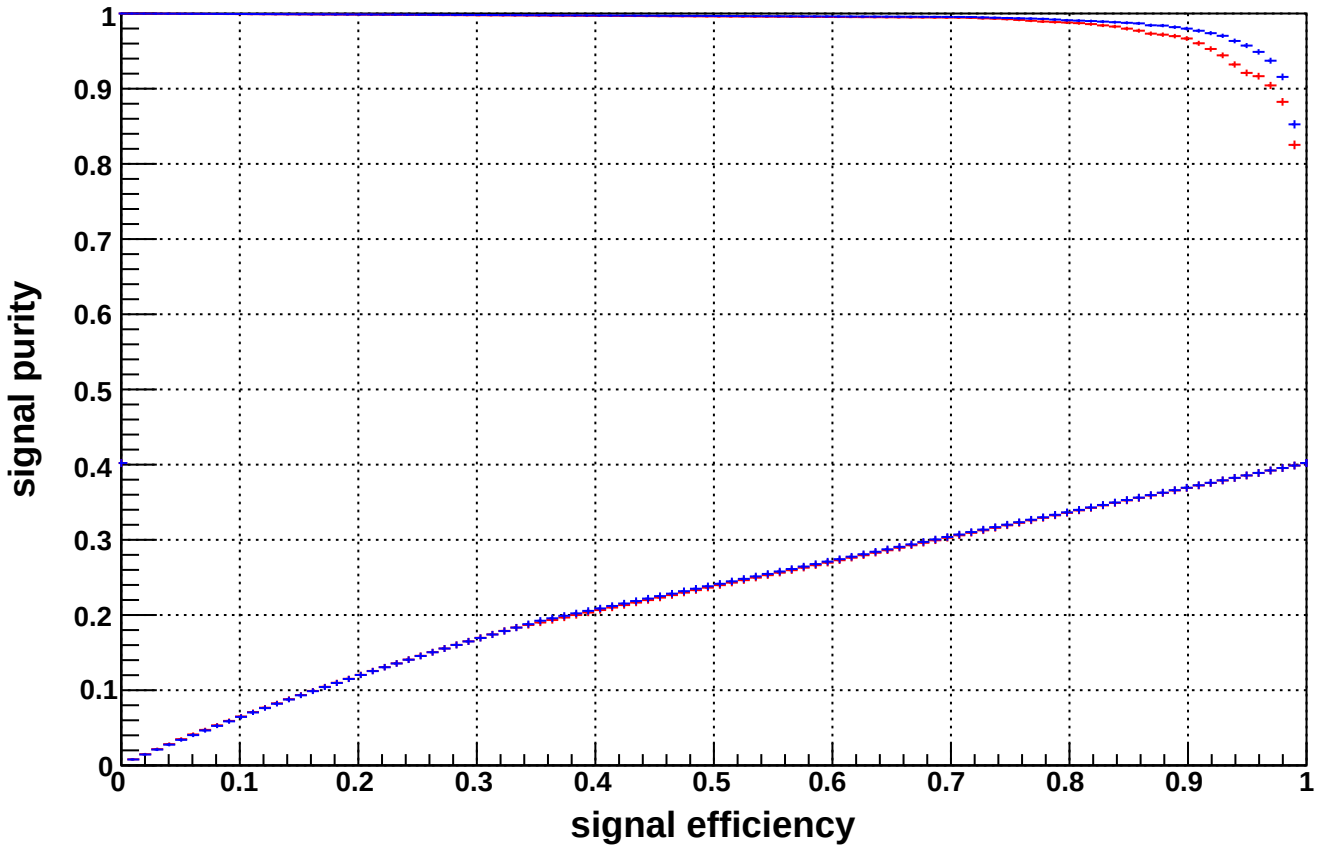


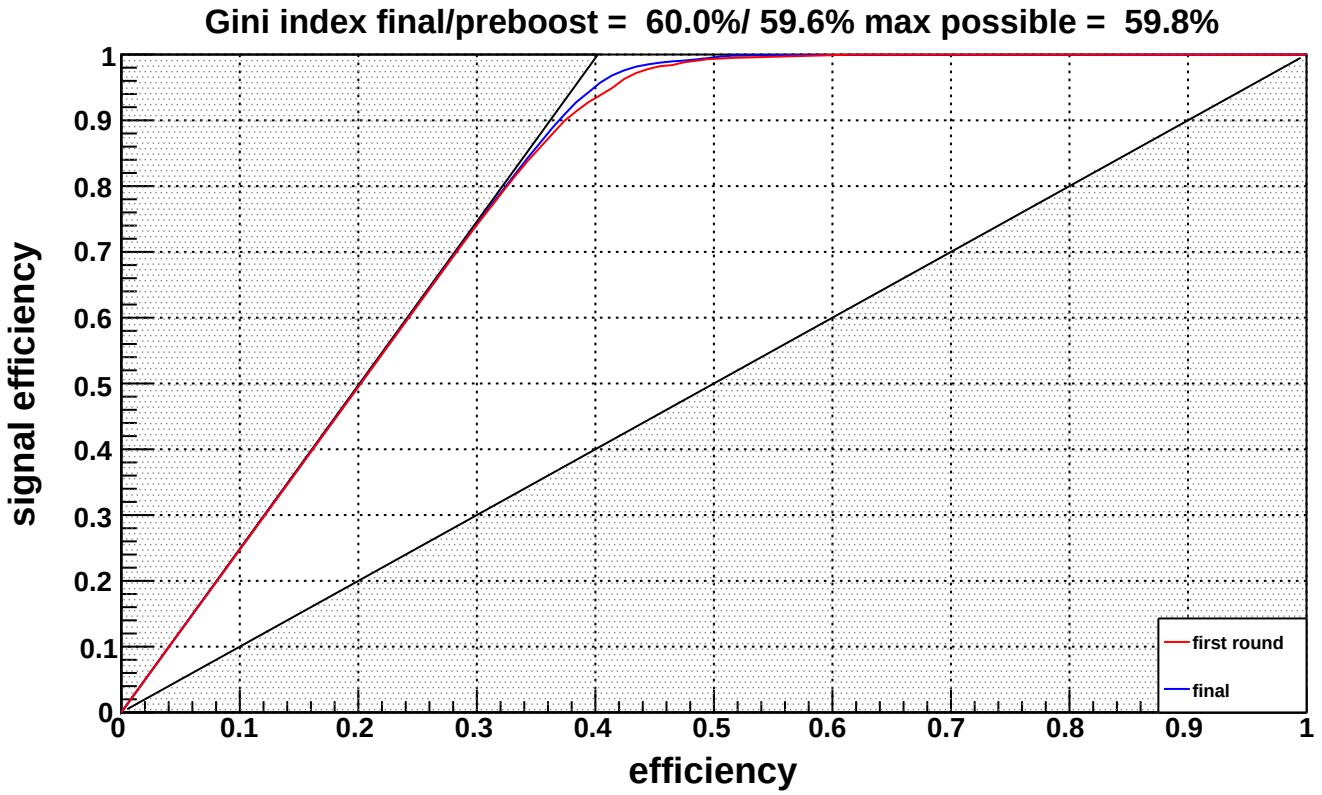
Err-Weight Learnsample

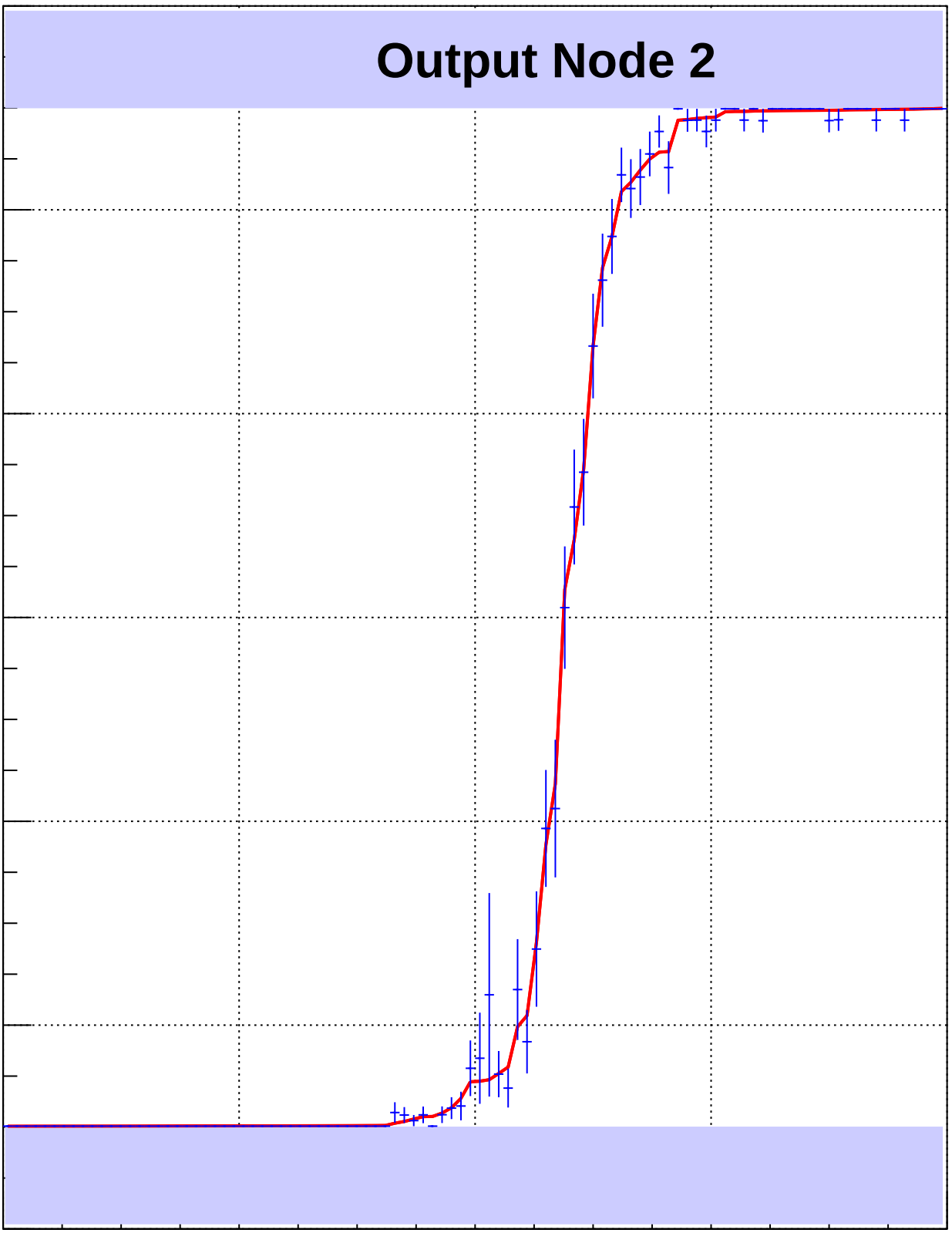



Output Node 1 (n = 8967.97 s = 3605.97 b = 5362 p_sig = 0.4021)
events
Network output
3500
3000
2500
2000
1500
1000
500
0
–1
–0.8
–0.6
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1


purity
Network output
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
–1
–0.8
–0.6
–0.4
–0.2
0
0.2
0.4
0.6
0.8
1


signal purity
signal efficiency
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


Gini index final/preboost = 60.0%/ 59.6% max possible = 59.8%
signal efficiency
efficiency
first round
final
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


Output Node 2

First Round Diag Fit

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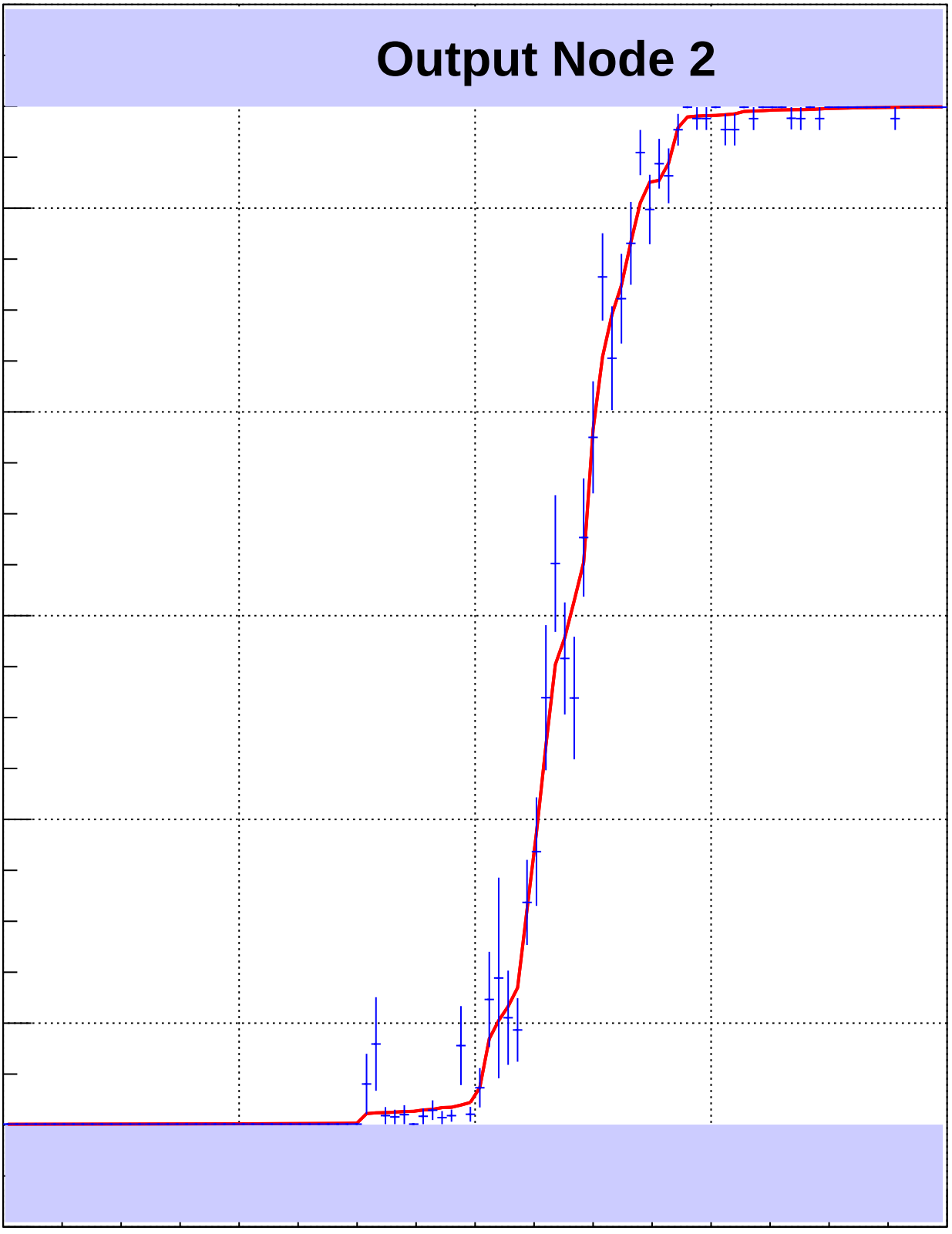
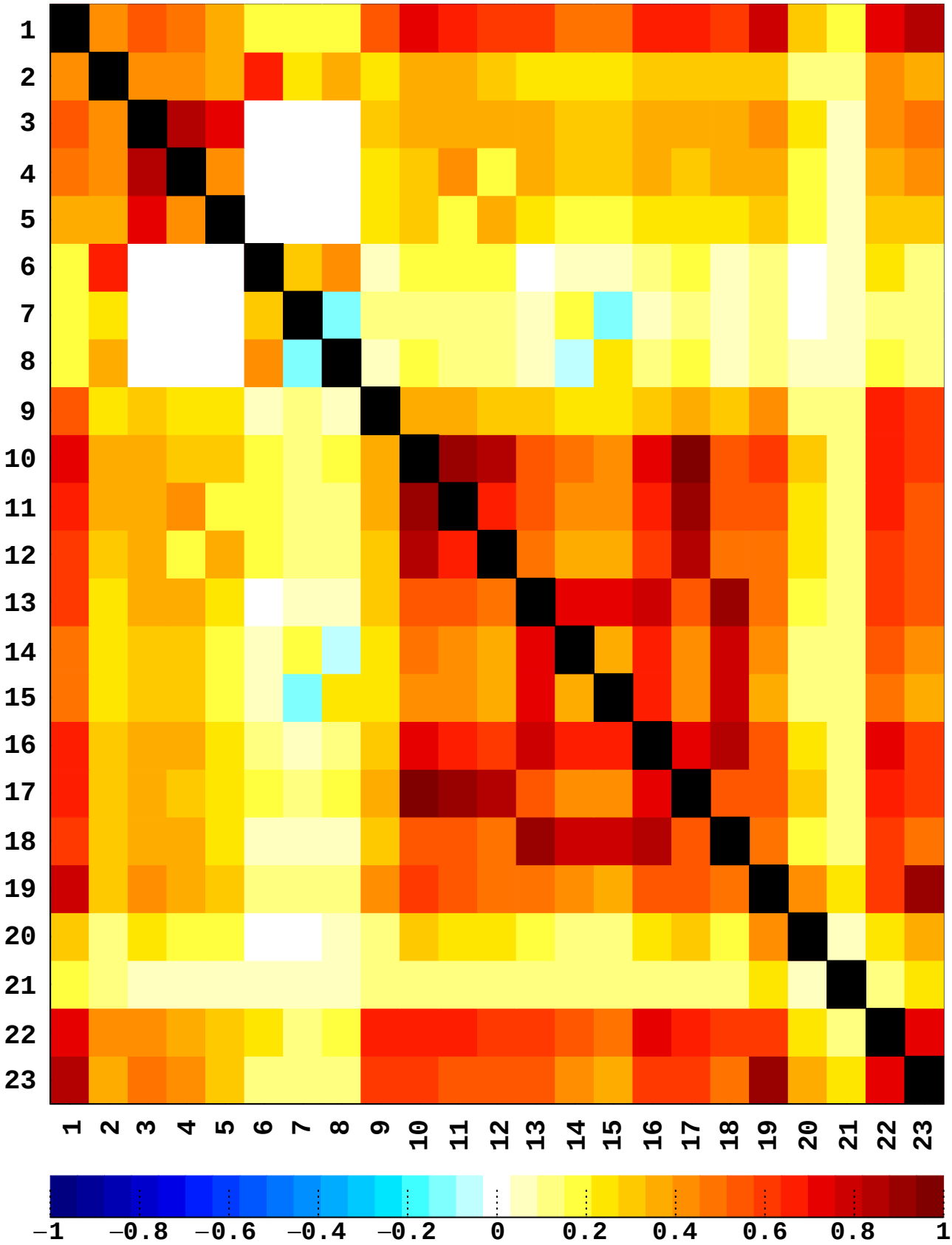
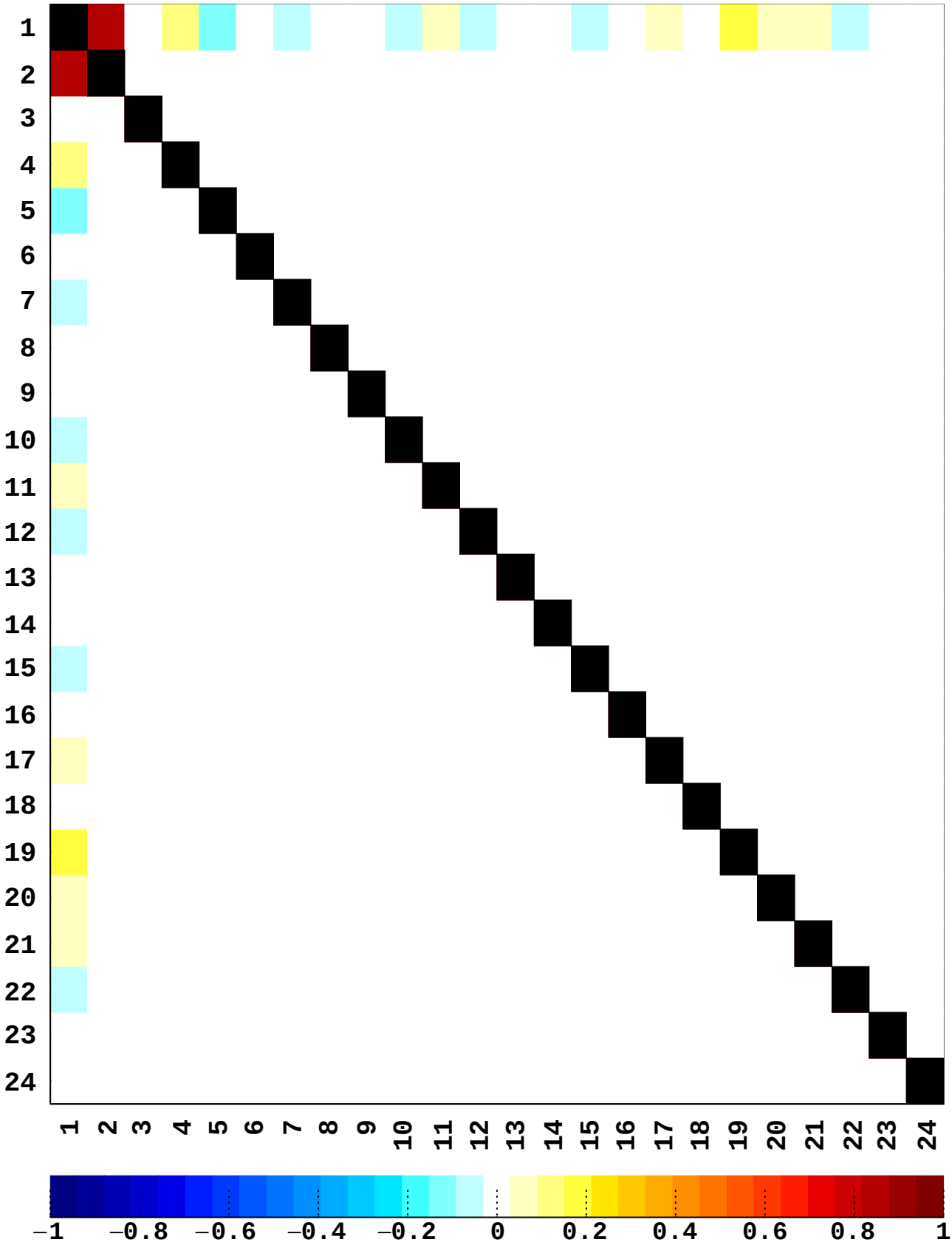


correlation matrix of input variables



correlation matrix of input variables



Input node 23 : B_0

1st most important

added signi. 80.44 **only this 80.44**

signi. loss 13.14 **corr. to others 96.30%**

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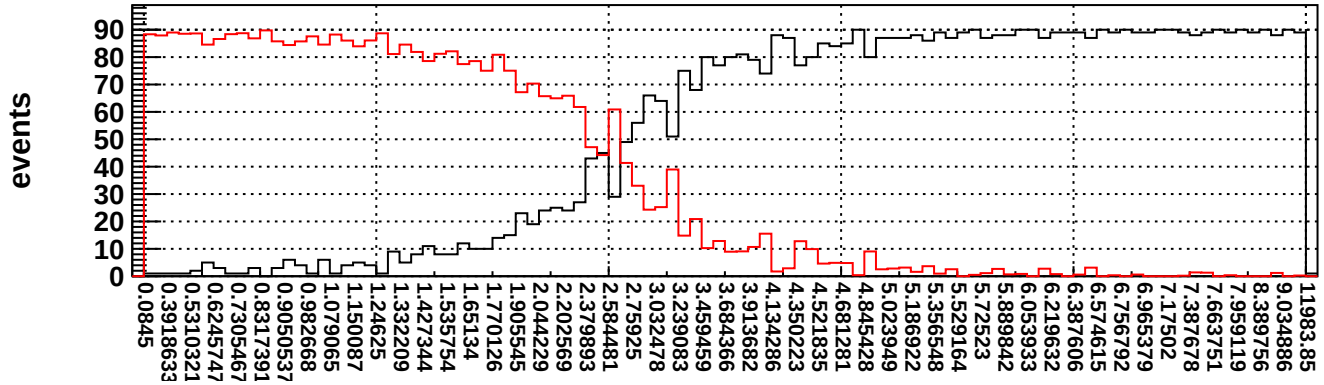
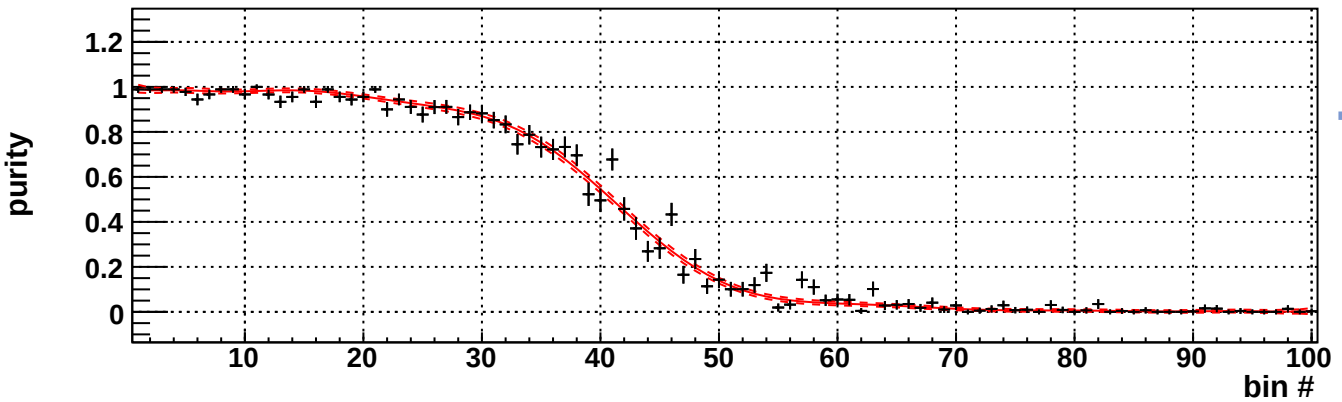
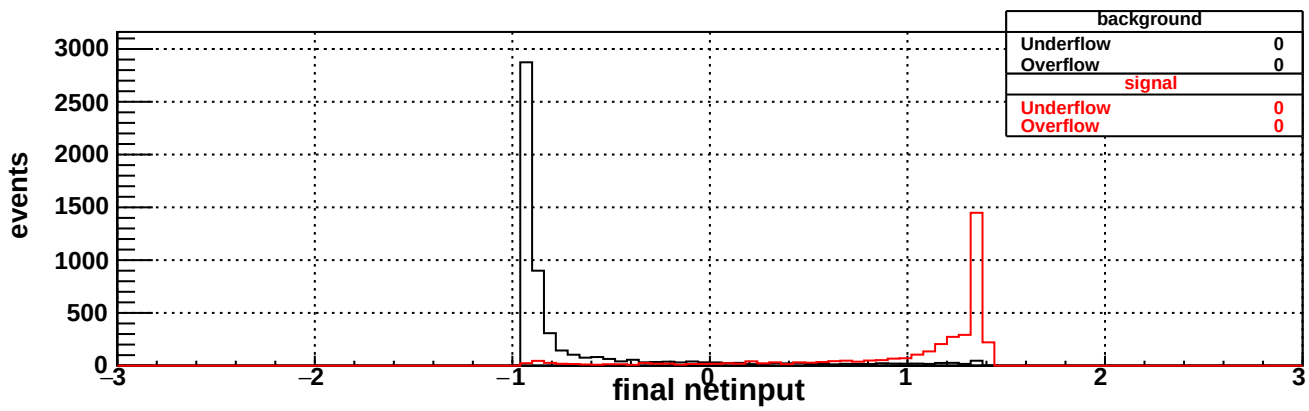


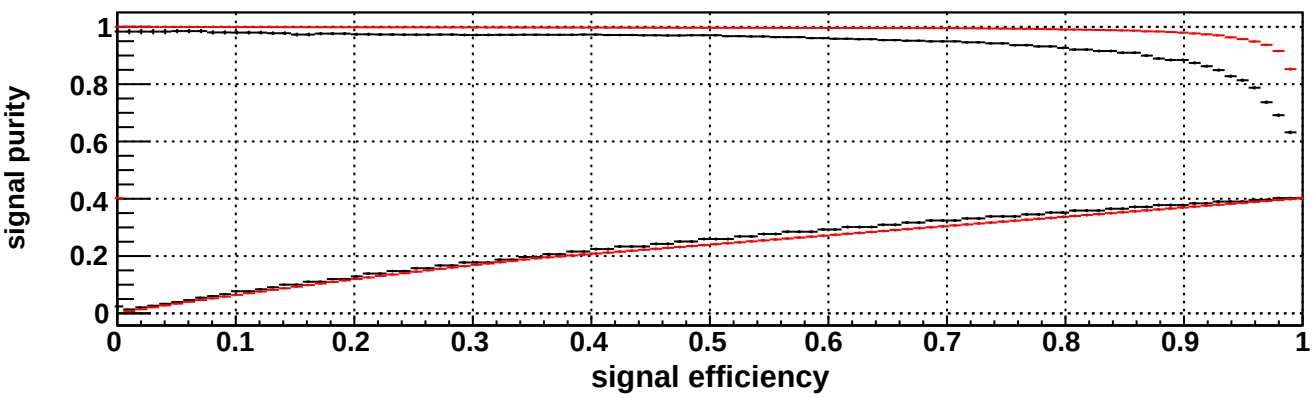
flat



spline fit



final



separation

Input node 10 : K^{0*}

2nd most important

added signi. 22.26 only this 67.58

signi. loss 3.48 corr. to others 97.80%

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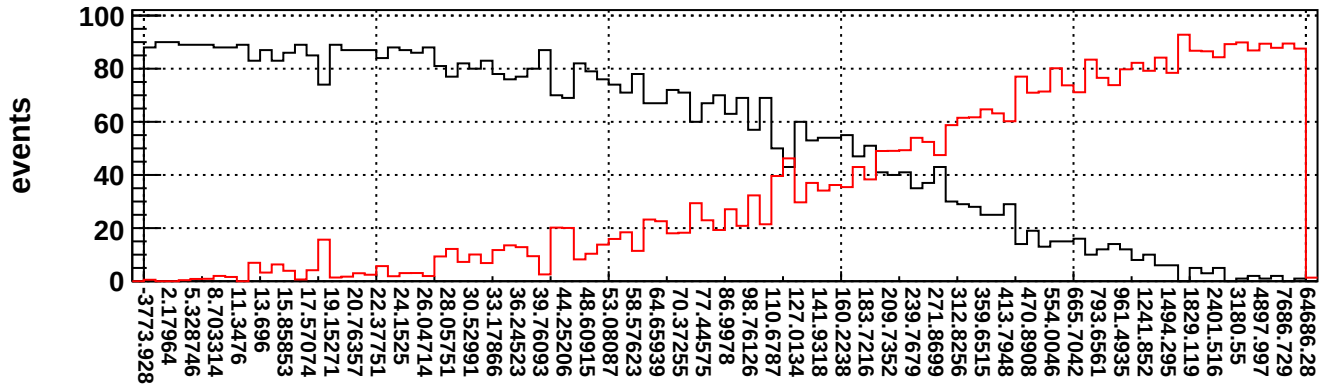

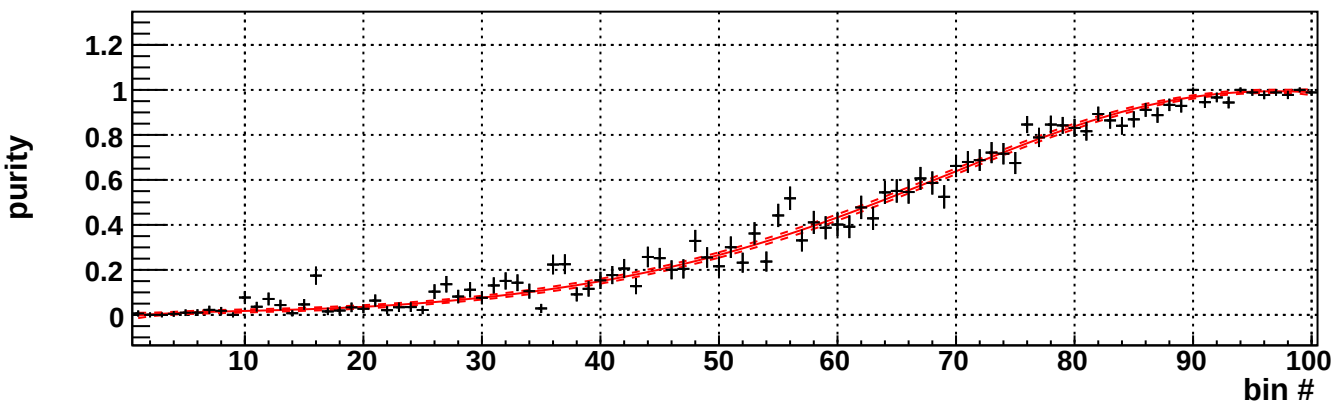

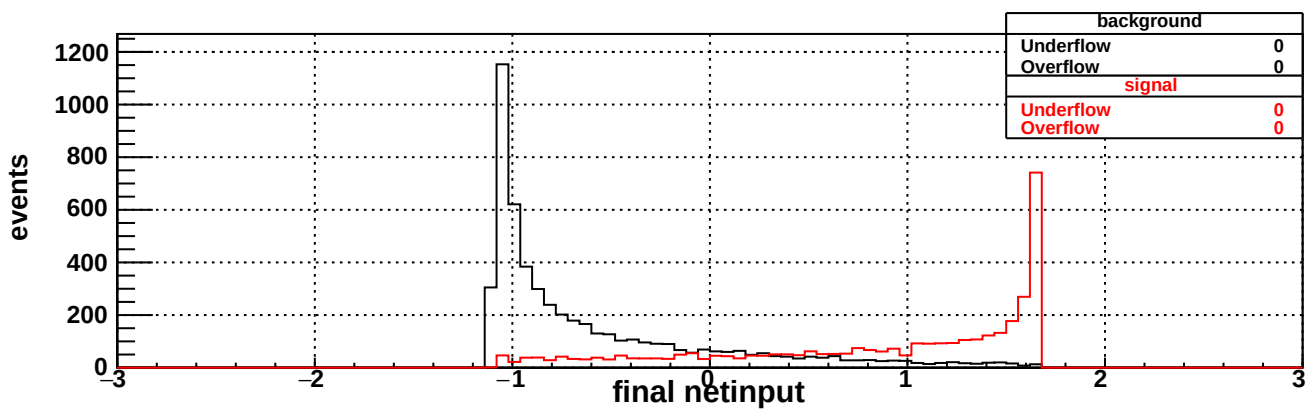

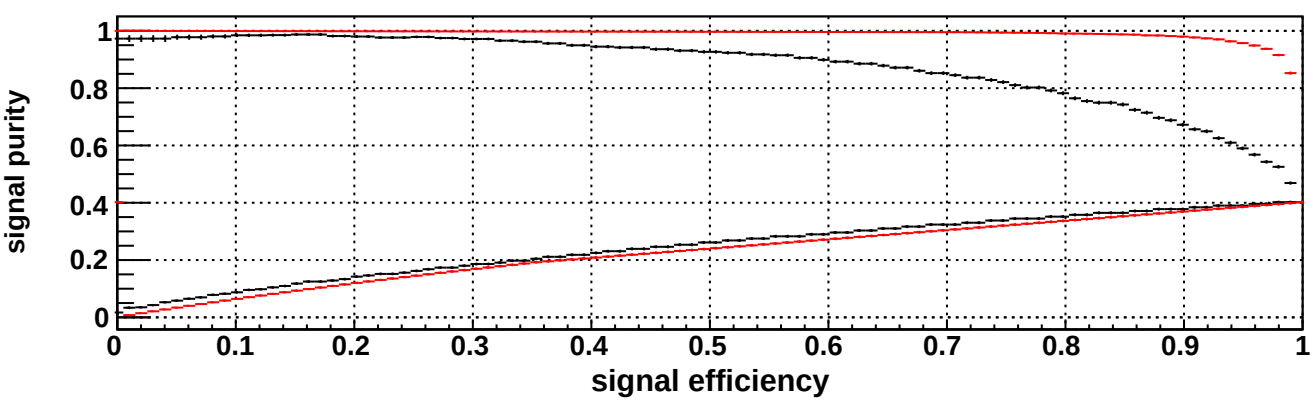

Input node 22 : B_0

3rd most important

added signi. 10.58

signi. loss 3.95

PrePro: DIRA 14 #22

only this 71.24

corr. to others 89.60%

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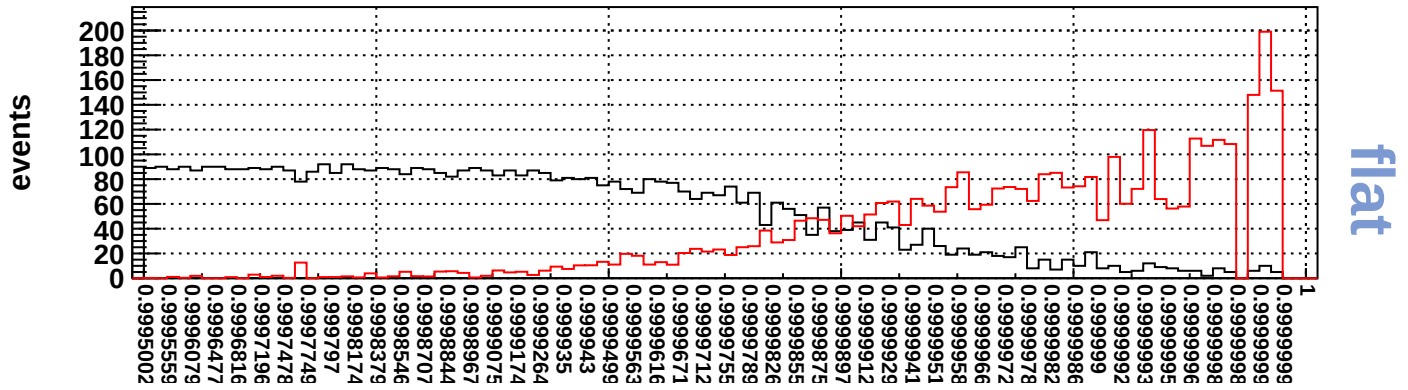

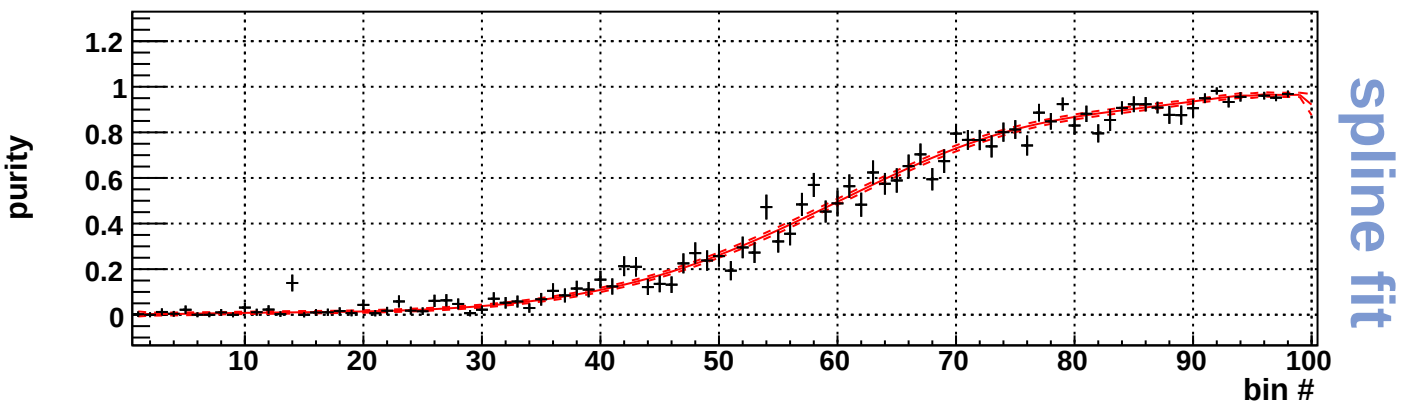

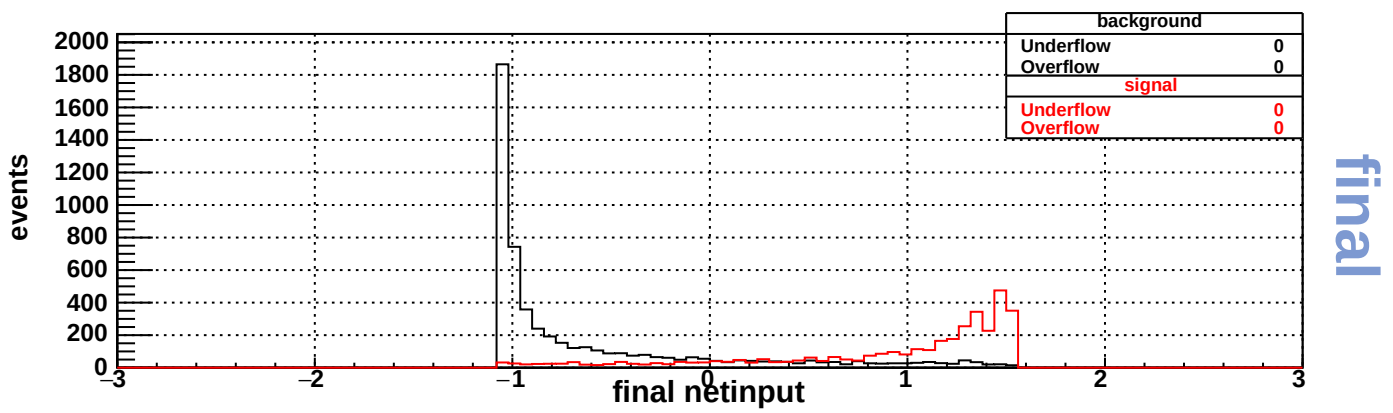

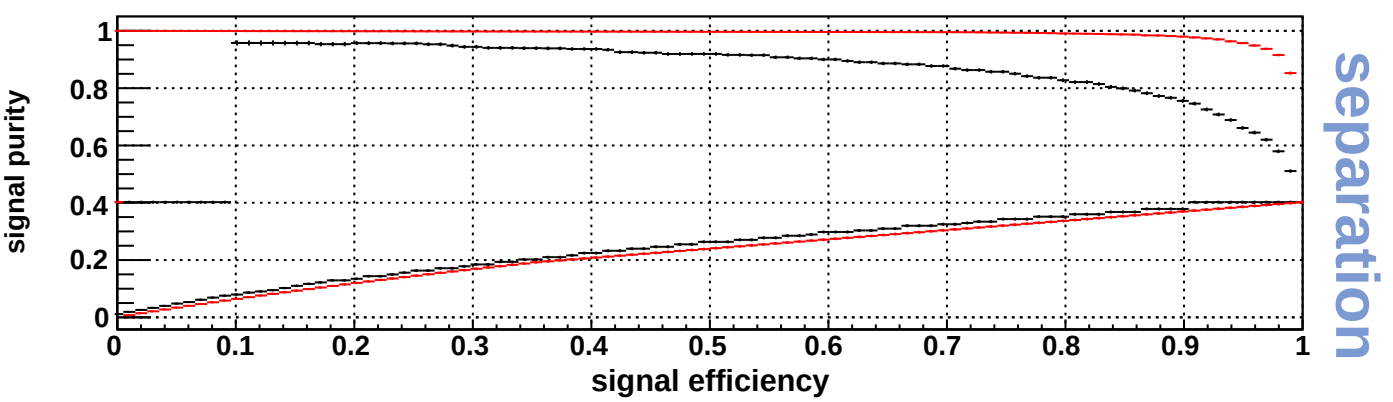

Input node 3 : K^{0*}

4th most important — **PrePro: p_T 14 #3**

added signi. 9.16 — **only this 49.13**

signi. loss 2.07 — **corr. to others 97.20%**

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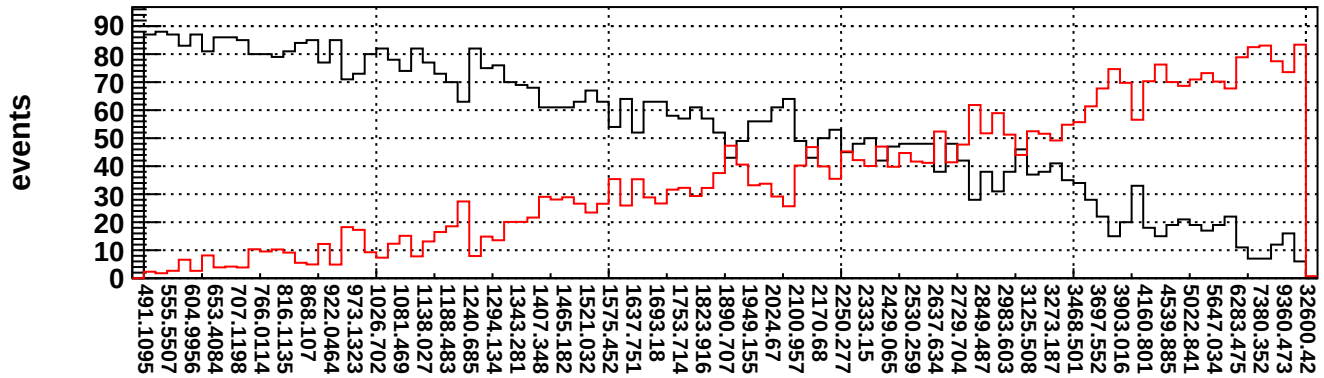
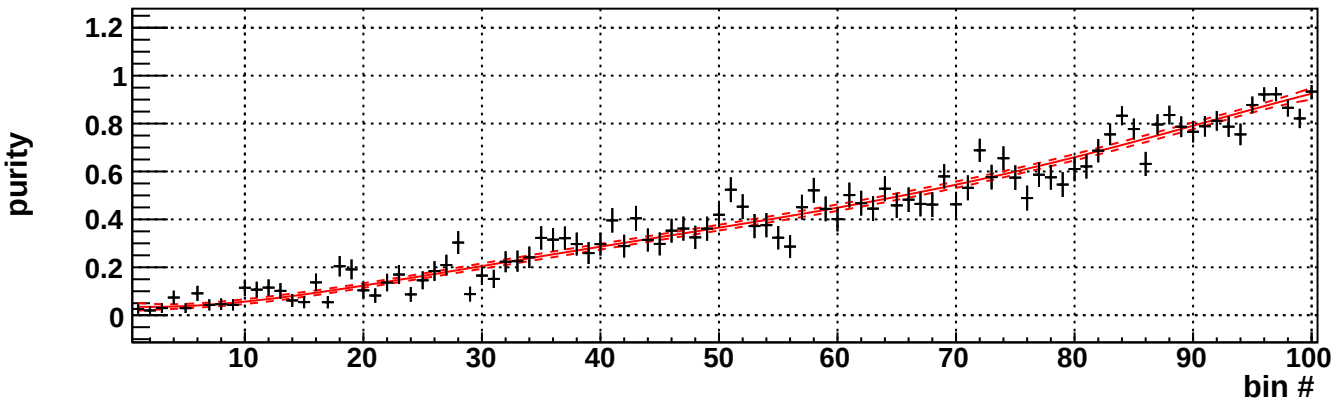
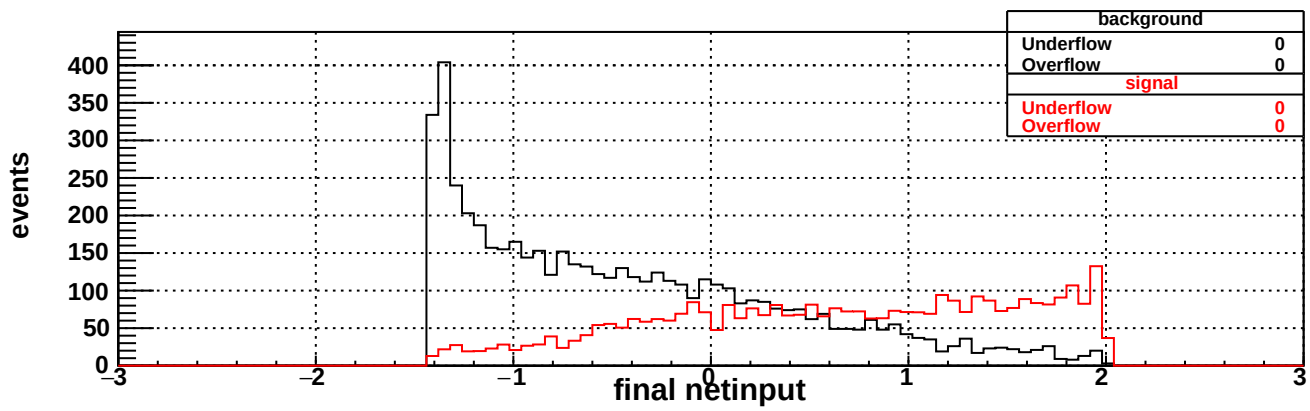


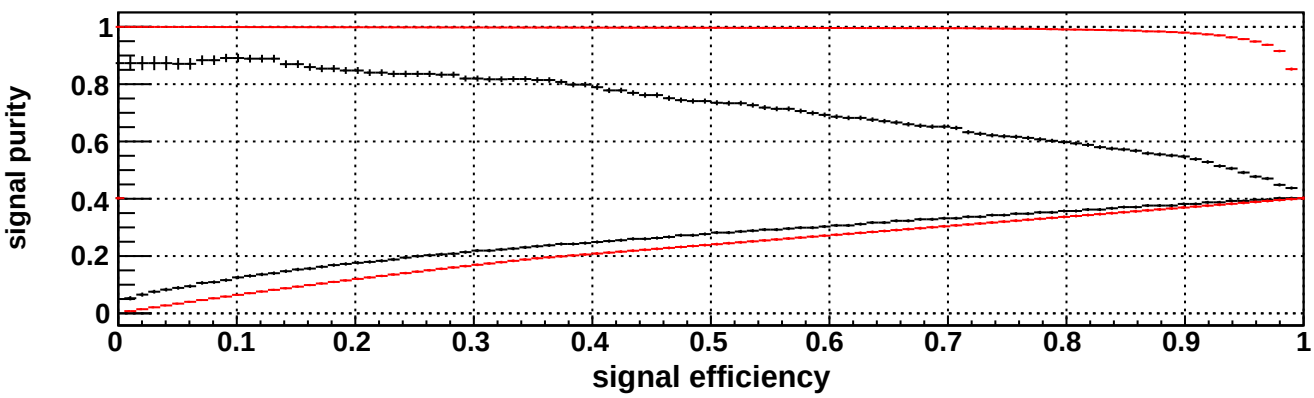
flat



spline fit



final



separation

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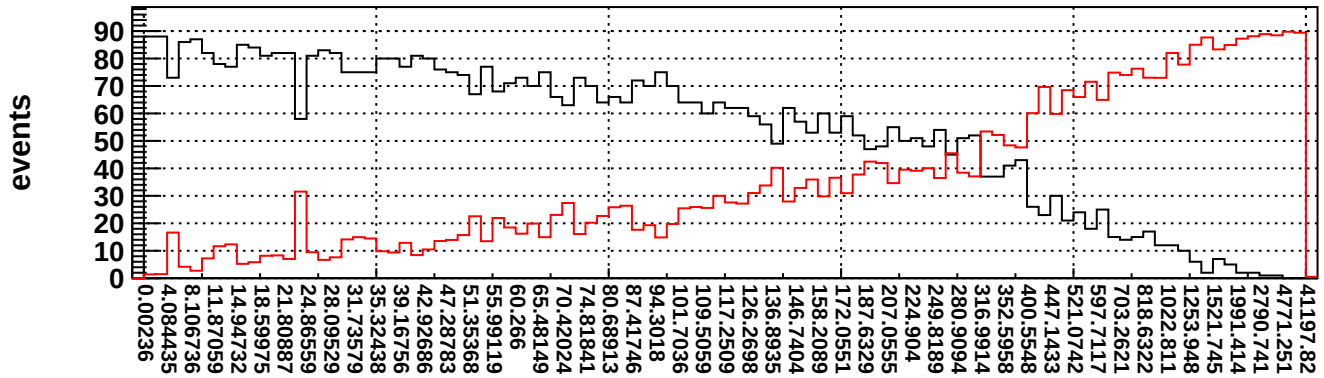
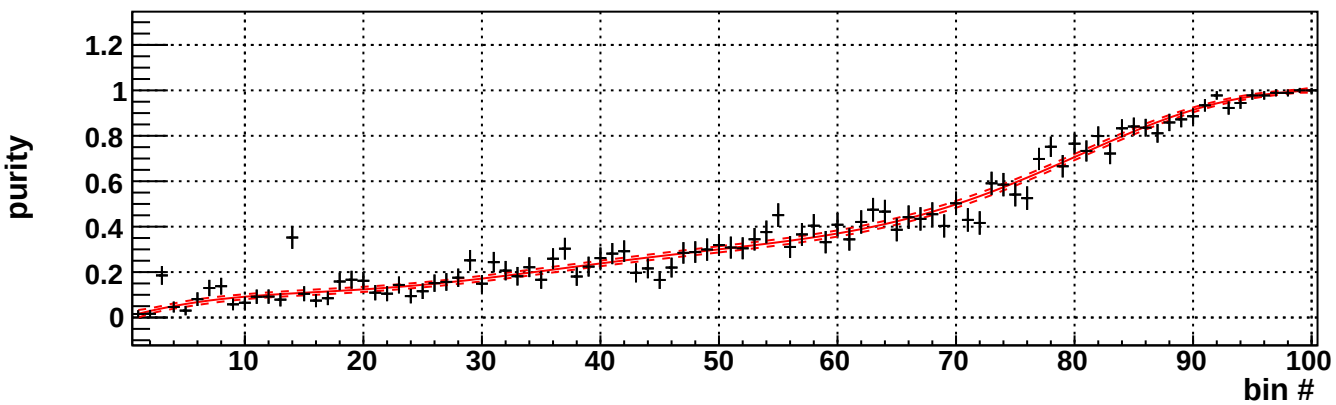
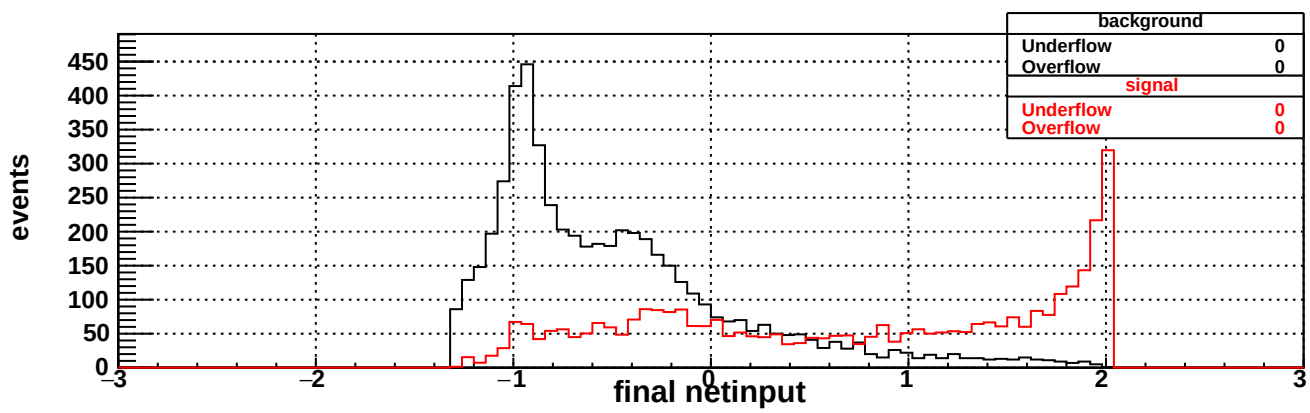
5th most important
added signi. 6.58
signi. loss 1.35
only this 56.15
corr. to others 92.00%



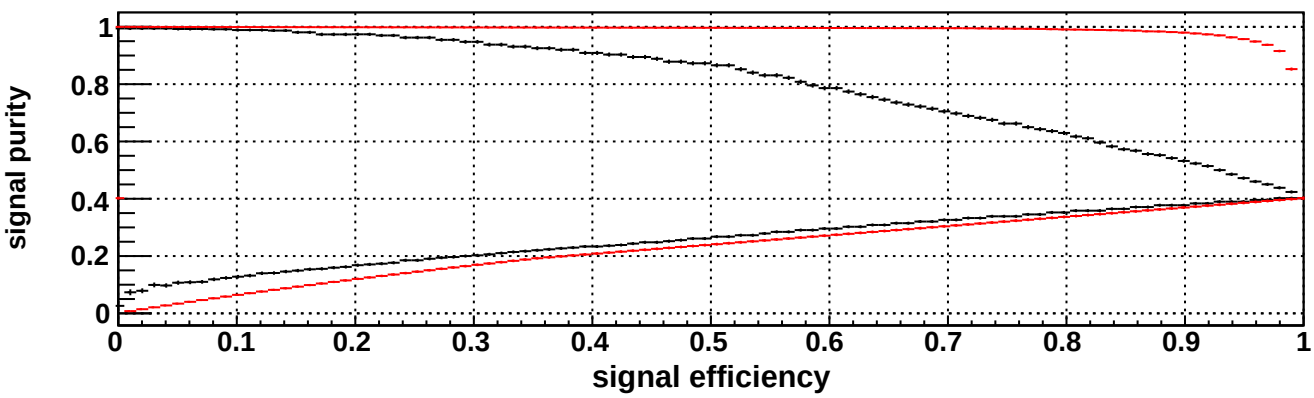
flat



spline fit



final



separation

Input node 2 : B_0

6th most important — PrePro: p_T 14 #2

added signi. 6.00 — only this 41.42

signi. loss 4.39 — corr. to others 83.70%

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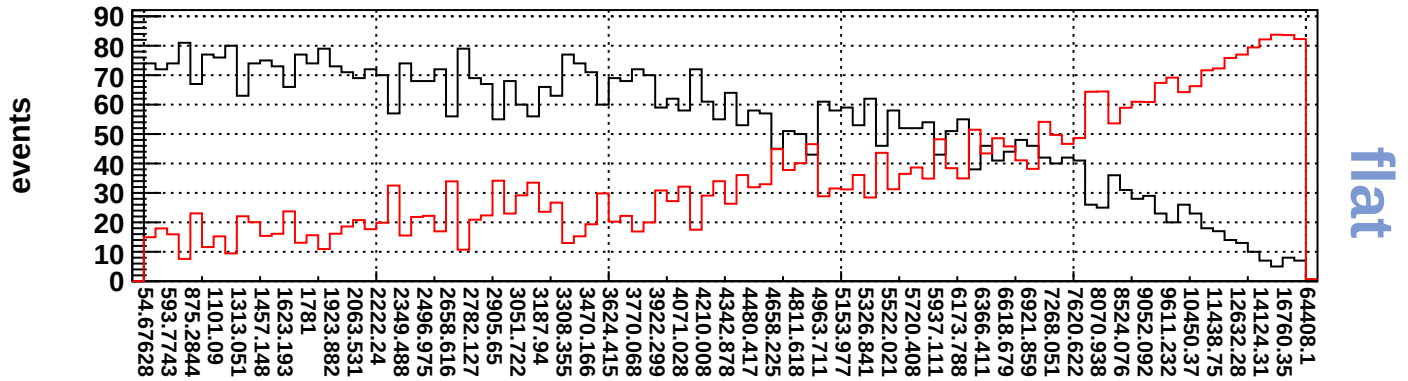
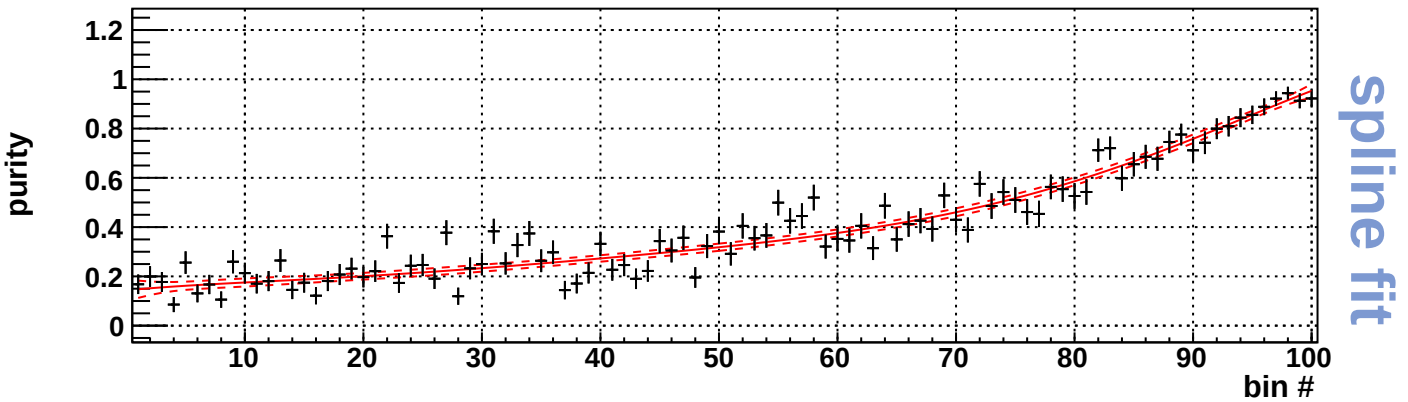
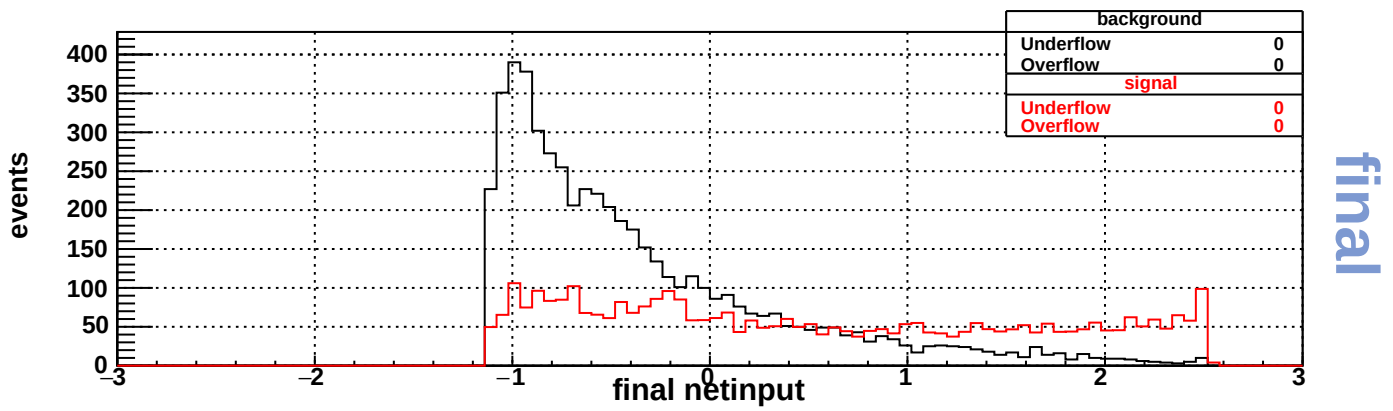


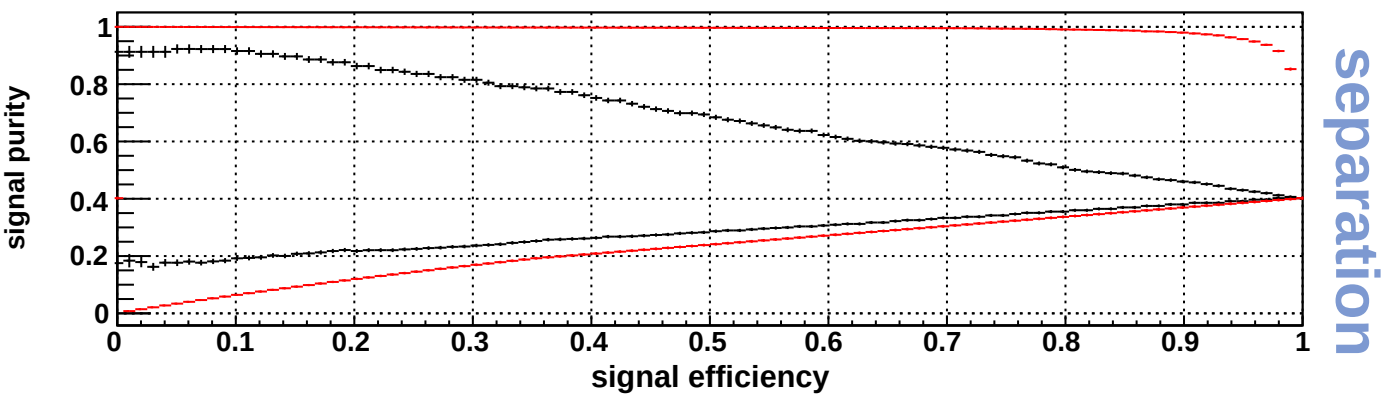
flat



spline fit



final



separation

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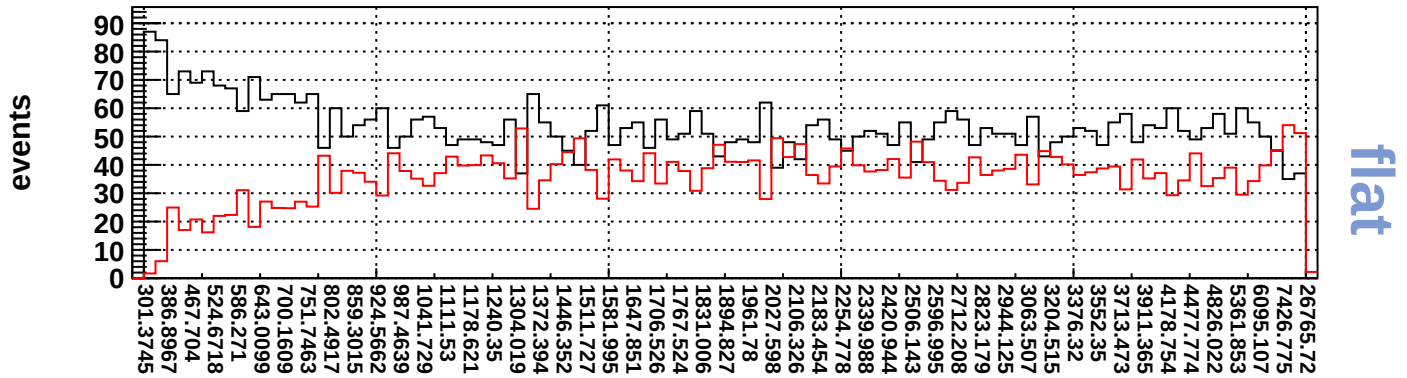
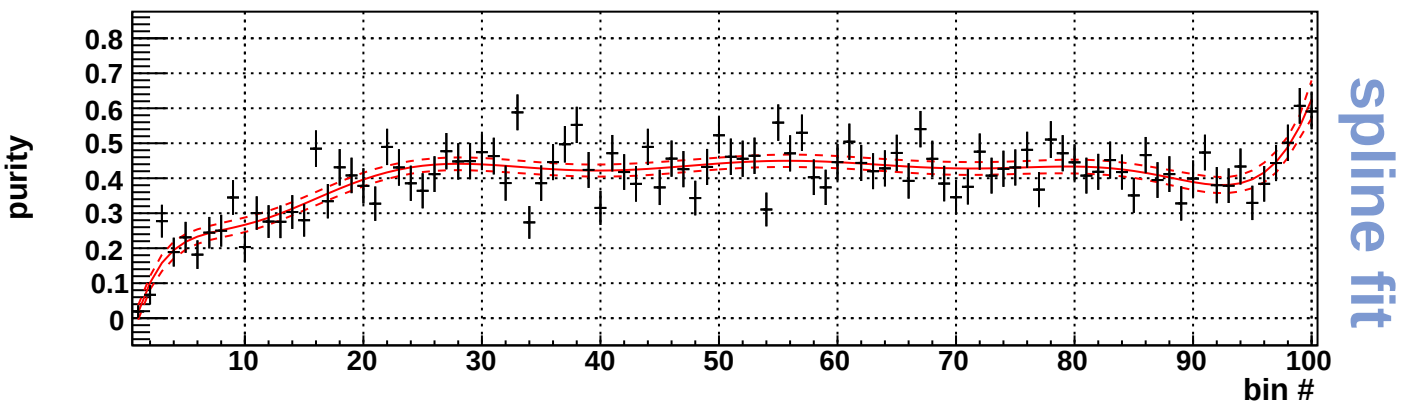
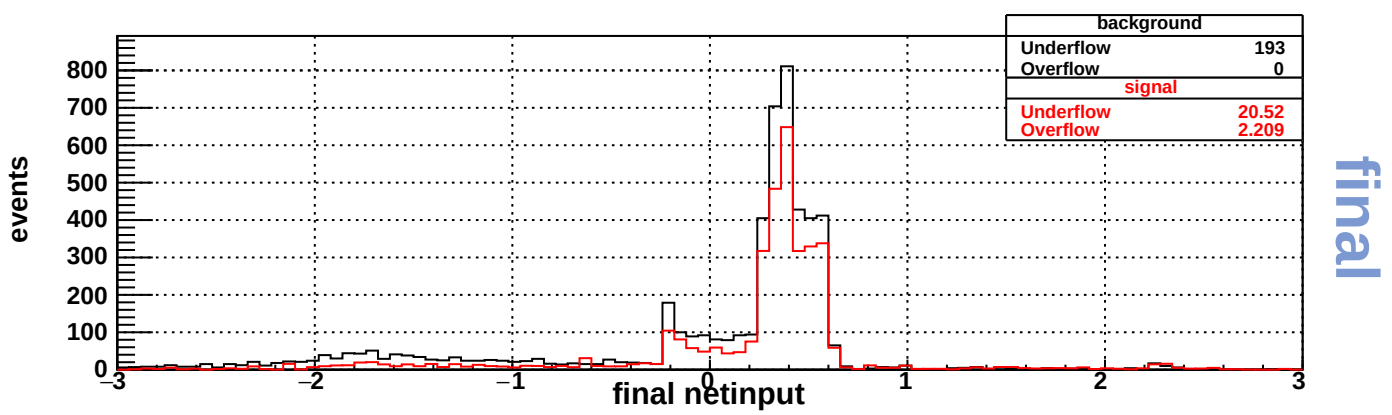
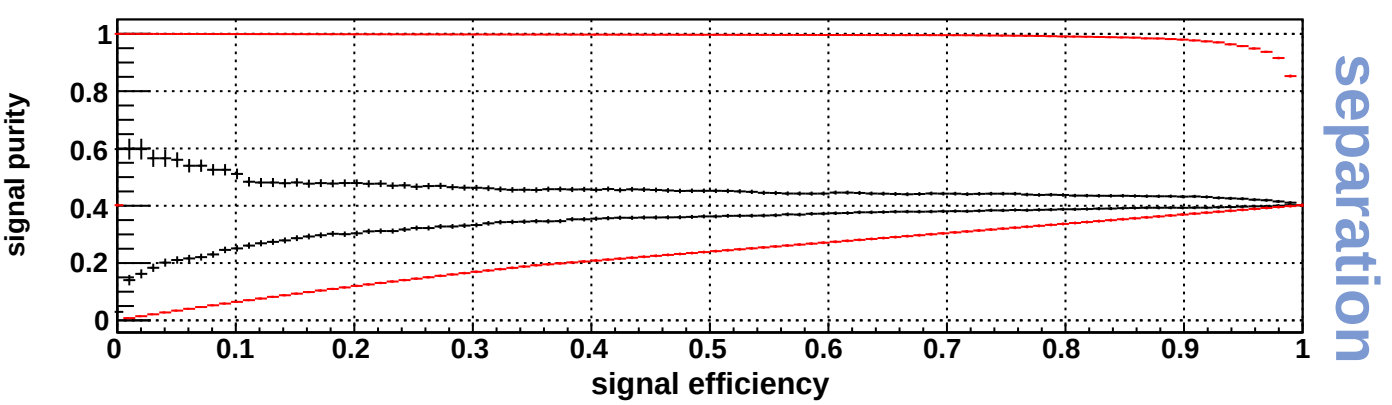
7th most important	PrePro: p_T 14 #7
added signi. 2.96	only this 15.85
signi. loss 3.79	corr. to others 49.10%









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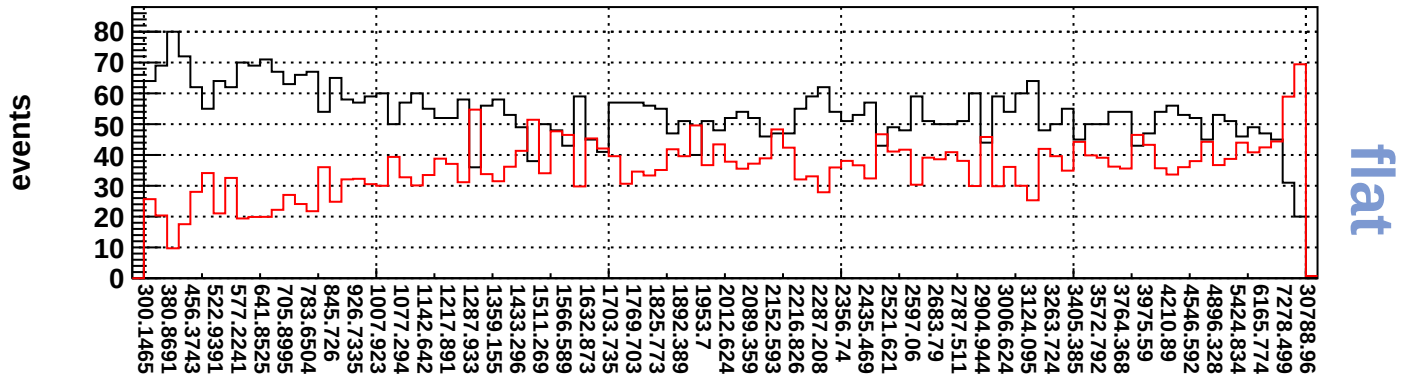
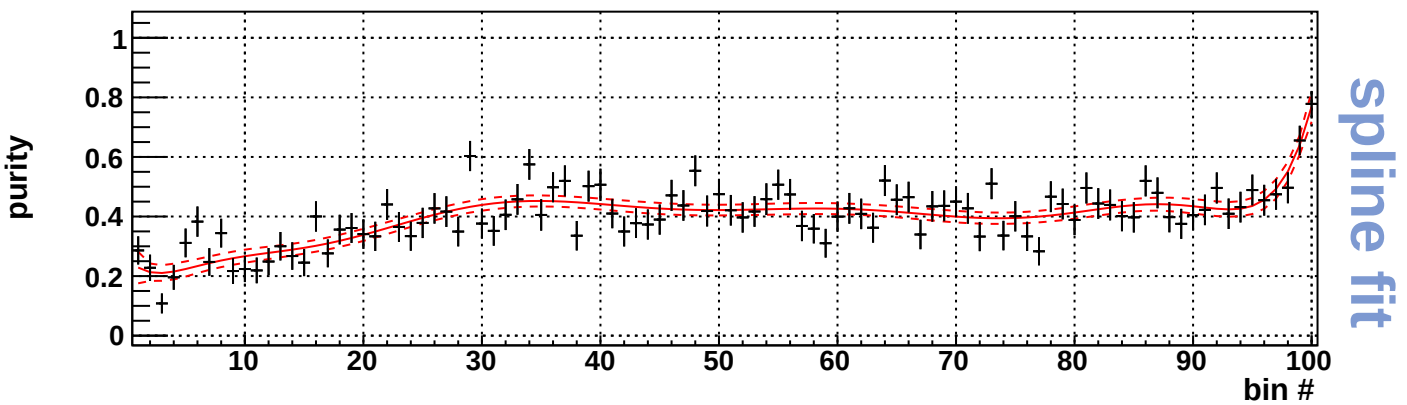
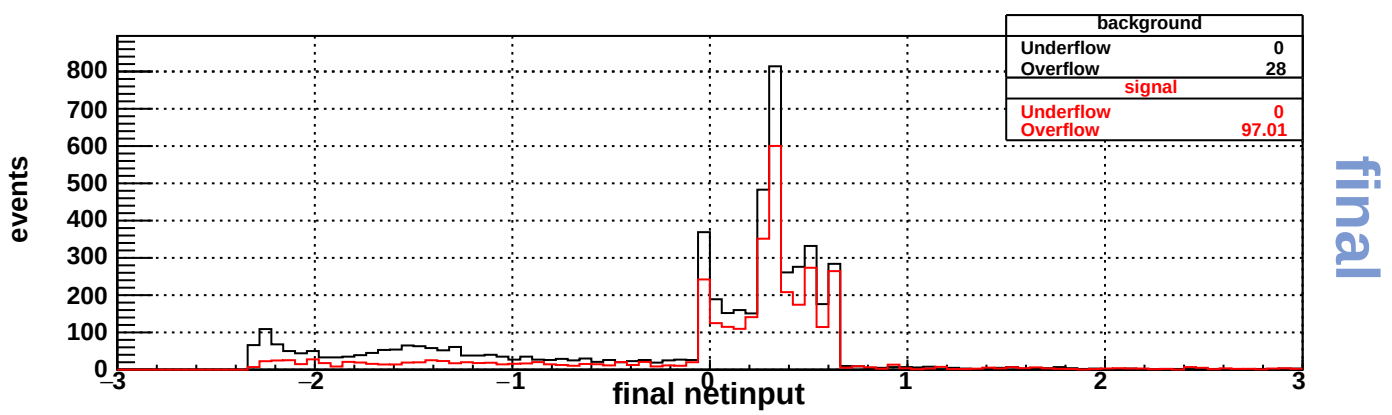
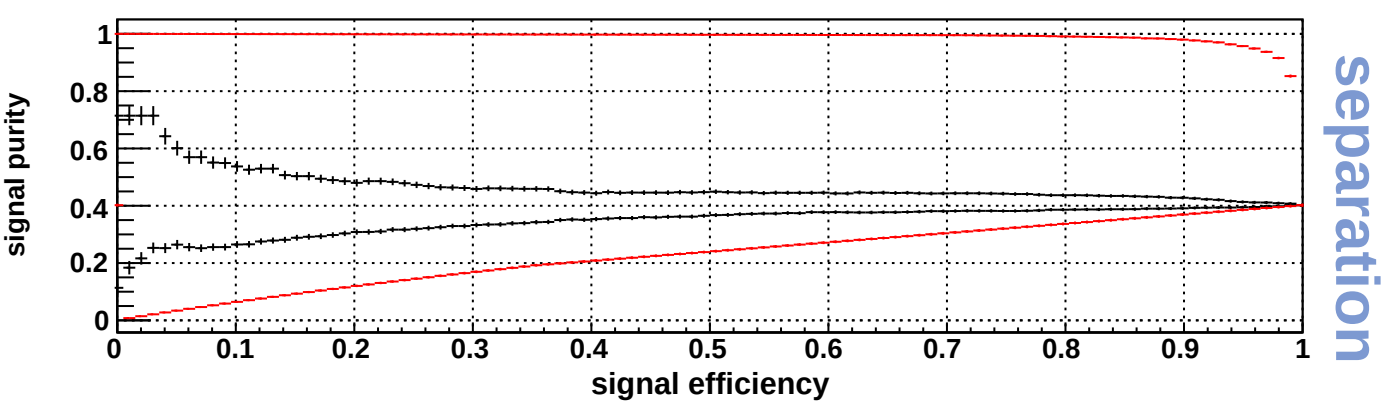
8th most important	PrePro: p_T 14 #8
added signi. 2.73	only this 15.04
signi. loss 3.46	corr. to others 57.80%









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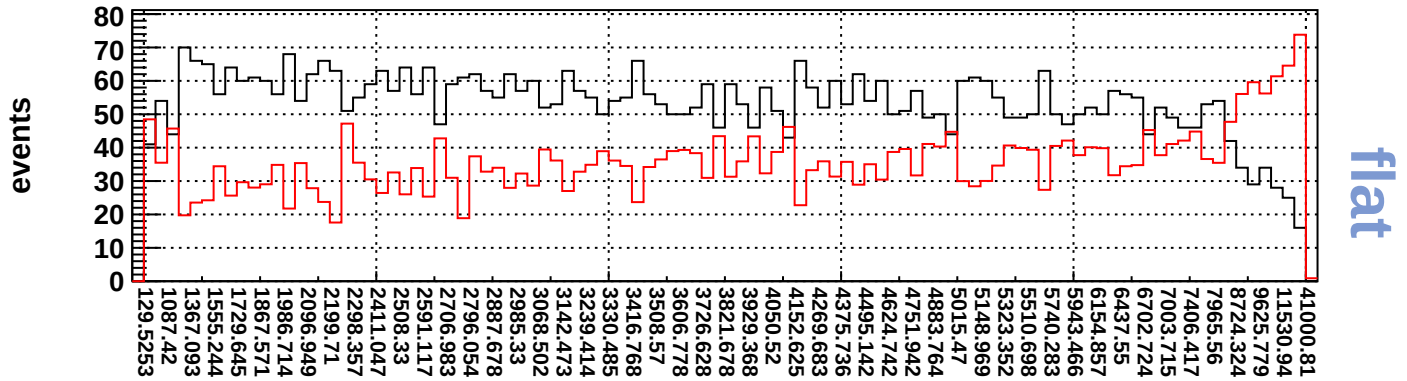
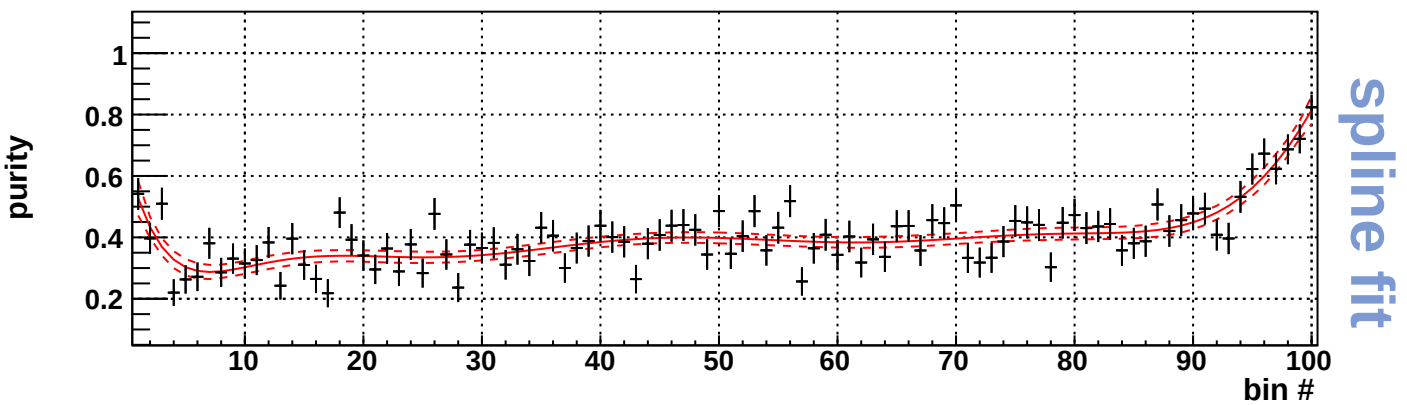
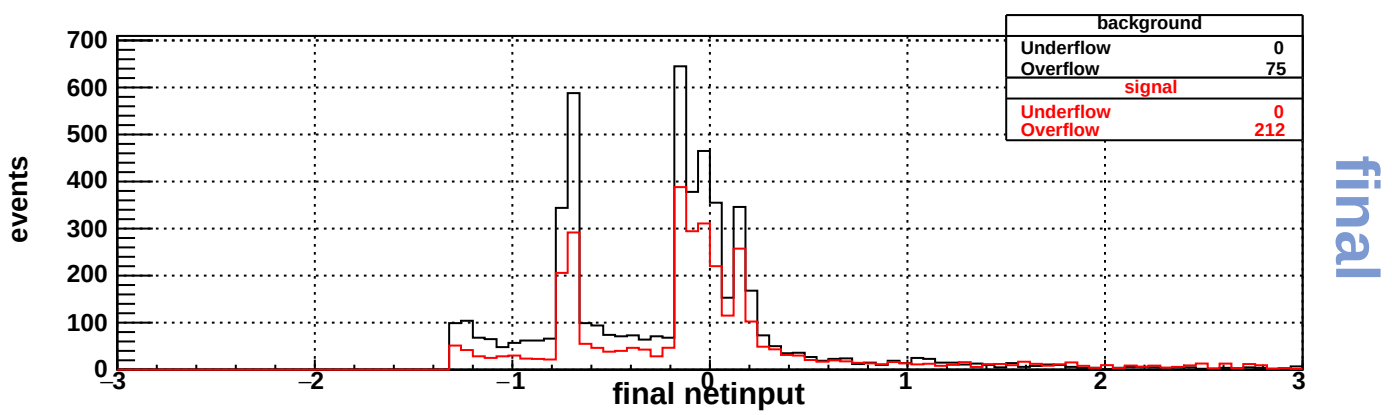
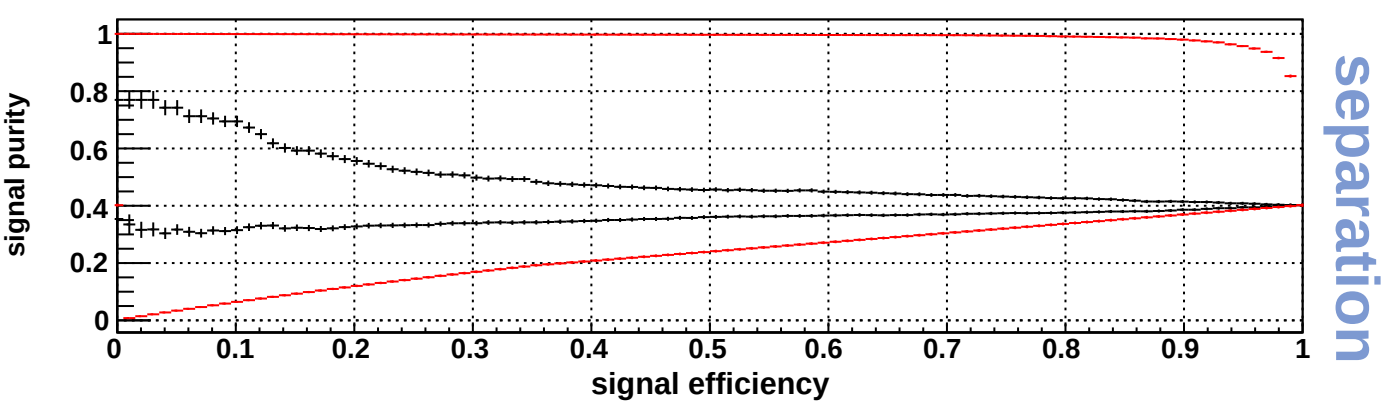
9th most important	PrePro: p_T 14 #6
added signi. 3.06	only this 16.41
signi. loss 2.84	corr. to others 79.80%









Input node 20 : K^{0*}

10th most important

added signi. 2.41 only this 28.14

signi. loss 2.38 corr. to others 44.80%

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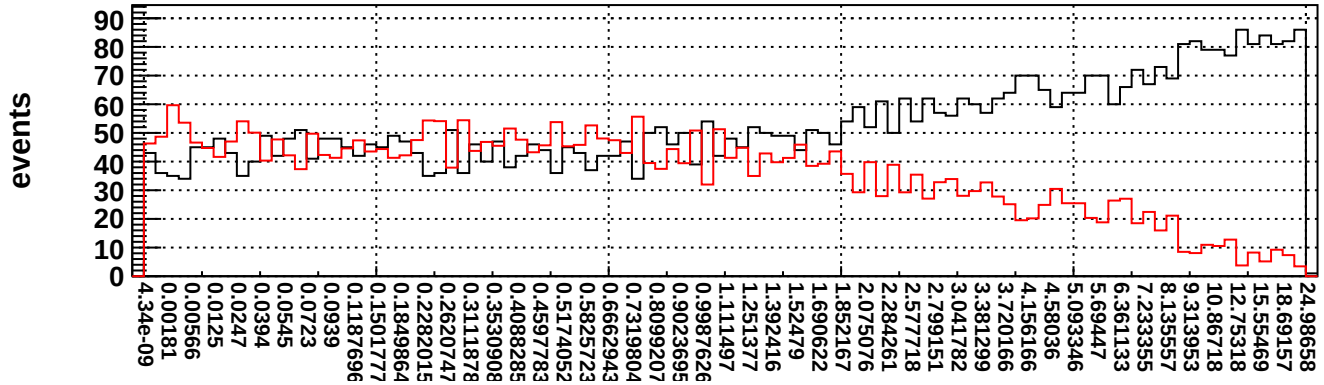
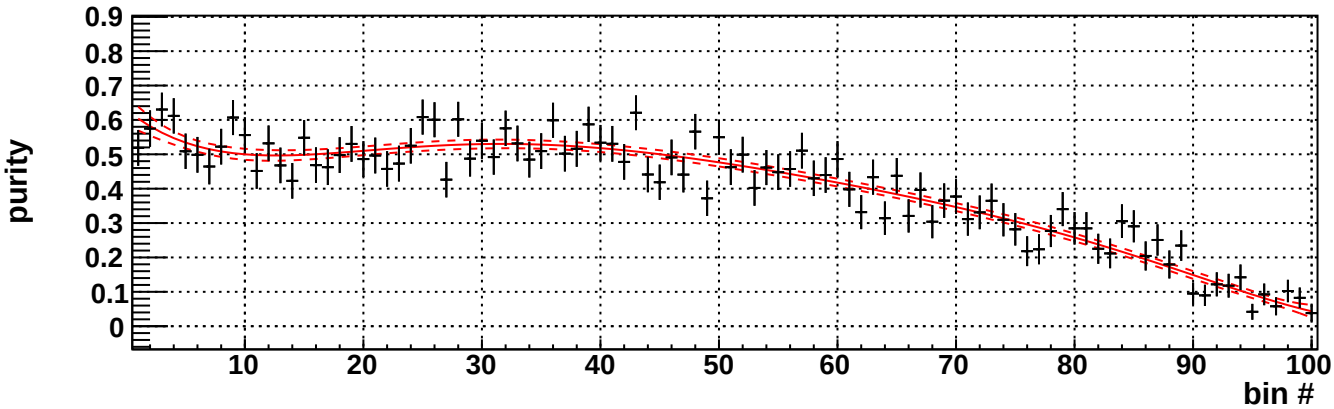
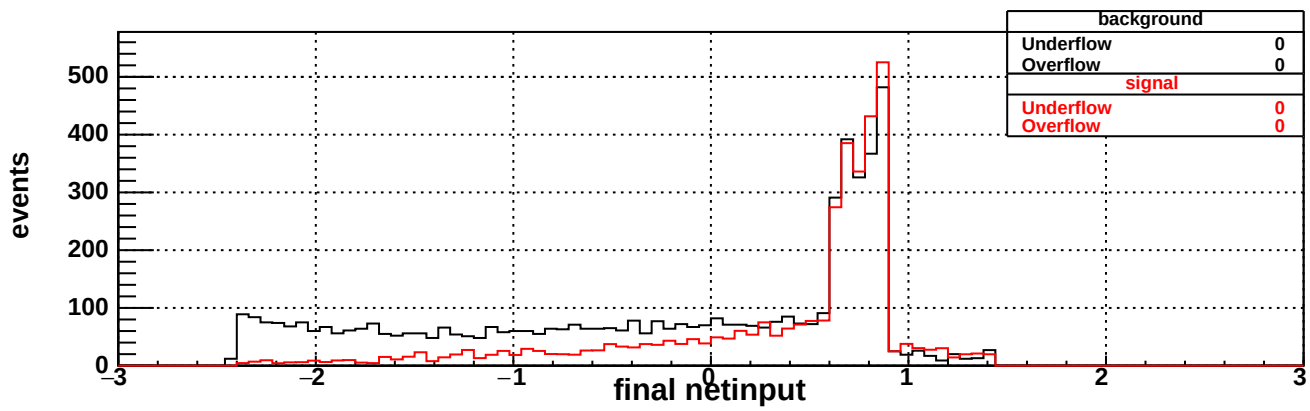


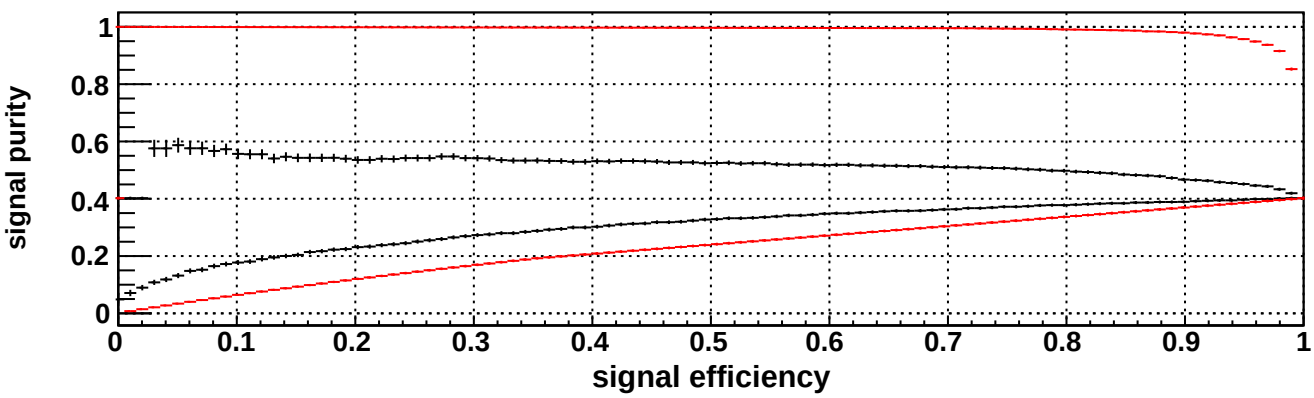
flat



spline fit



final



separation

Input node 16 : B_0

11th most important

added signi. 2.03 **only this 63.73**

signi. loss 1.37 **corr. to others 92.80%**

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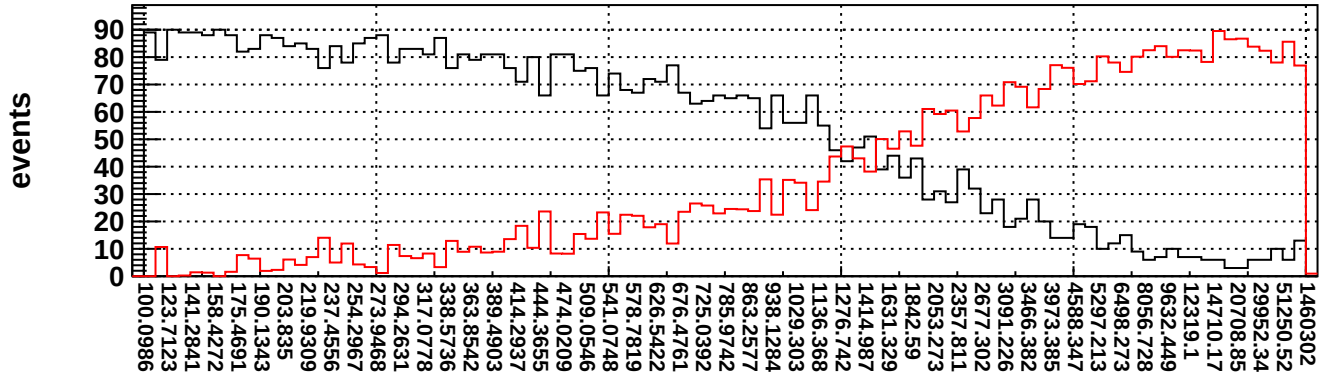
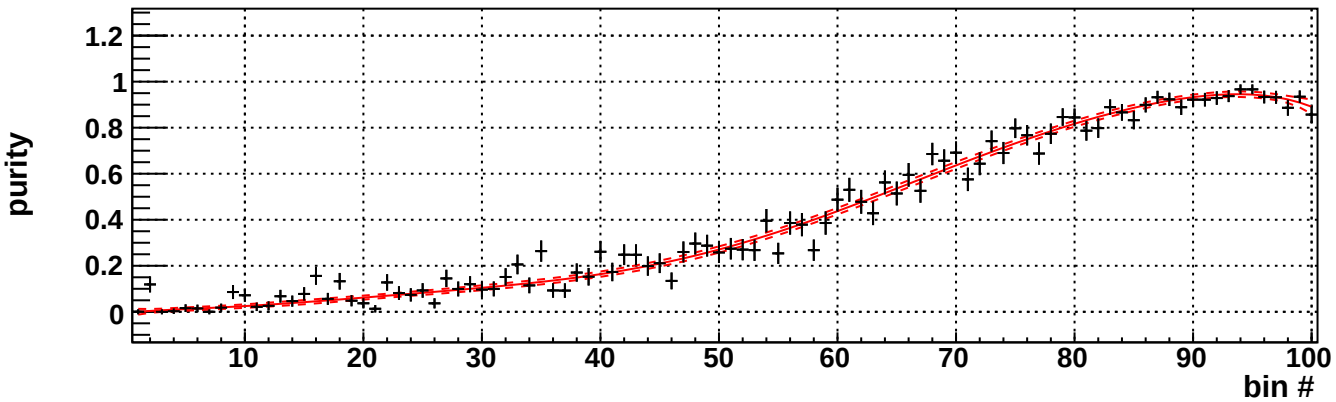
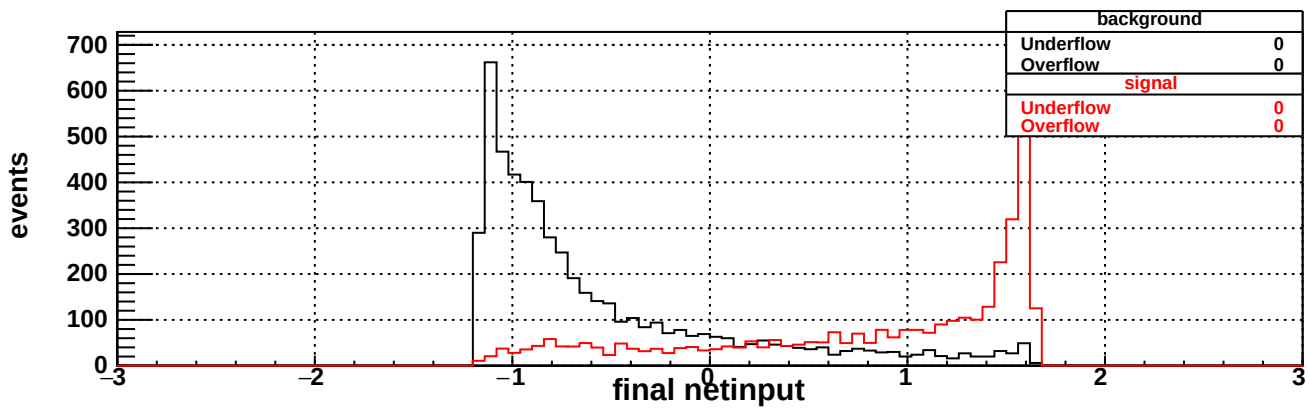


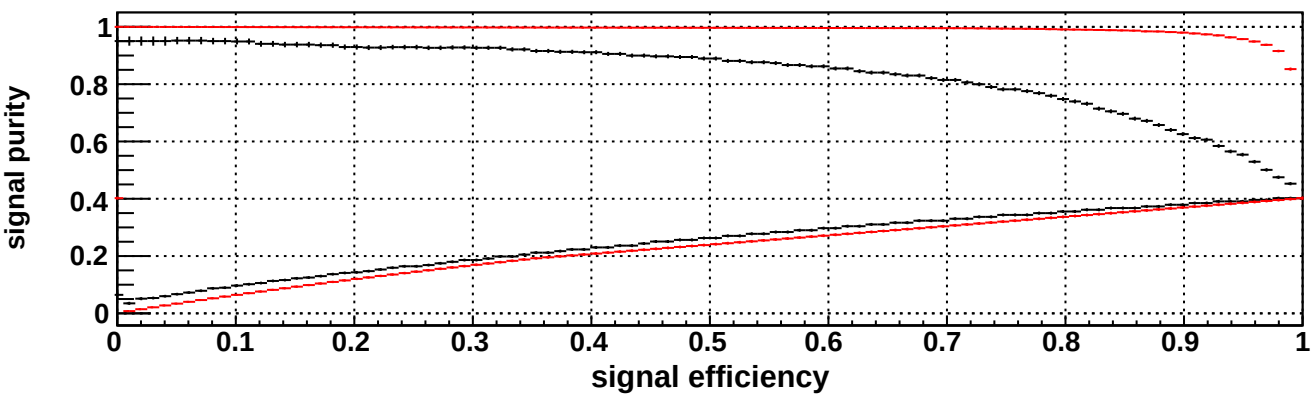
flat



spline fit



final



separation

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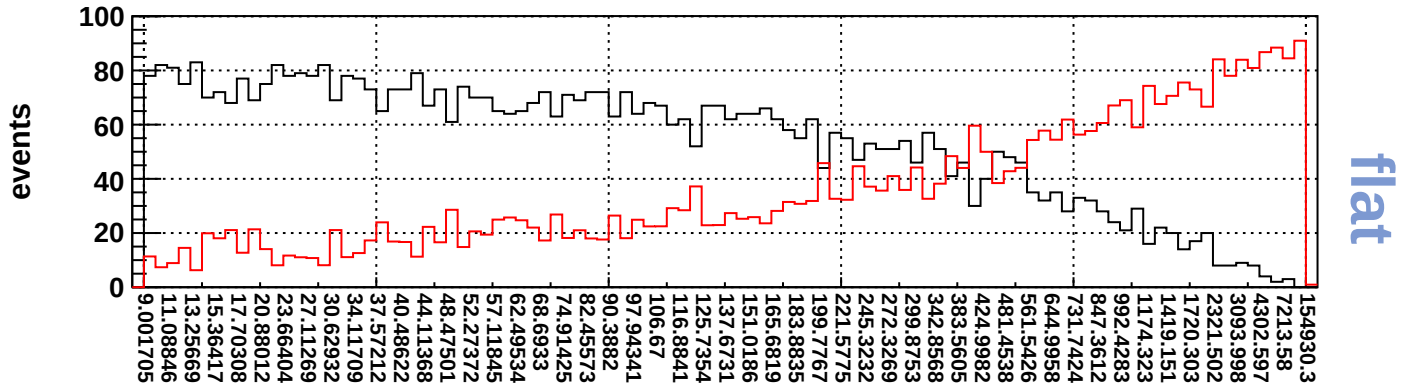
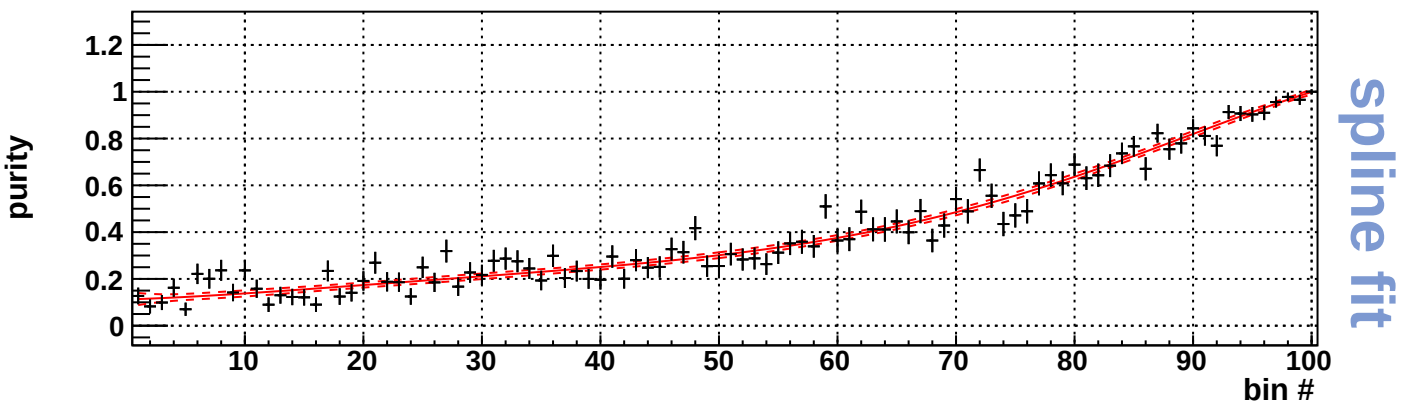
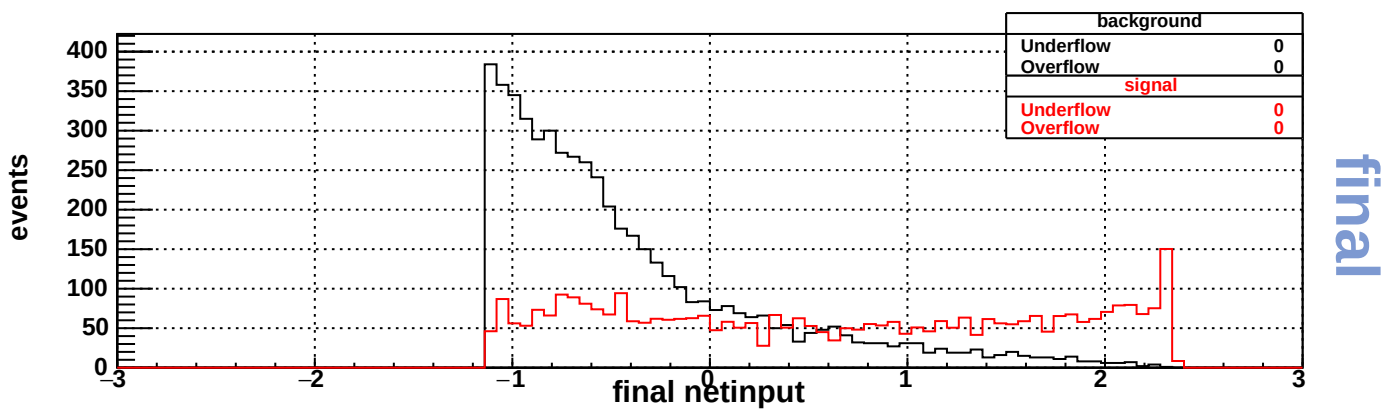
12th most important

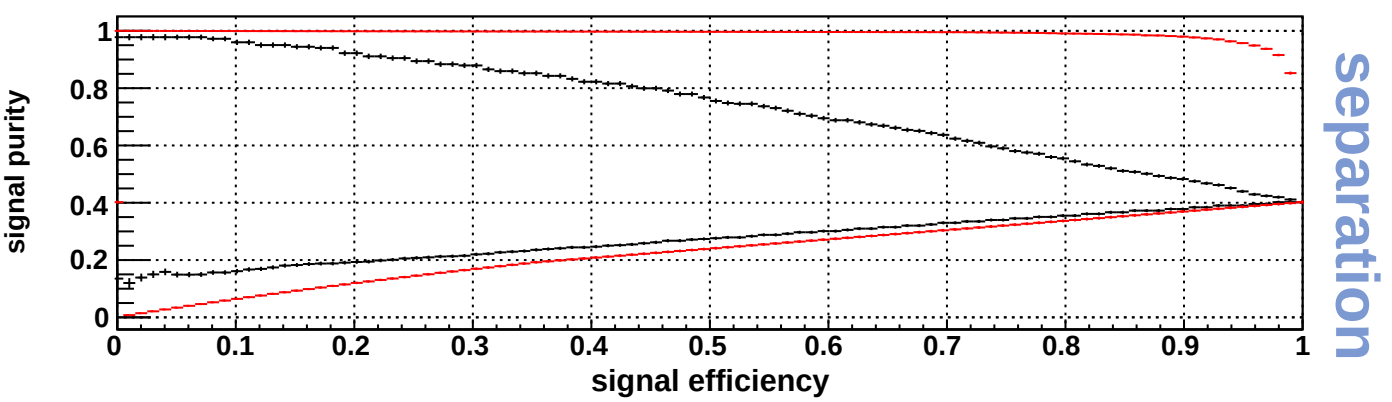
added signi. 1.45 **only this 47.90**

signi. loss 1.75 **corr. to others 91.70%**









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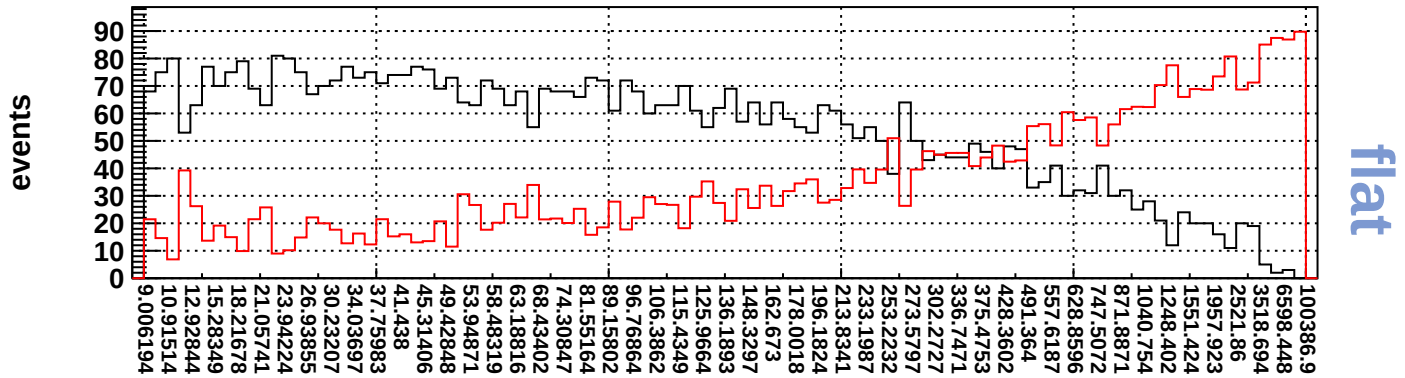
13th most important

added signi. 1.04 **only this 43.24**

signi. loss 1.20 **corr. to others 90.90%**



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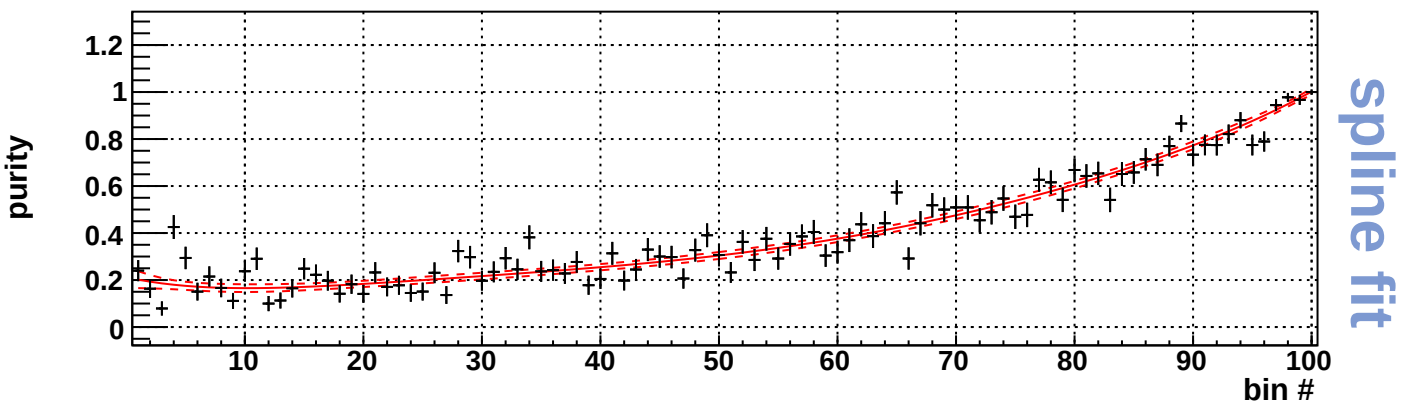
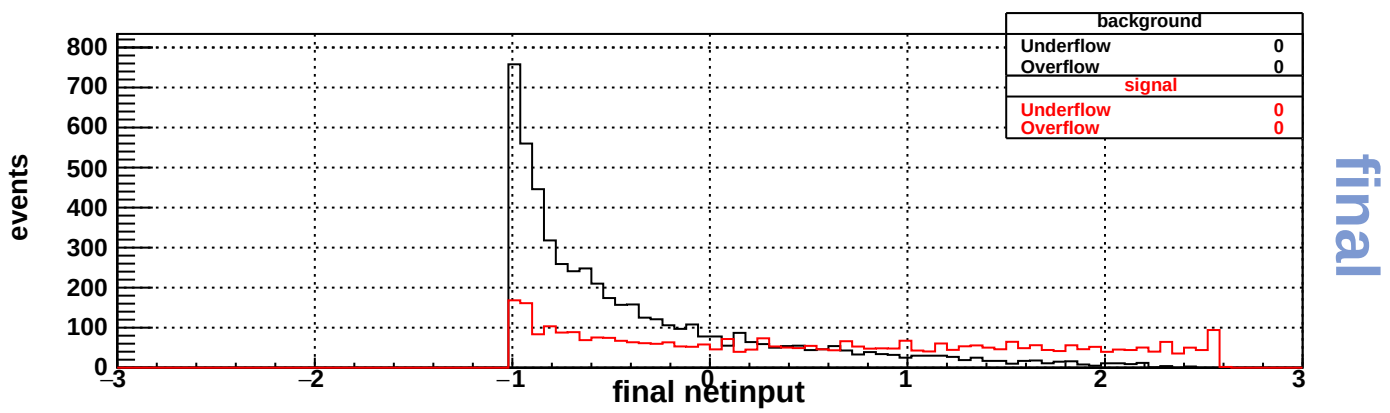
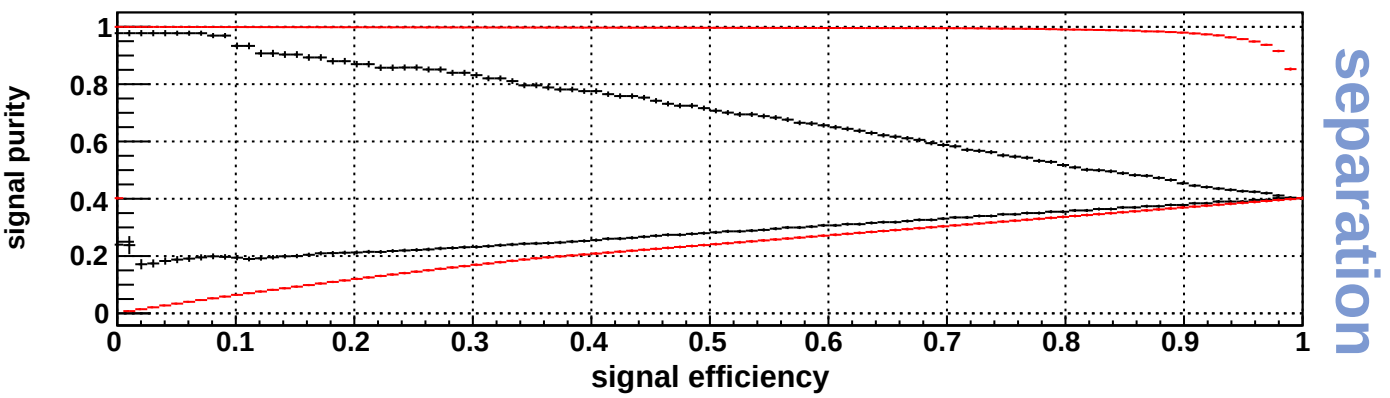


spline fit



final



separation

Input node 11 : K

14th most important

added signi. 0.84 only this 62.99

signi. loss 0.71 corr. to others 94.70%

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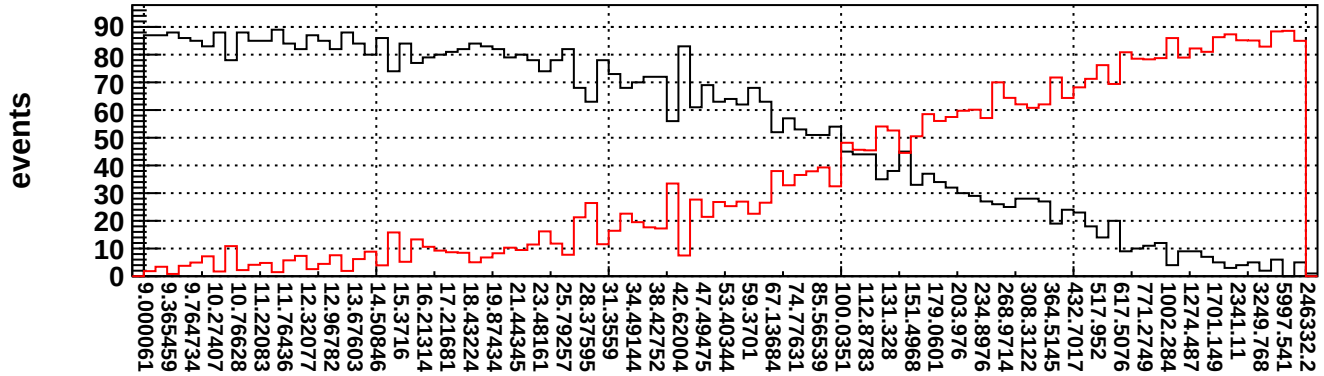
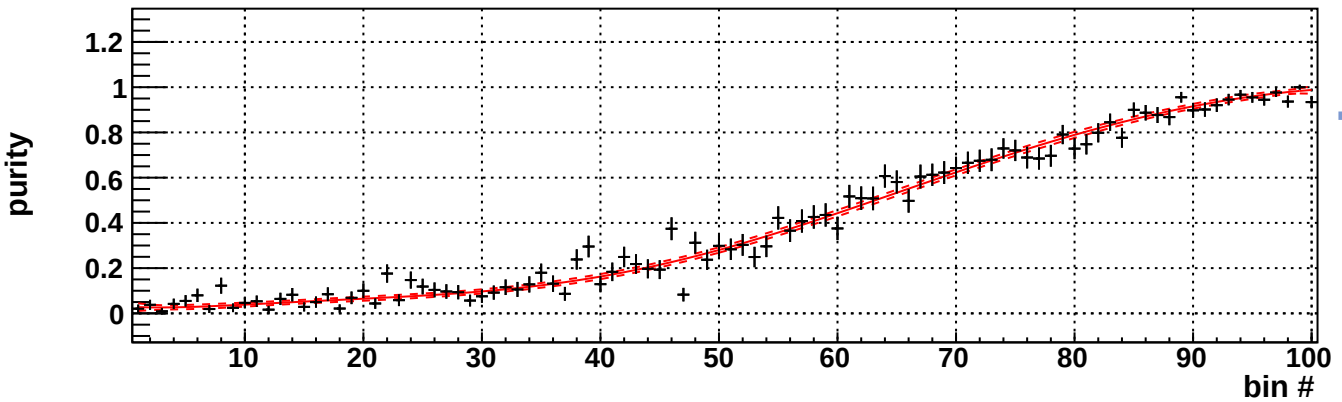
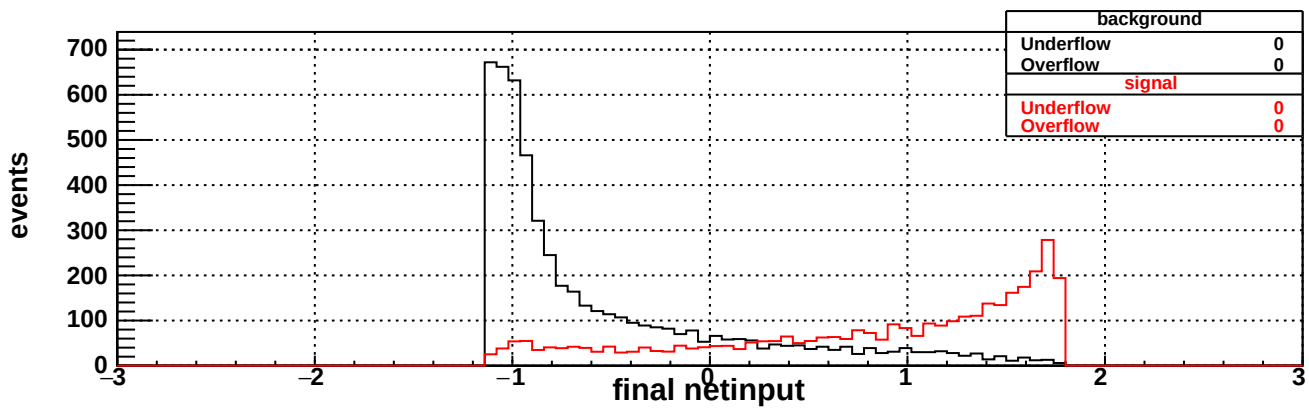


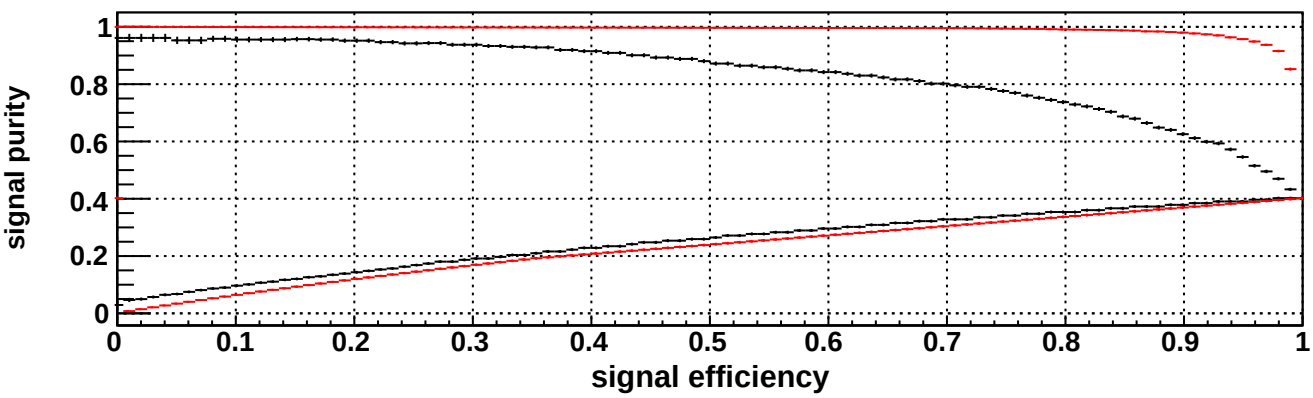
flat



spline fit



final



separation

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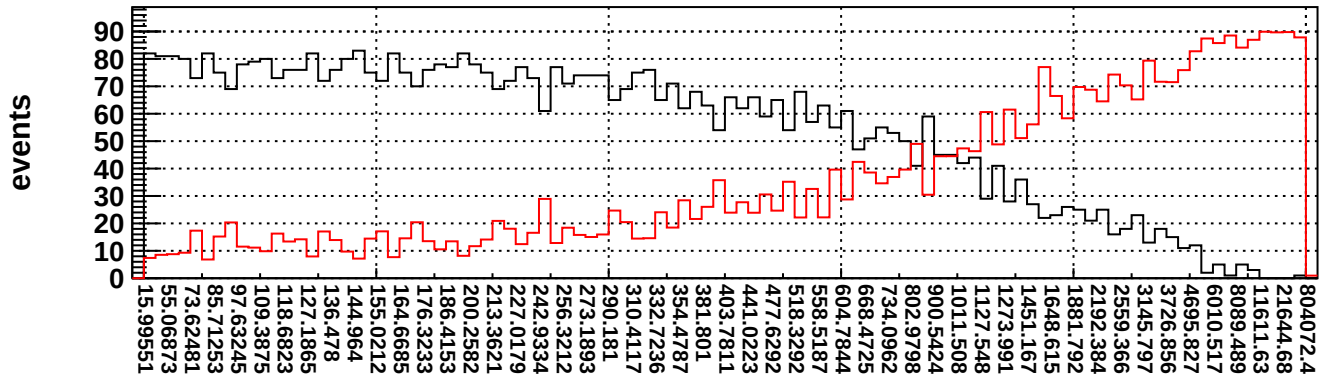
15th most important

added signi. 0.60 — **only this 55.41**

signi. loss 0.62 — **corr. to others 96.40%**



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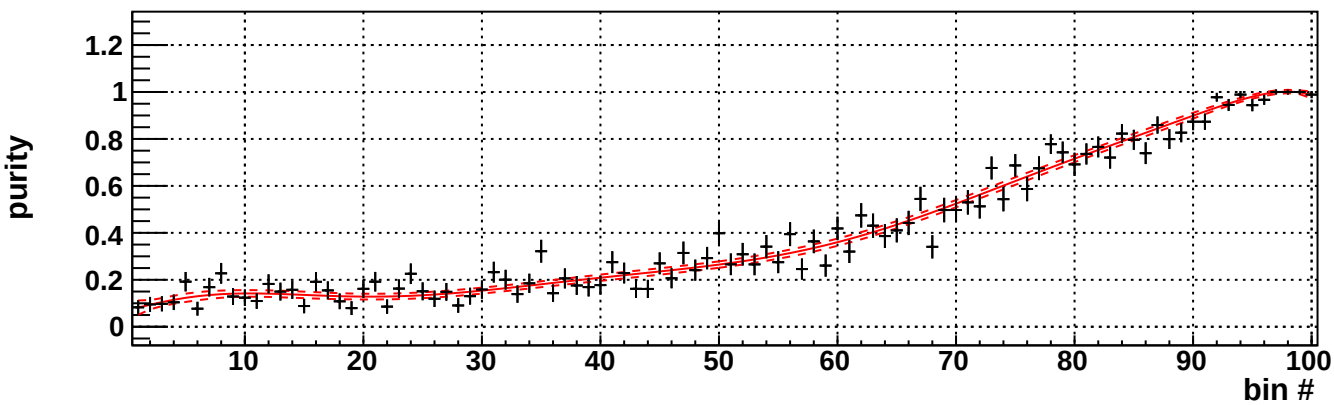
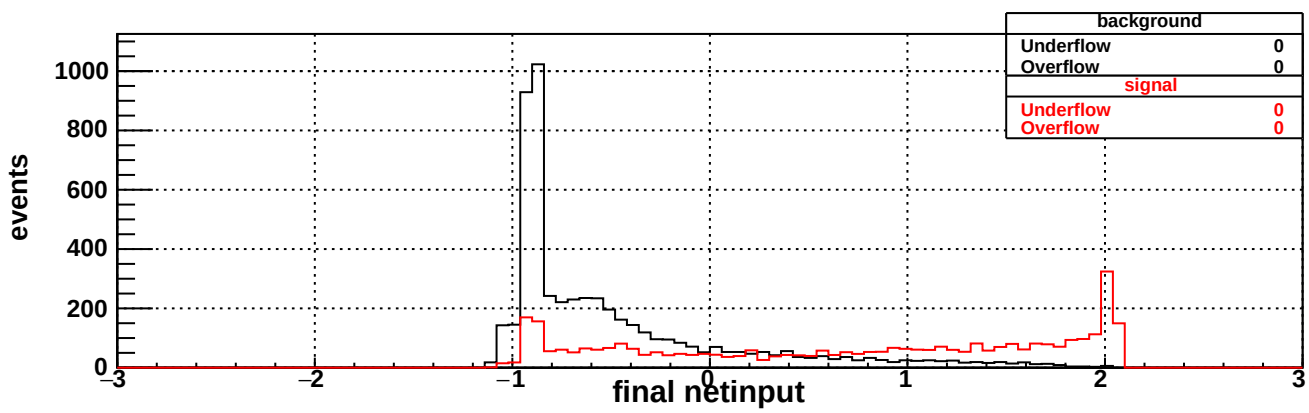
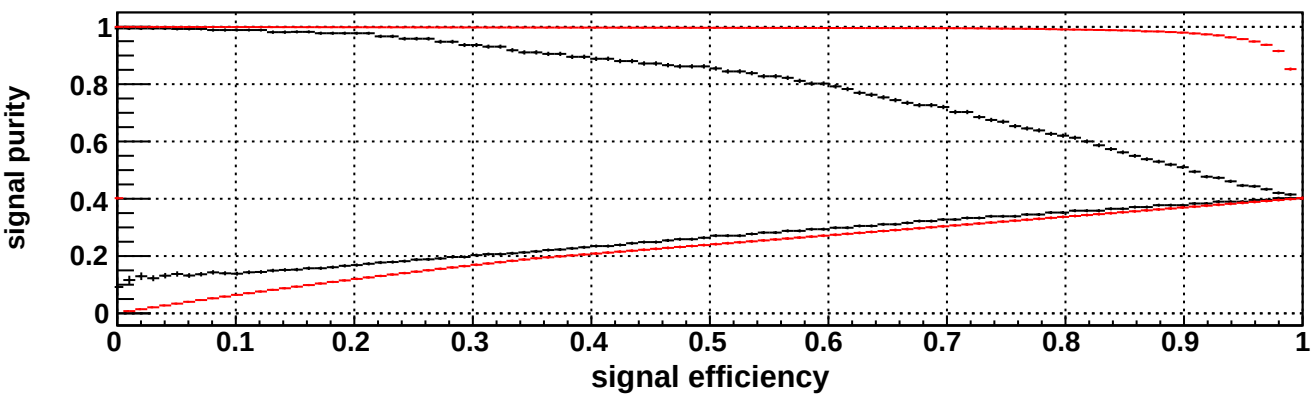


spline fit



final



separation

Input node 19 : B_0

16th most important

added signi. 0.56 **only this 74.60**

signi. loss 0.61 **corr. to others 94.90%**

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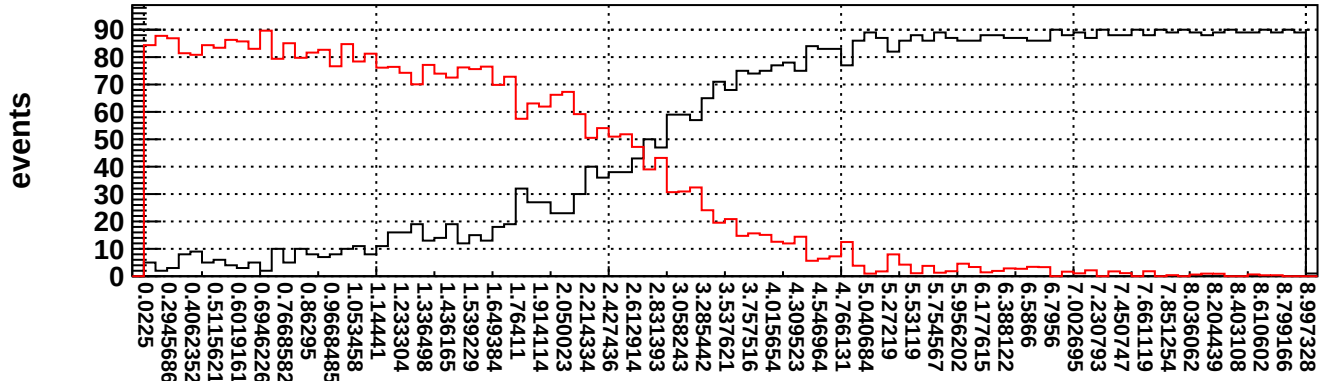
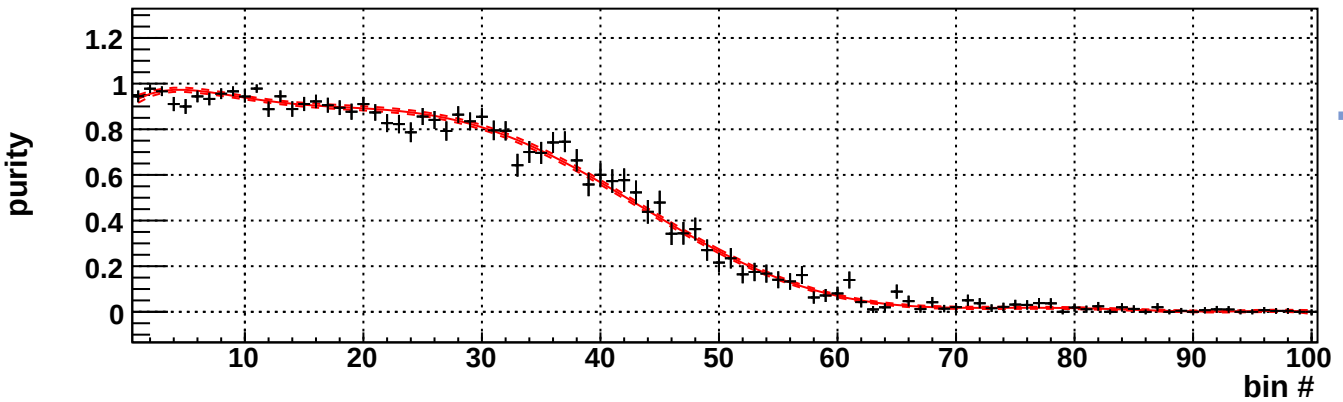
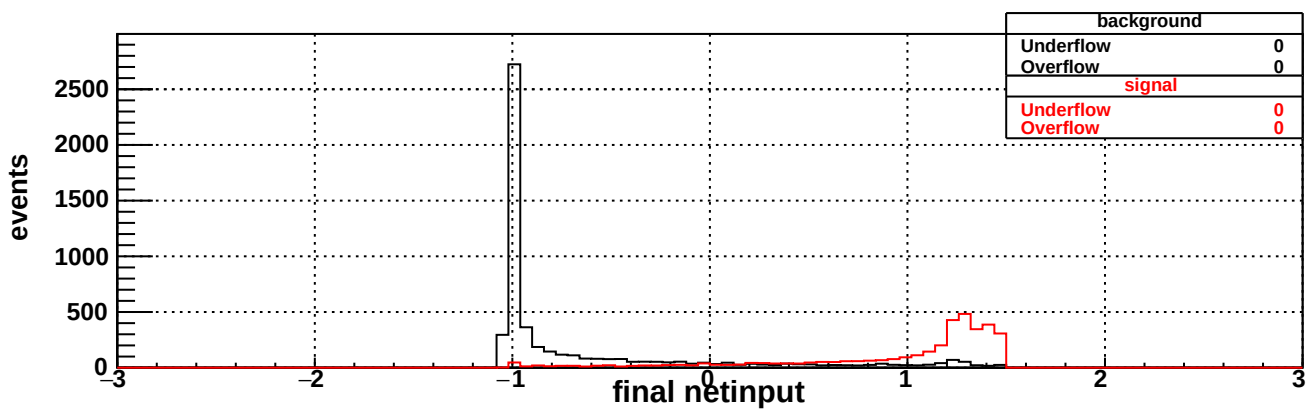


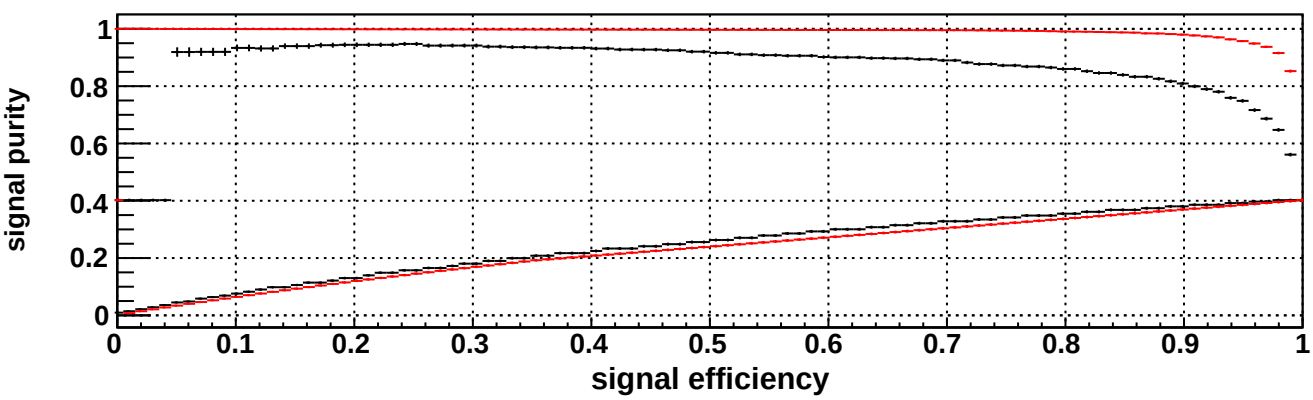
flat



spline fit



final



separation

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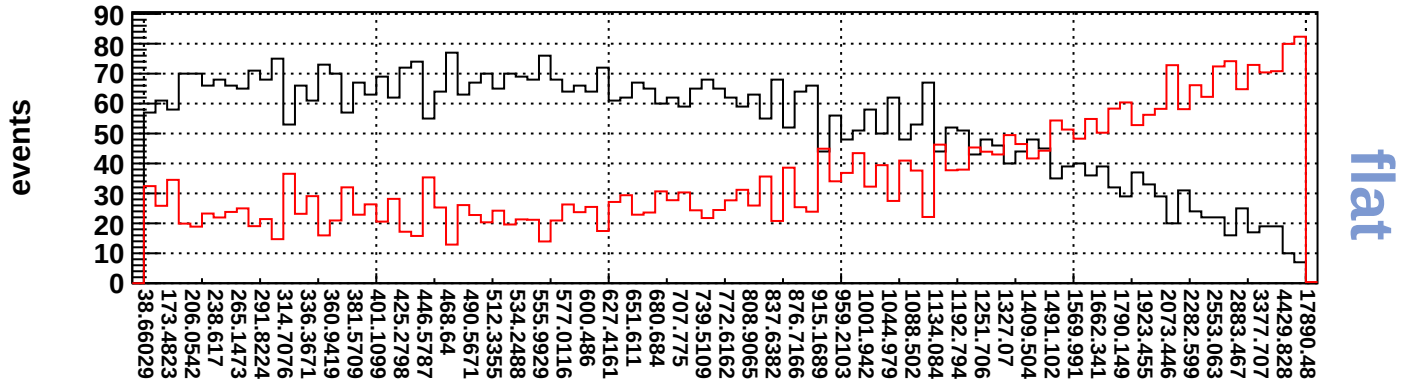
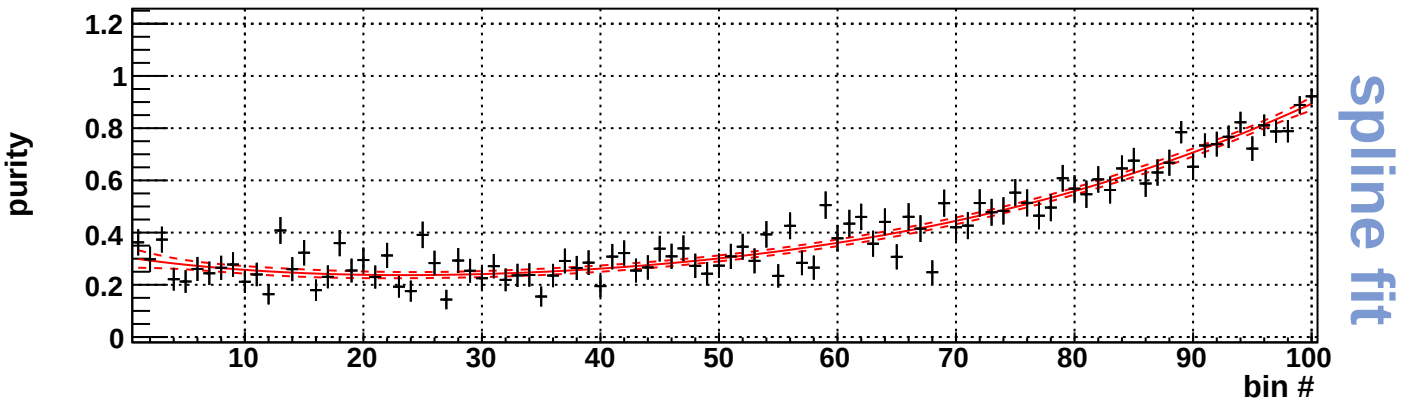
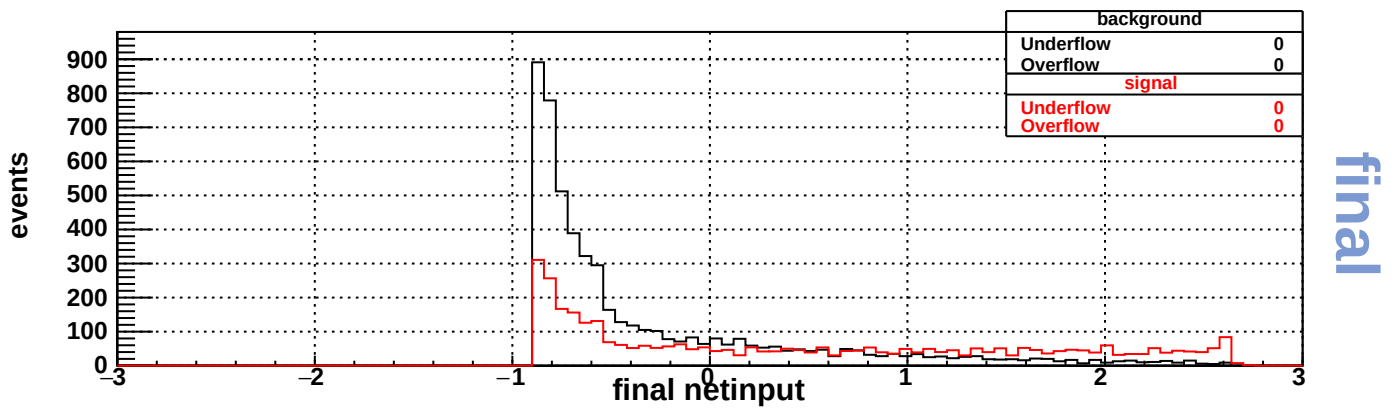
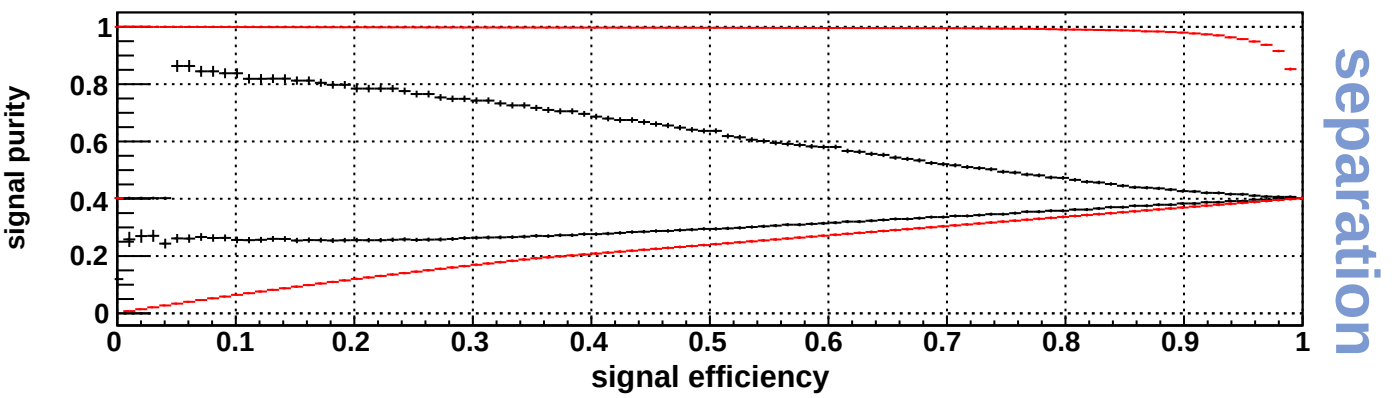
17th most important	PrePro: p_T 14 #5
added signi. 0.55	only this 34.94
signi. loss 0.48	corr. to others 89.40%









Input node 17 : K^{0*}

18th most important

added signi. 0.34 only this 64.88

signi. loss 0.41 corr. to others 97.40%

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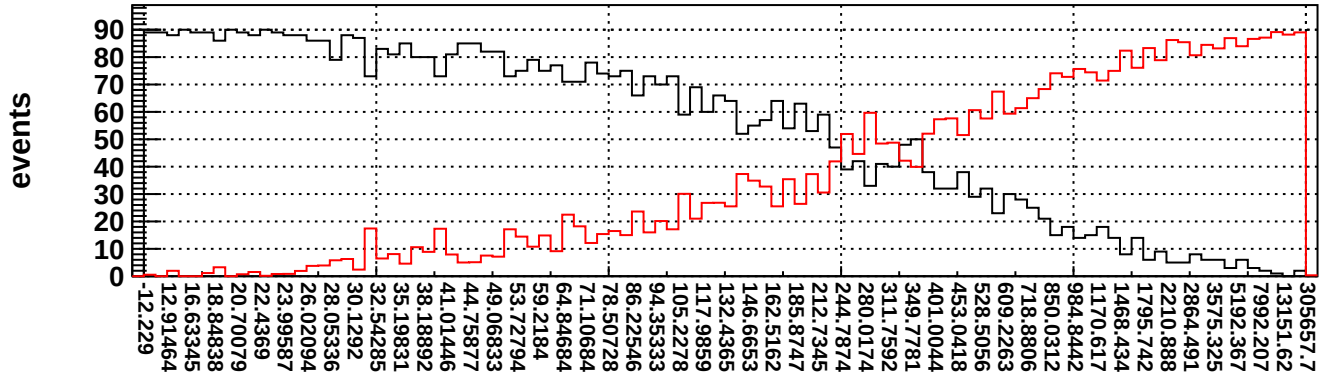

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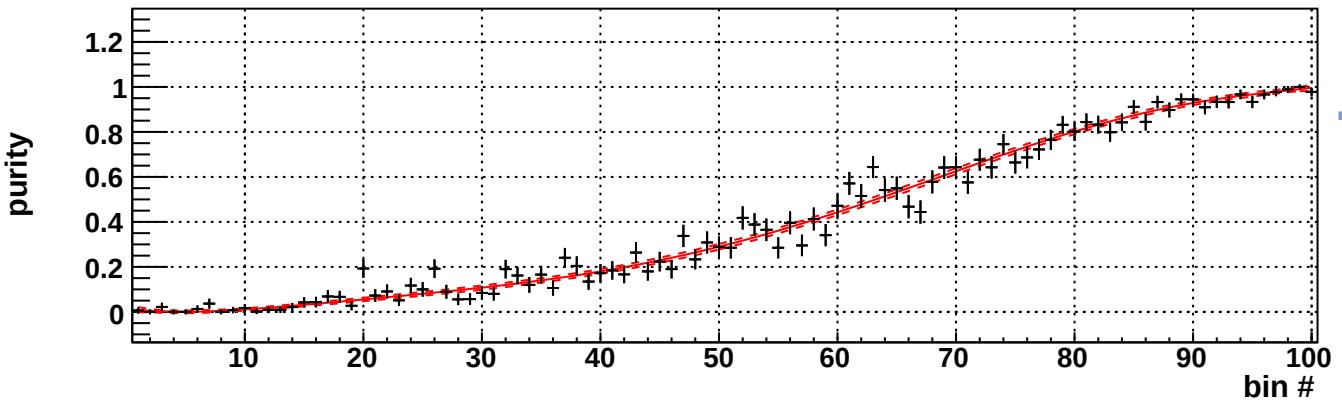
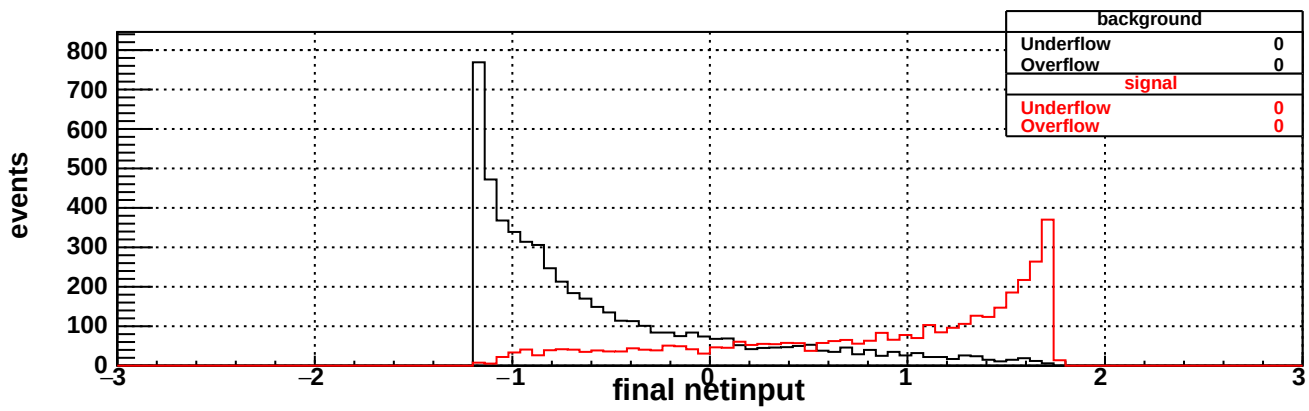
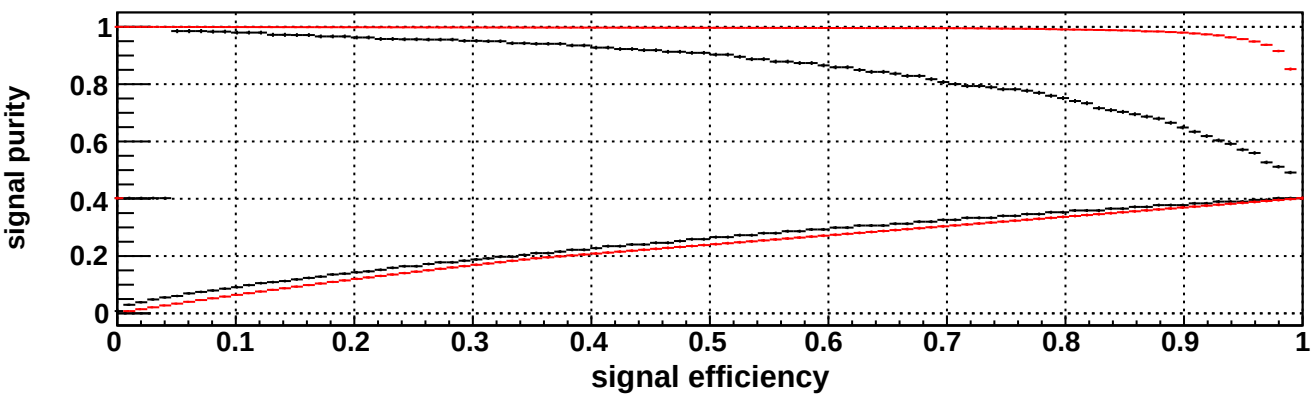


spline fit



final



separation

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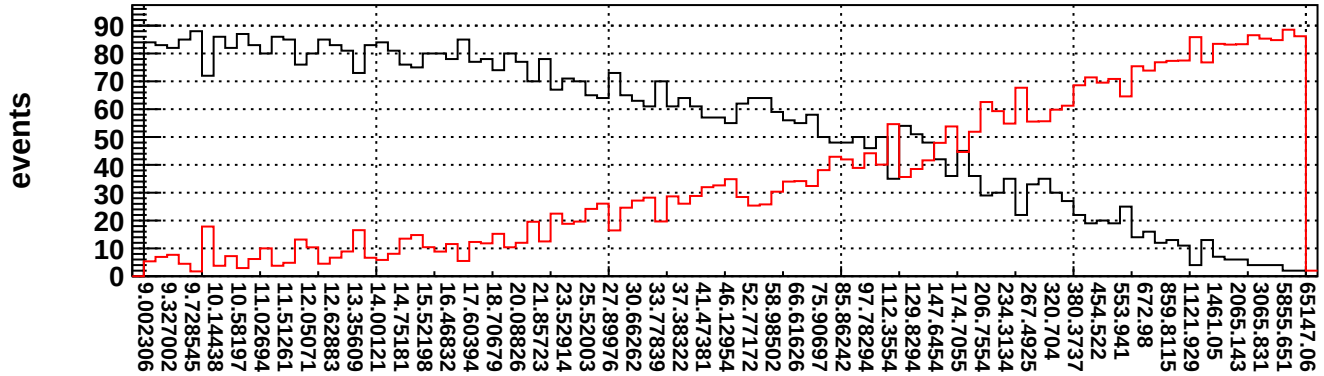
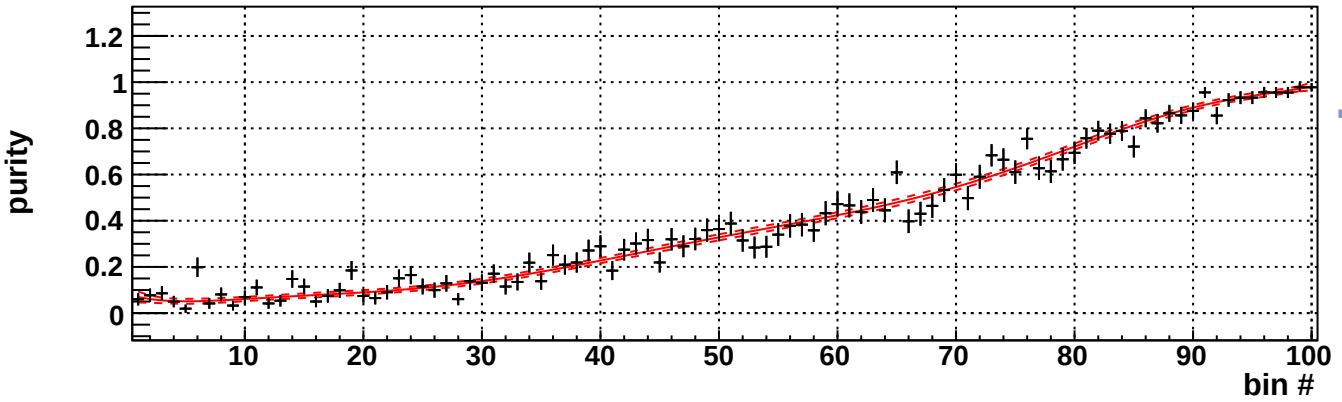
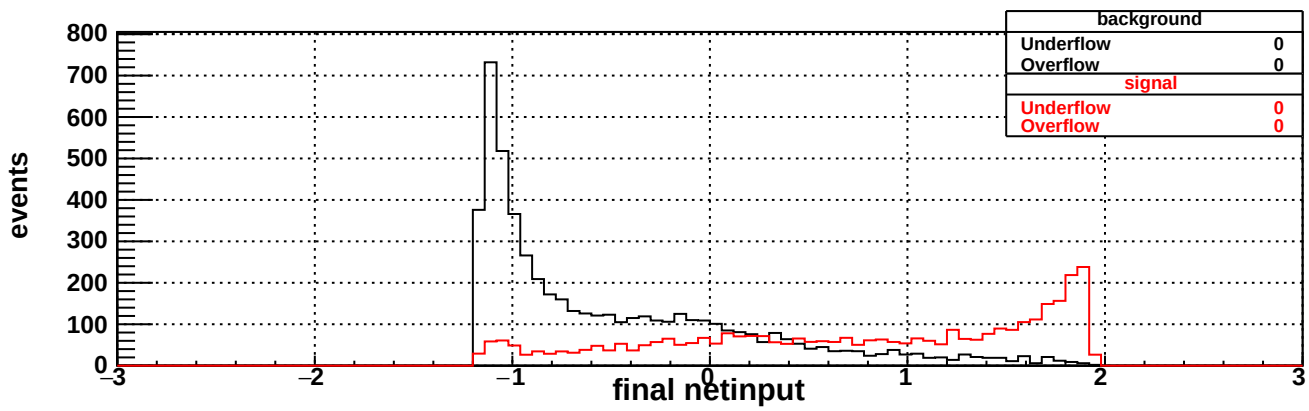
19th most important

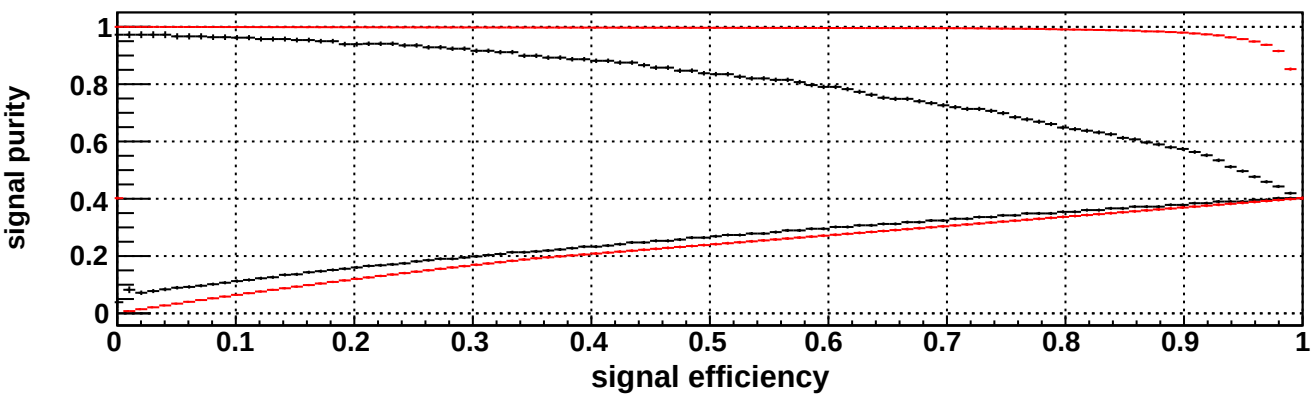
added signi. 0.32 — **only this 56.92**

signi. loss 0.30 — **corr. to others 92.20%**









Input node 9 : B_0

20th most important

added signi. 0.30 only this 52.17

signi. loss 0.30 corr. to others 82.00%

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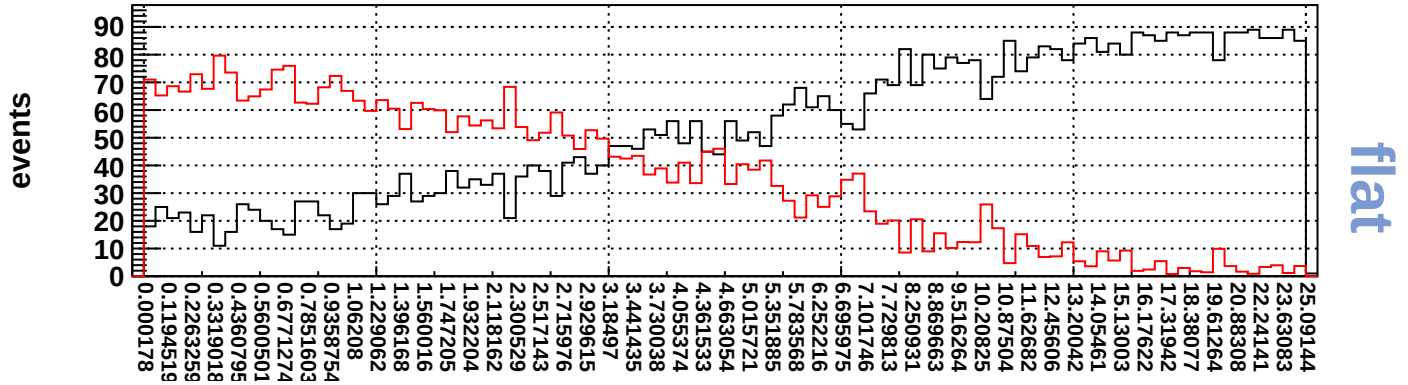

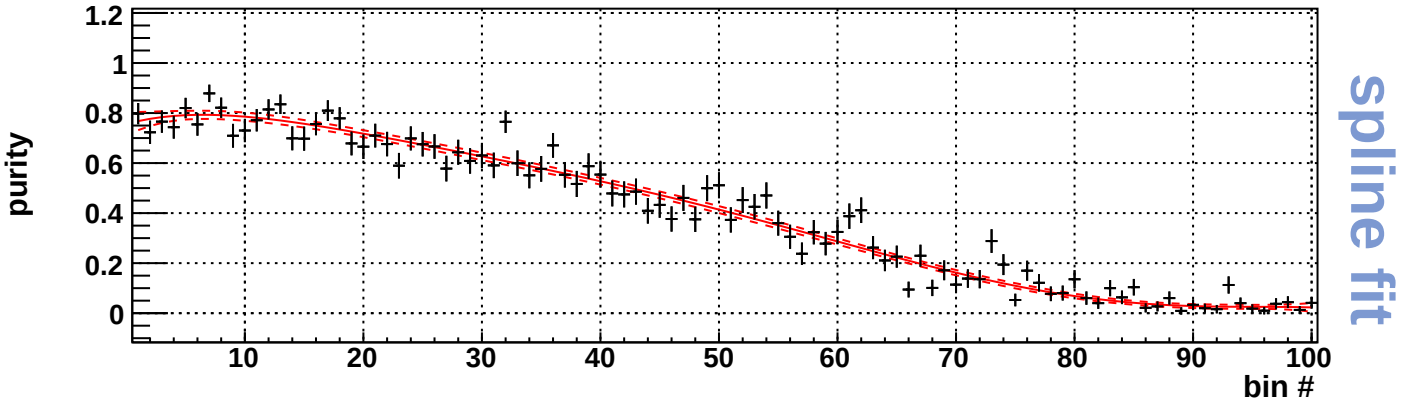

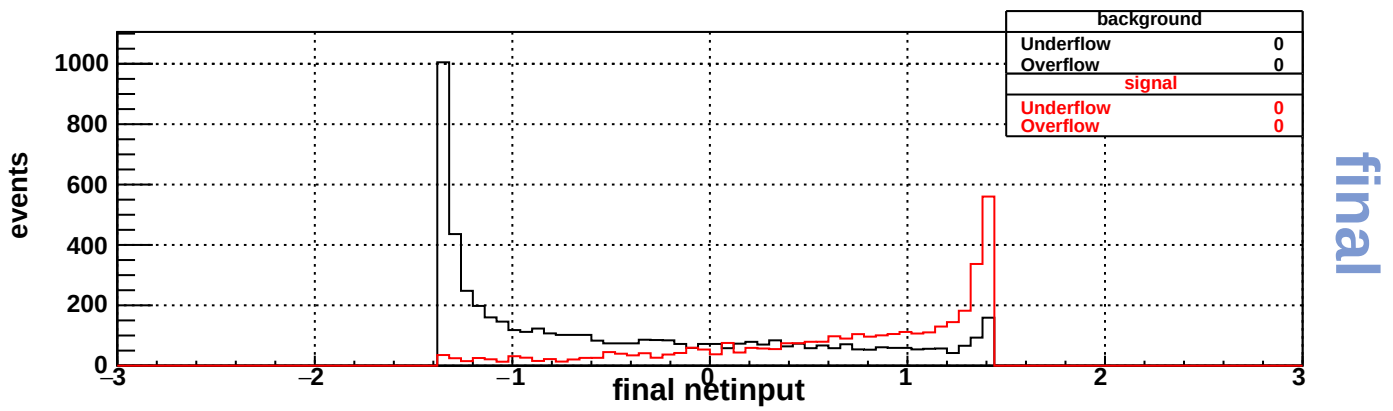

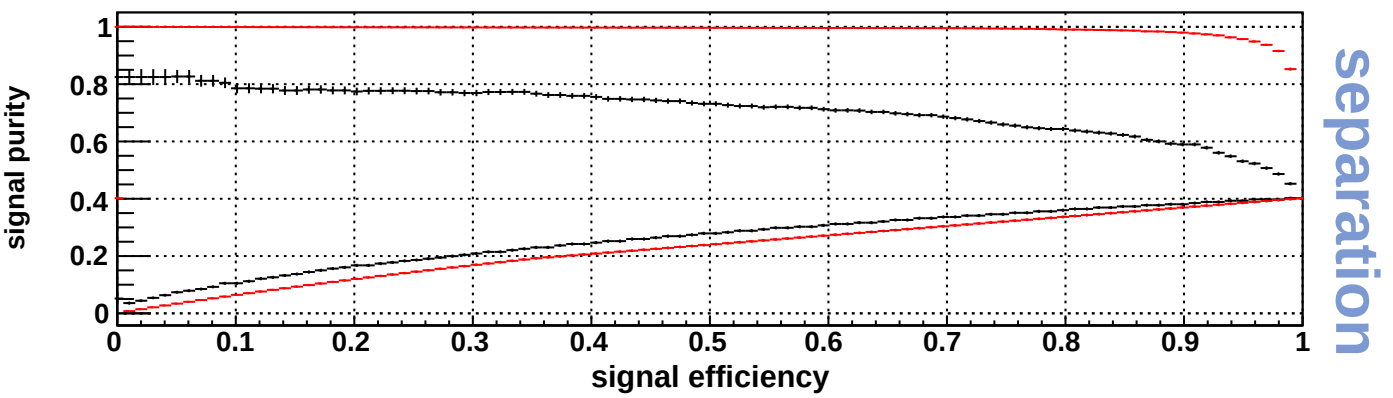

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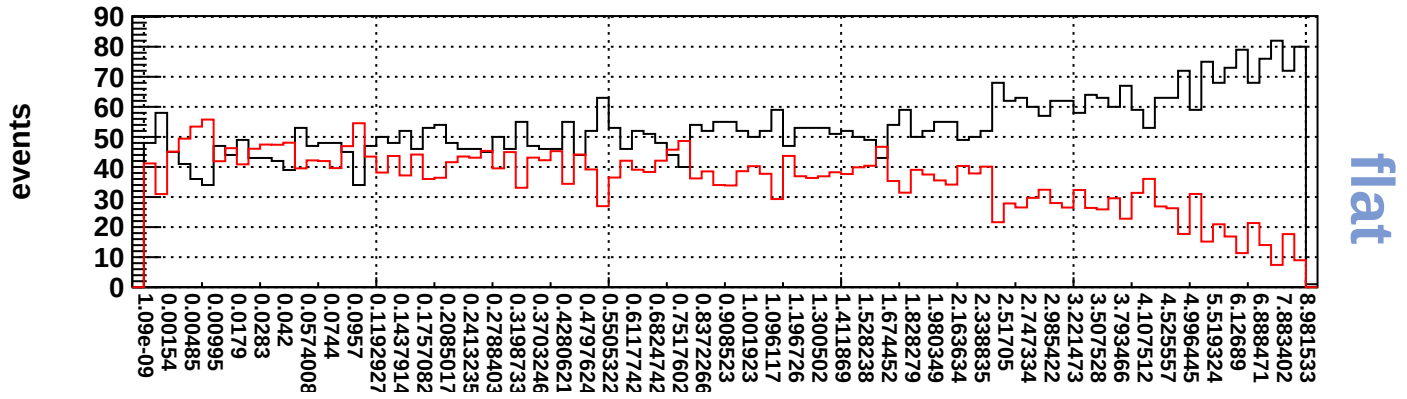
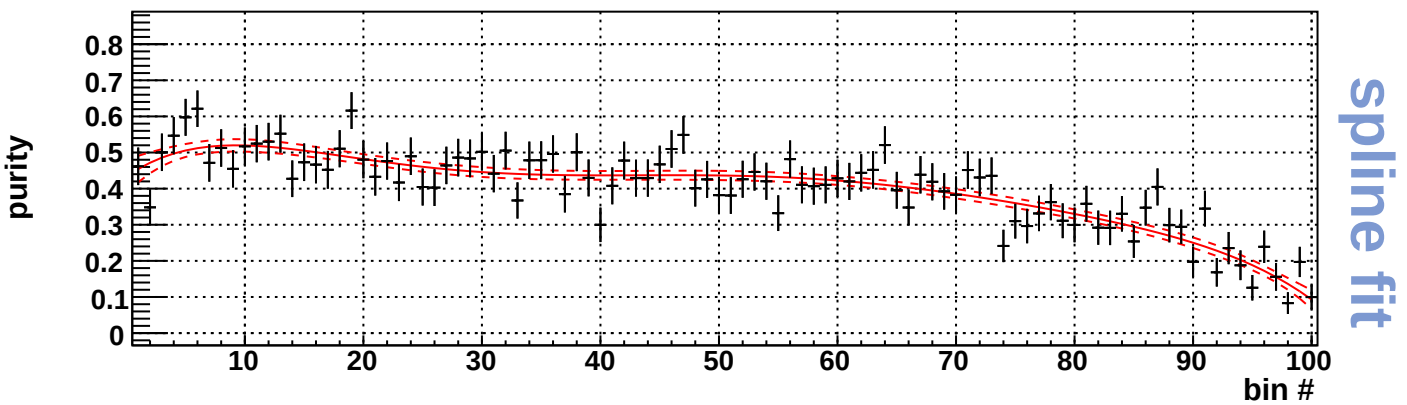
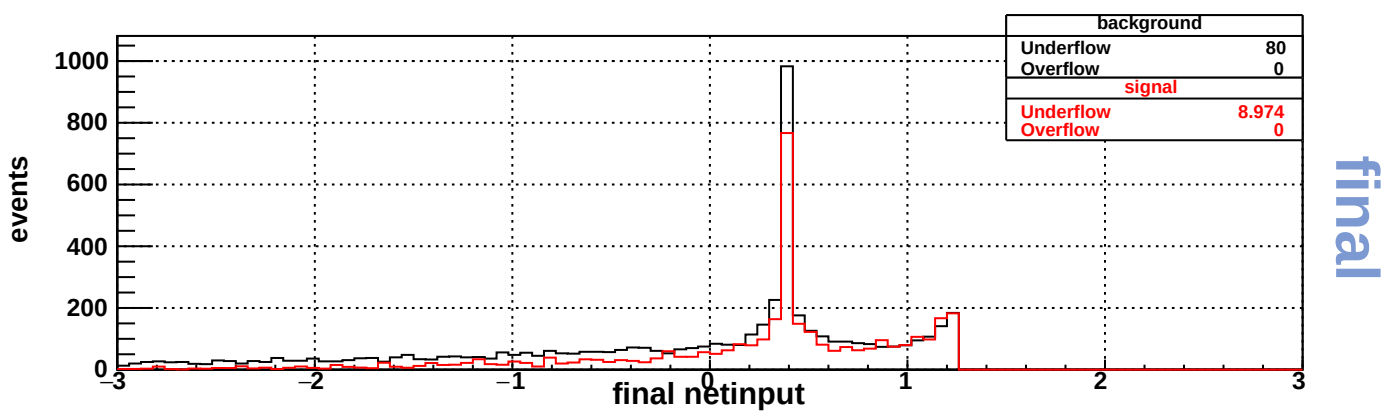
21st most important

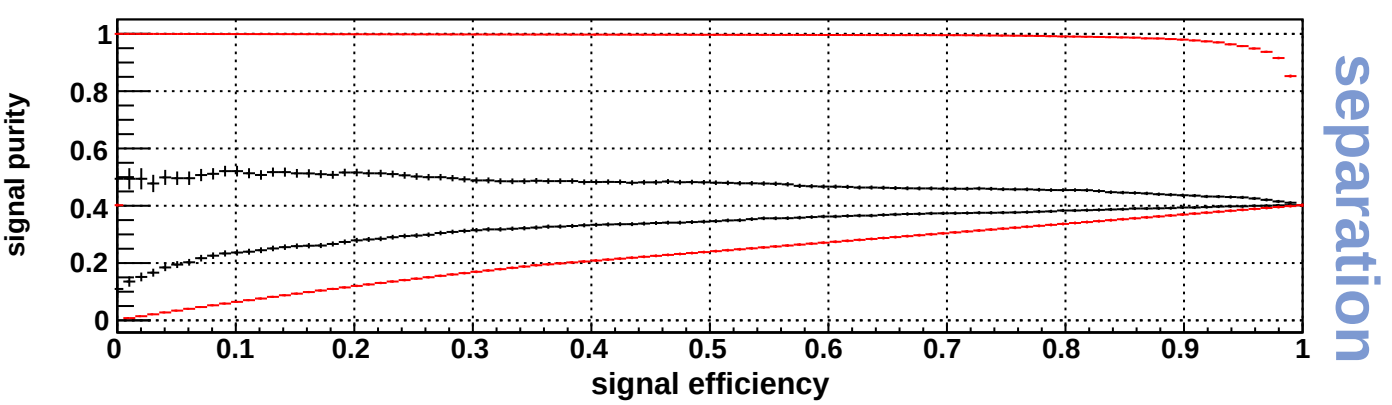
added signi. 0.07 **only this 18.35**

signi. loss 0.07 **corr. to others 27.80%**









Input node 4 : K

22nd most important	PrePro: p_T 14 #4
added signi. 0.03	only this 43.58
signi. loss 0.03	corr. to others 95.40%

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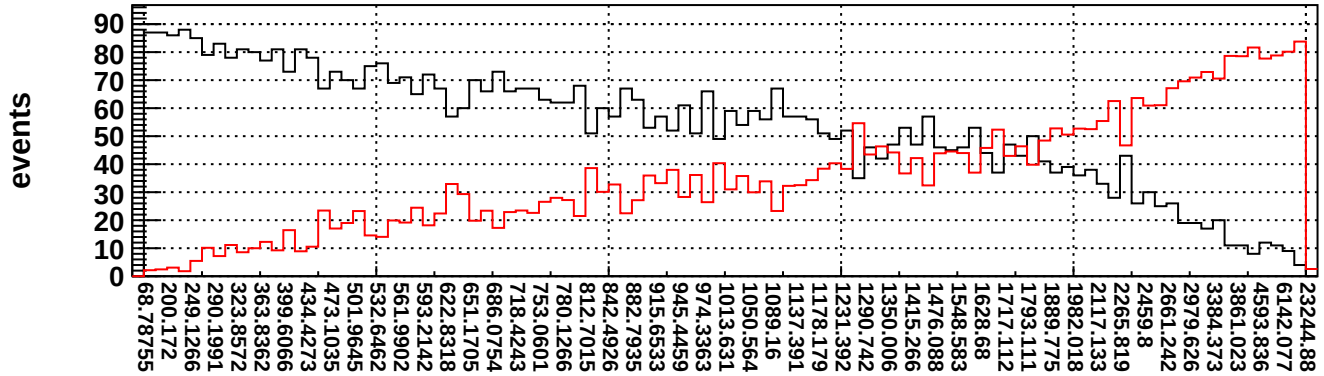

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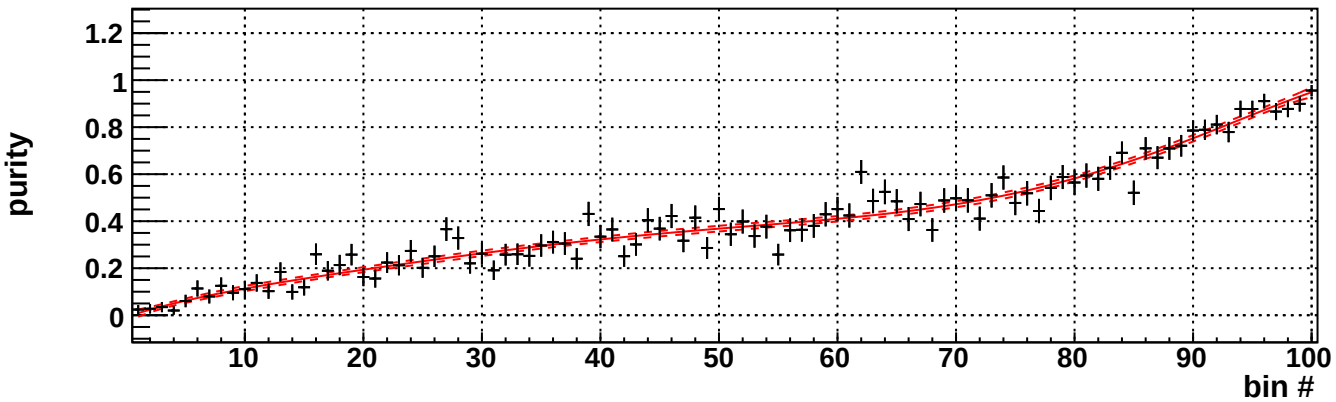
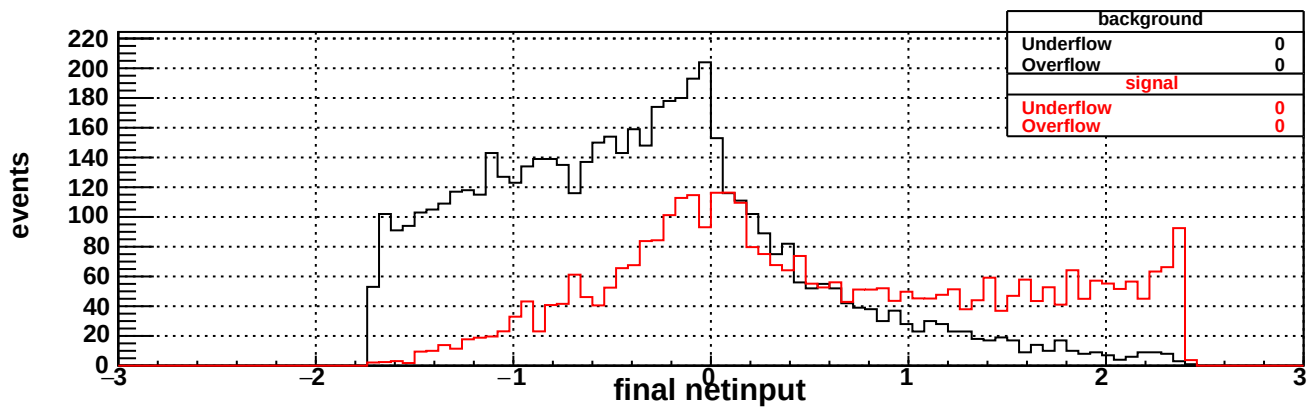


spline fit



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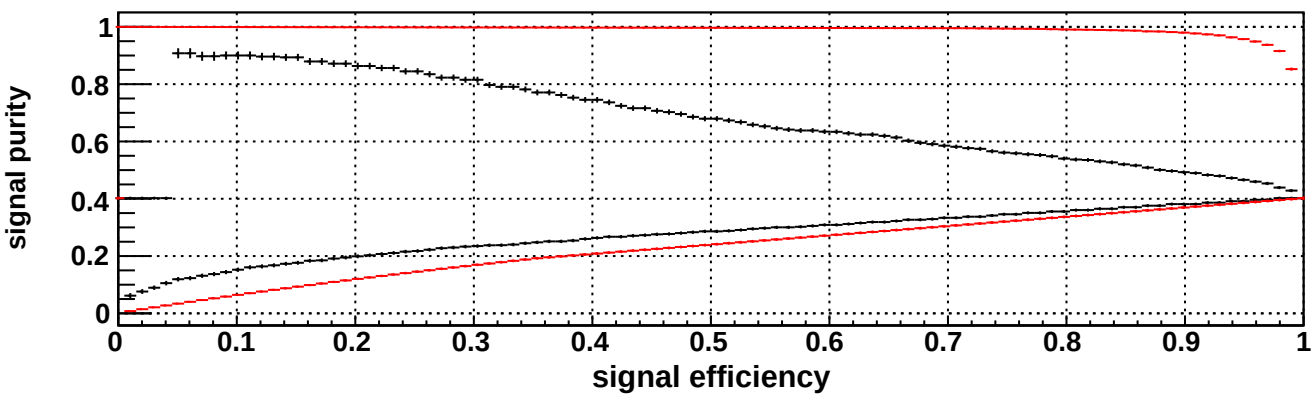
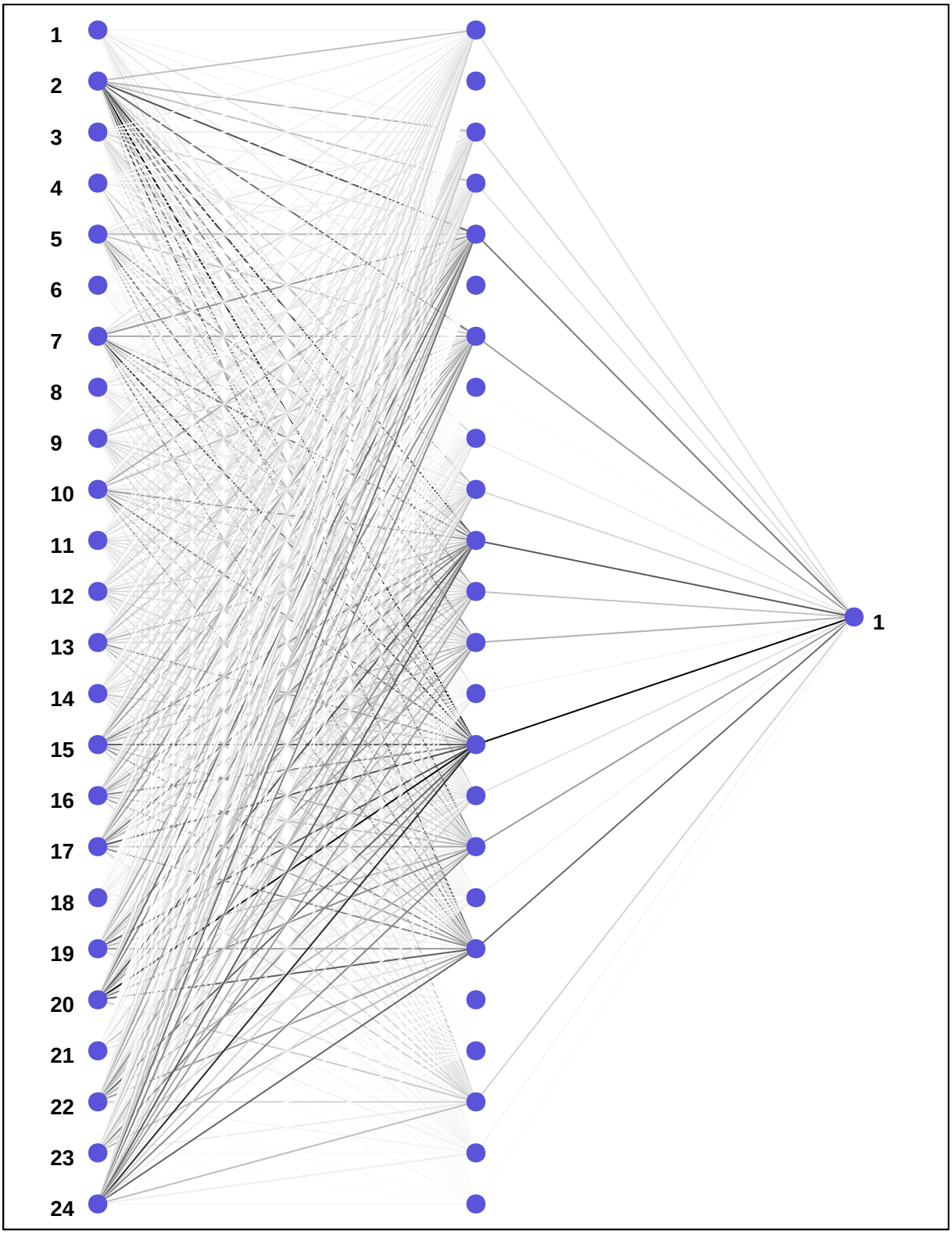


separation

Network at iteration 1000