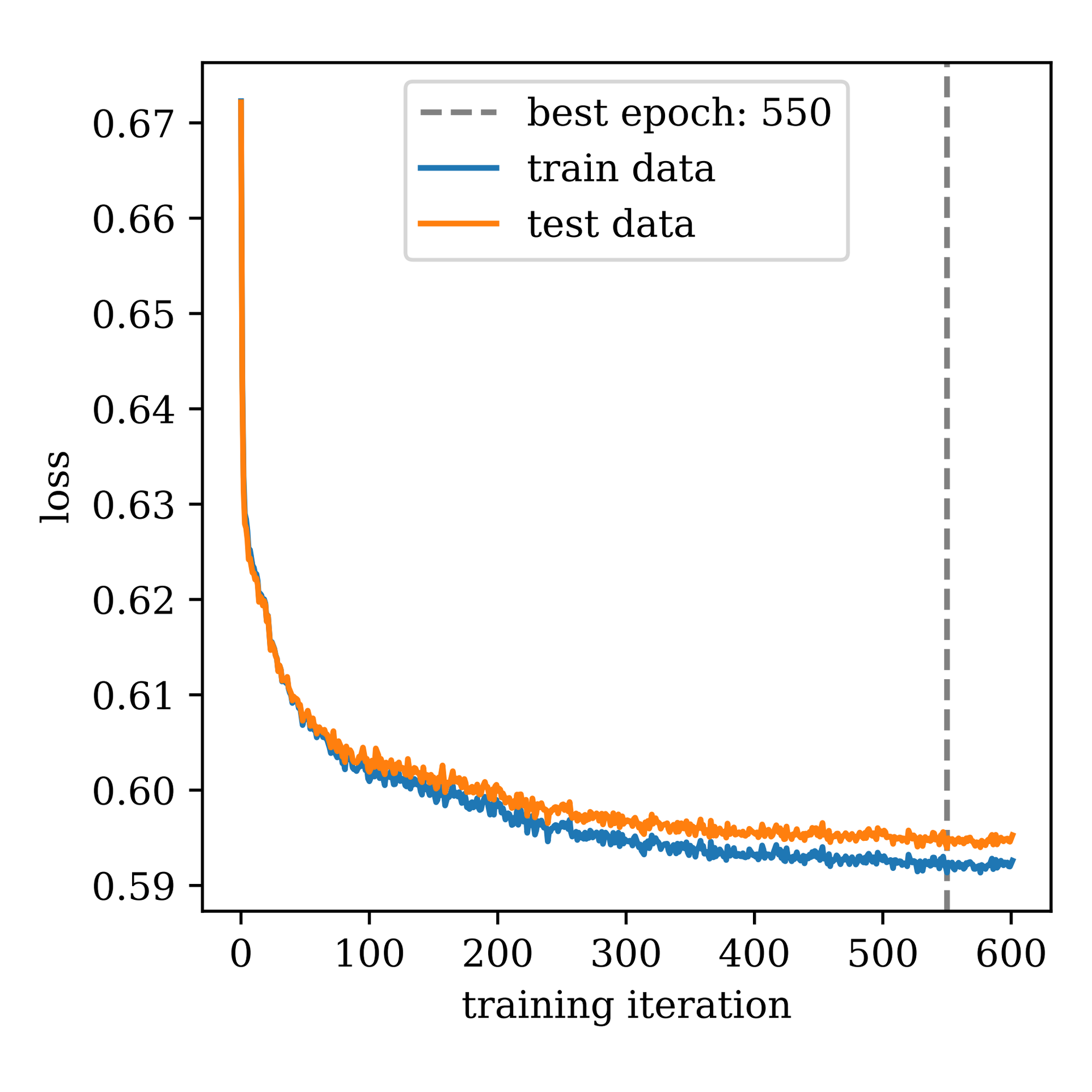
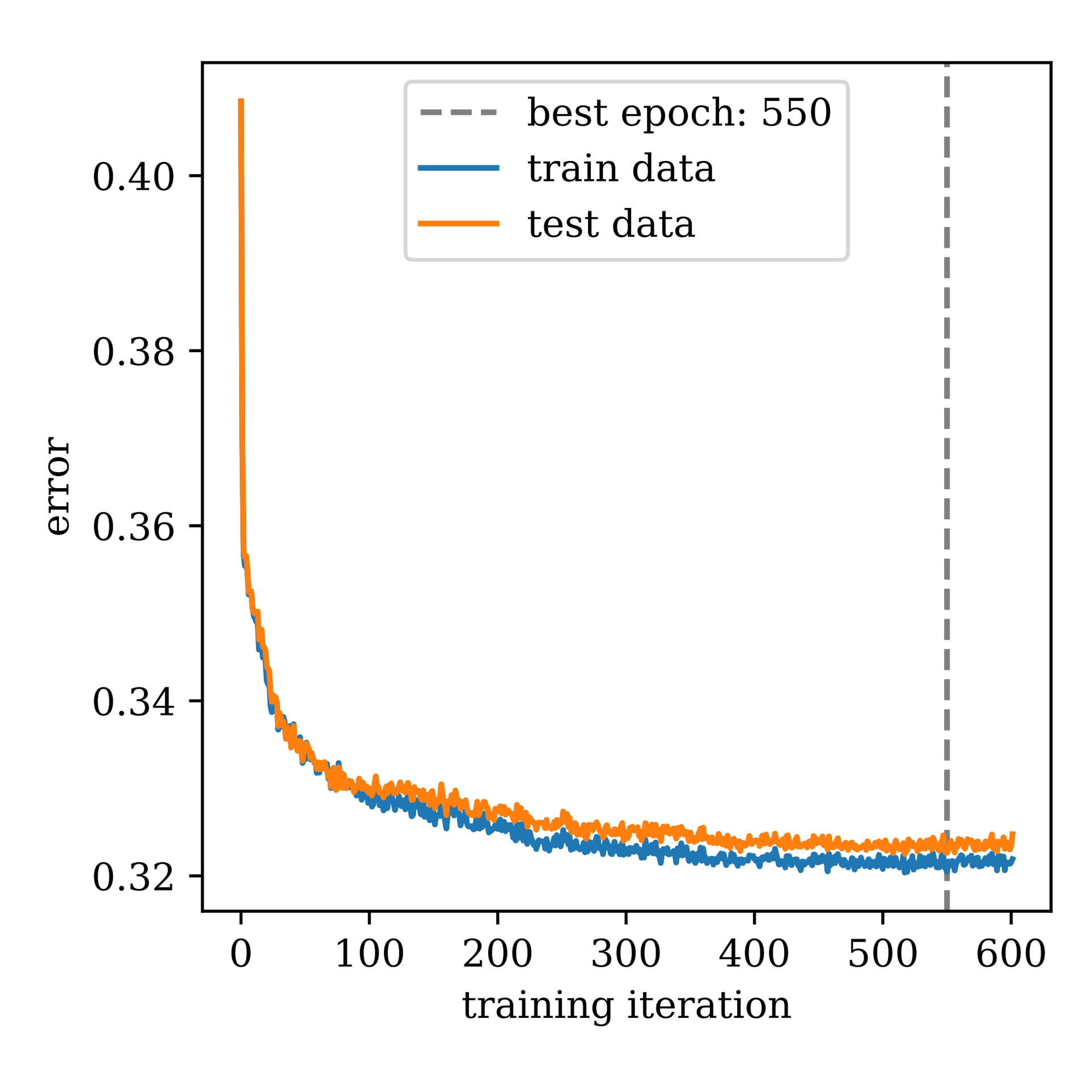
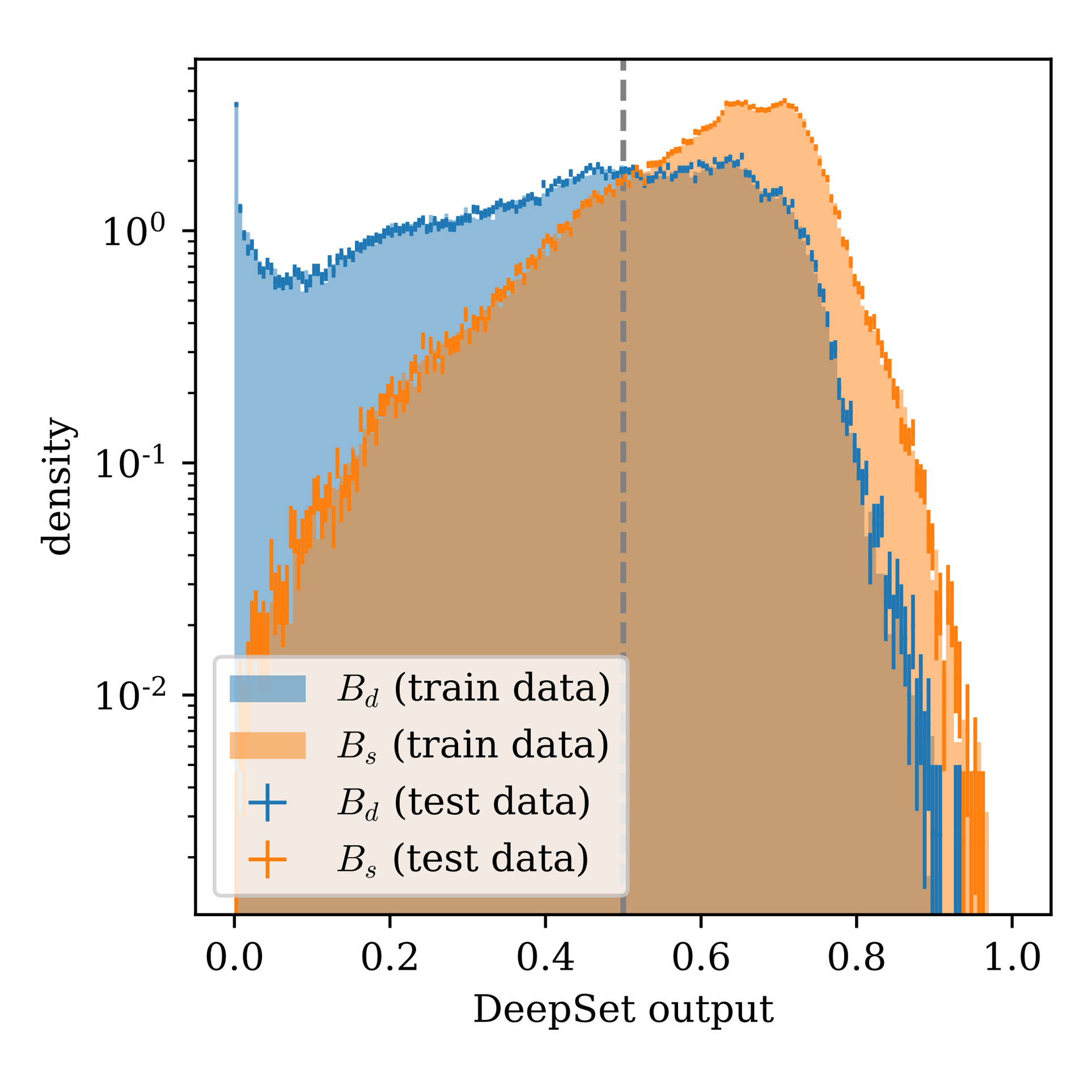
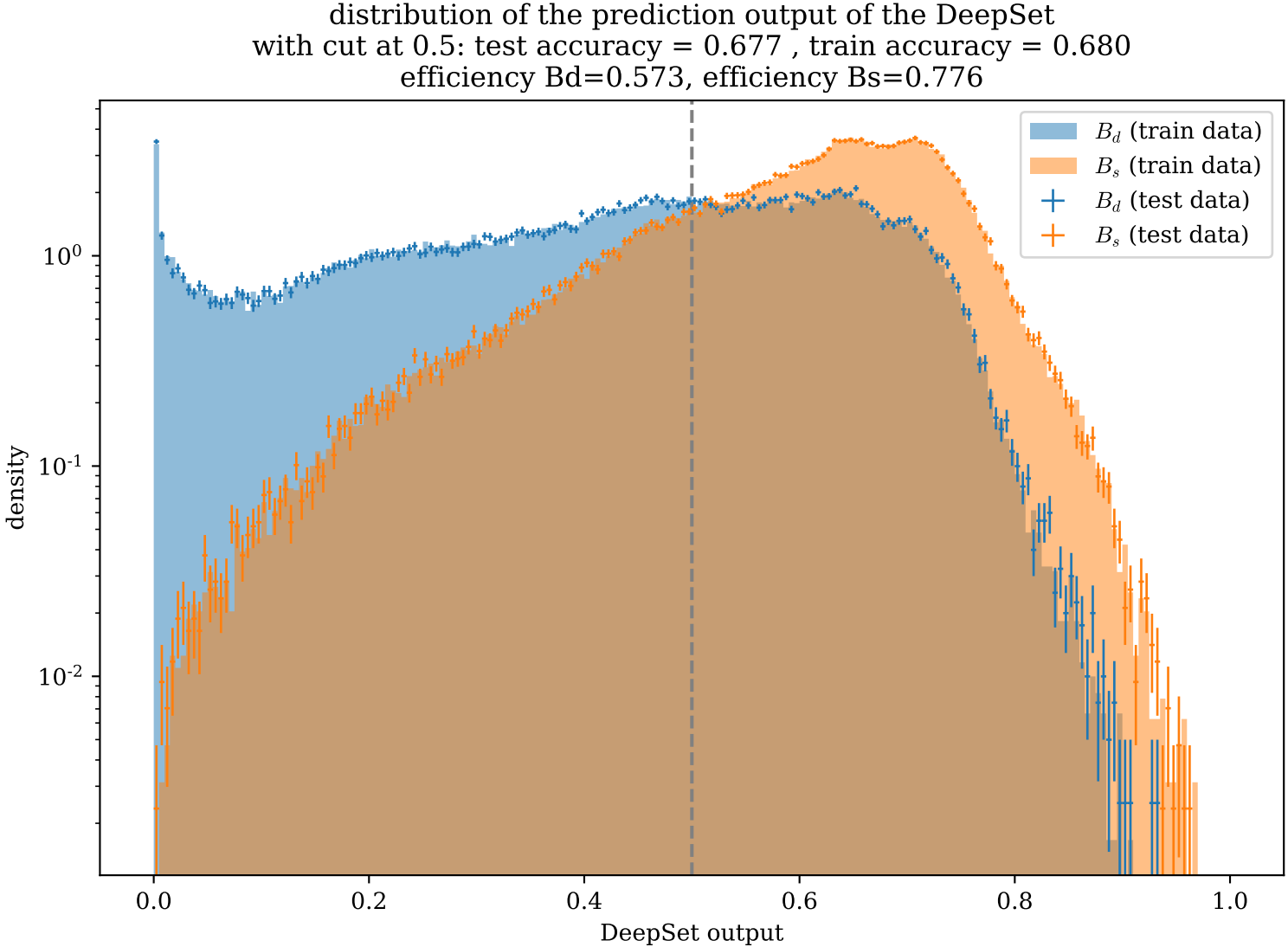
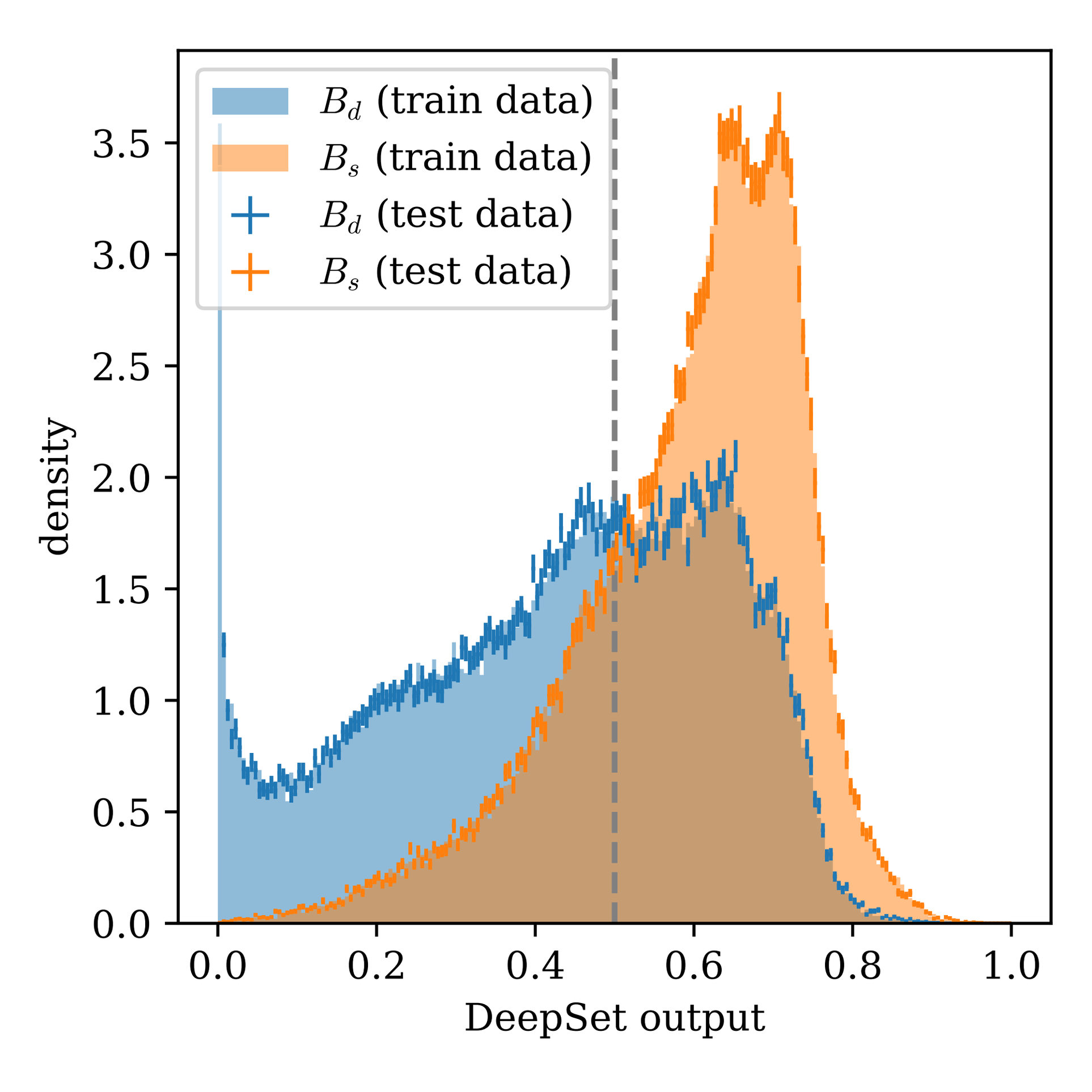
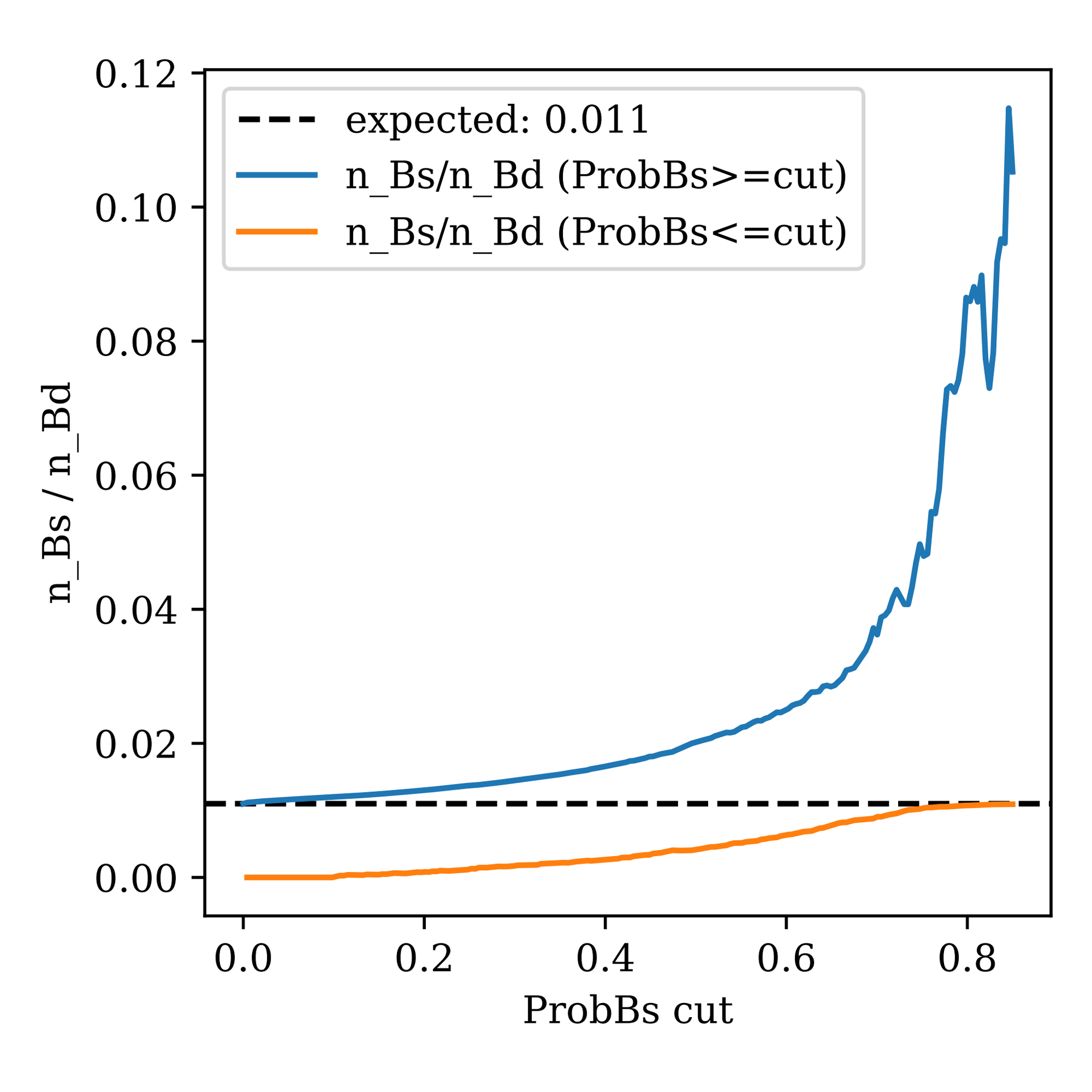

best epoch: 550
train data
test data
0.67
0.66
0.65
0.64
0.63
0.62
0.61
0.60
0.59
loss
0
100
200
300
400
500
600
training iteration

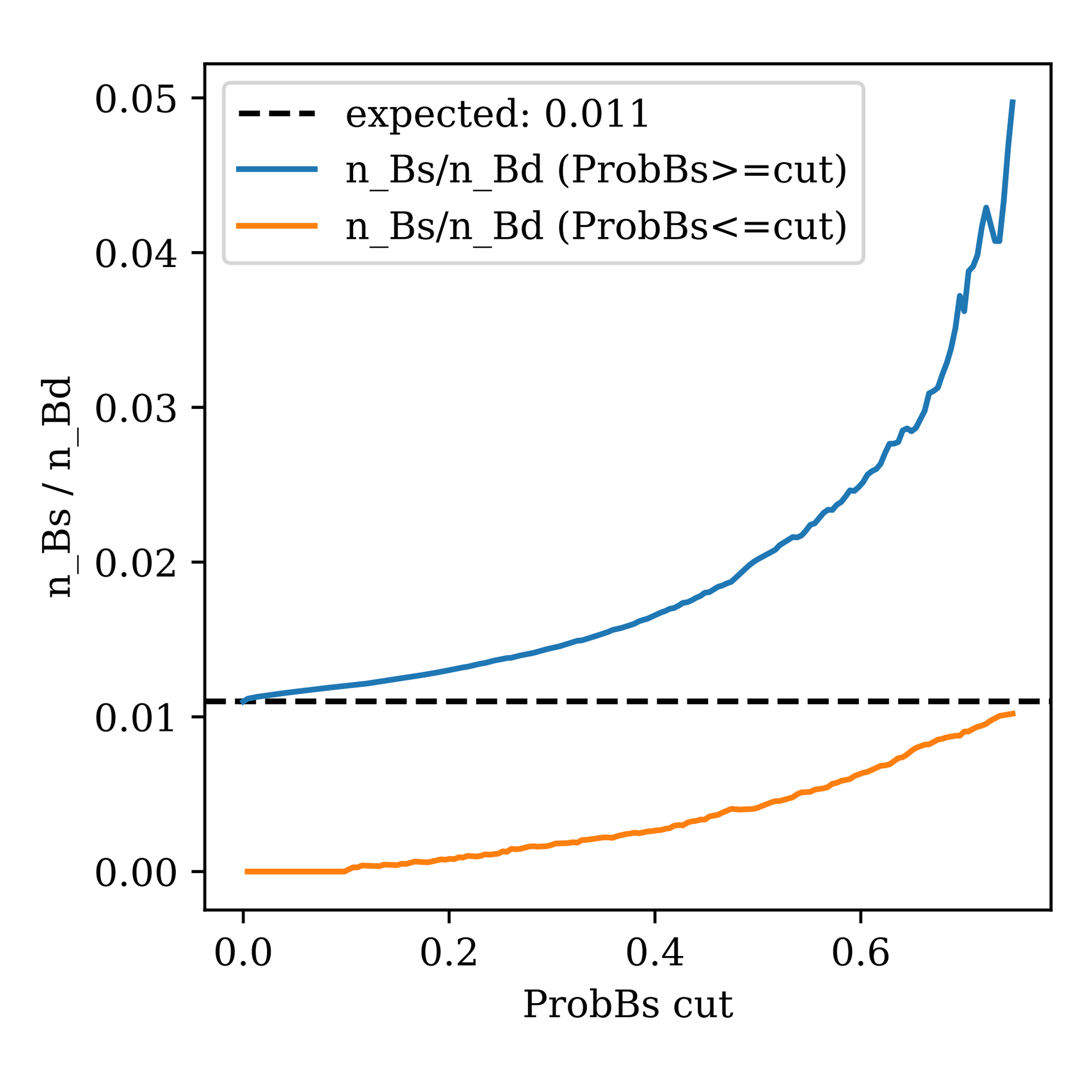

best epoch: 550
train data
test data
0.40
0.38
0.36
0.34
0.32
error
0
100
200
300
400
500
600
training iteration

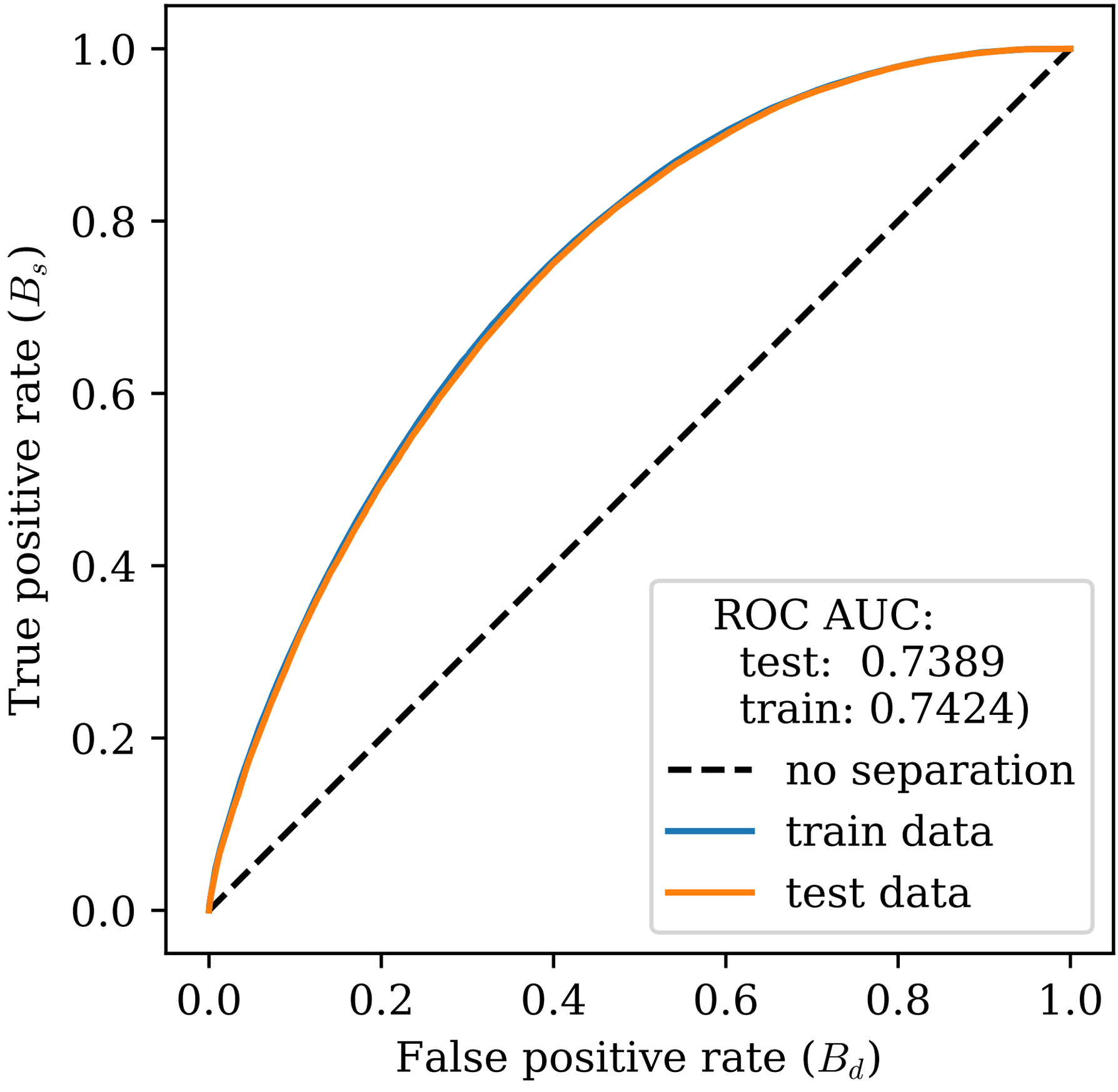

density
10^0
10^{-1}
10^{-2}
0.0
0.2
0.4
0.6
0.8
1.0
DeepSet output
B_d (train data)
B_s (train data)
B_d (test data)
B_s (test data)

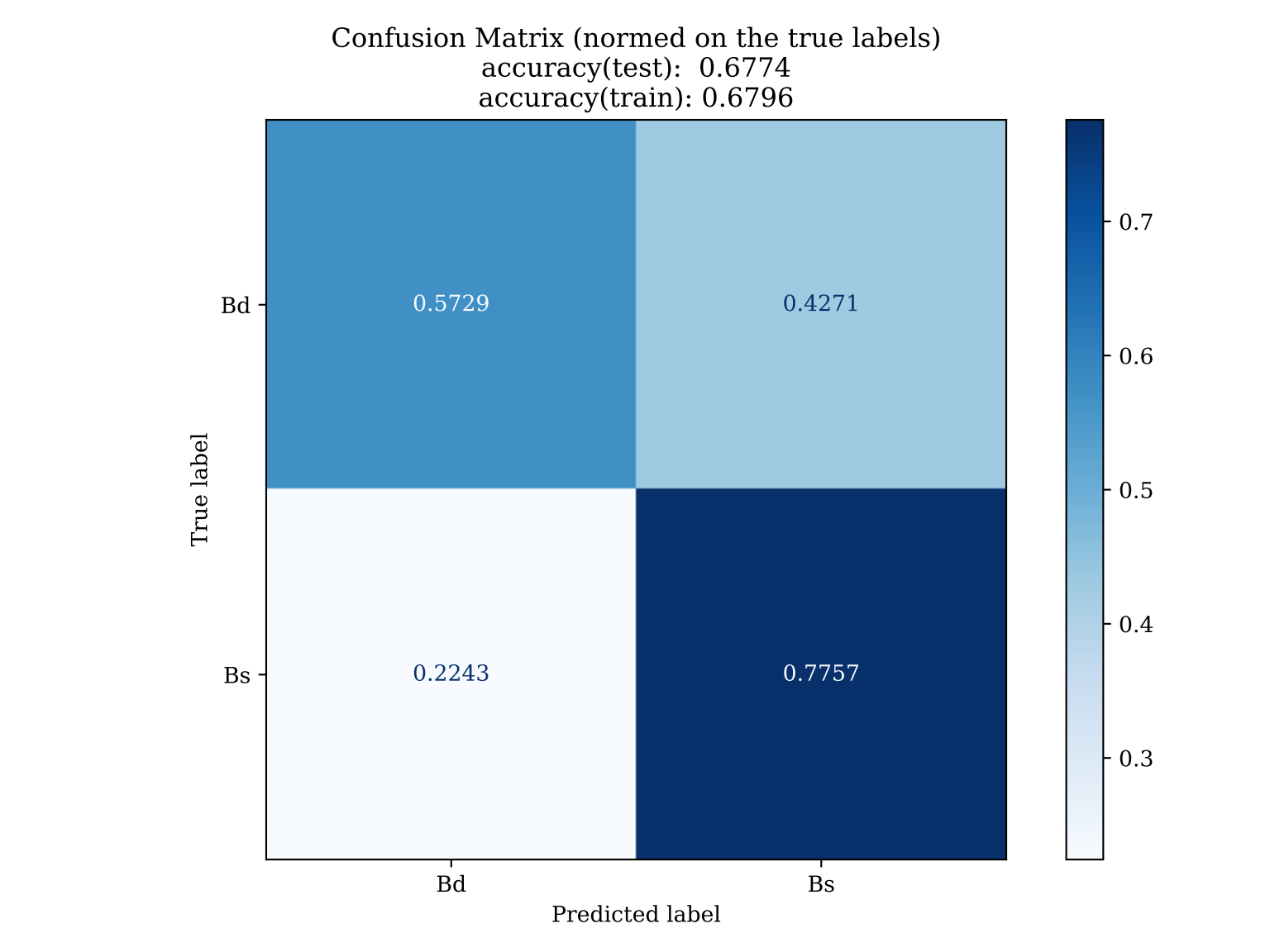

distribution of the prediction output of the DeepSet
with cut at 0.5: test accuracy = 0.677 , train accuracy = 0.680
efficiency Bd=0.573, efficiency Bs=0.776
B_d (train data)
B_s (train data)
B_d (test data)
B_s (test data)
density
10^0
10^{-1}
10^{-2}
0.0
0.2
0.4
0.6
0.8
1.0
DeepSet output


B_d (train data)
B_s (train data)
B_d (test data)
B_s (test data)
density
DeepSet output
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0.0
0.2
0.4
0.6
0.8
1.0


expected: 0.011
n_Bs/n_Bd (ProbBs>=cut)
n_Bs/n_Bd (ProbBs<=cut)
n_Bs / n_Bd
ProbBs cut
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.0
0.2
0.4
0.6
0.8


expected: 0.011
n_Bs/n_Bd (ProbBs>=cut)
n_Bs/n_Bd (ProbBs<=cut)
n_Bs / n_Bd
0.05
0.04
0.03
0.02
0.01
0.00
0.0
0.2
0.4
0.6
ProbBs cut


1.0
0.8
0.6
0.4
0.2
0.0
True positive rate (B_s)
0.0
0.2
0.4
0.6
0.8
1.0
False positive rate (B_d)
ROC AUC:
test: 0.7389
train: 0.7424)
no separation
train data
test data


Confusion Matrix (normed on the true labels)
accuracy(test): 0.6774
accuracy(train): 0.6796
0.5729
0.4271
0.2243
0.7757
Bd
Bs
True label
Bd
Bs
Predicted label
0.7
0.6
0.5
0.4
0.3