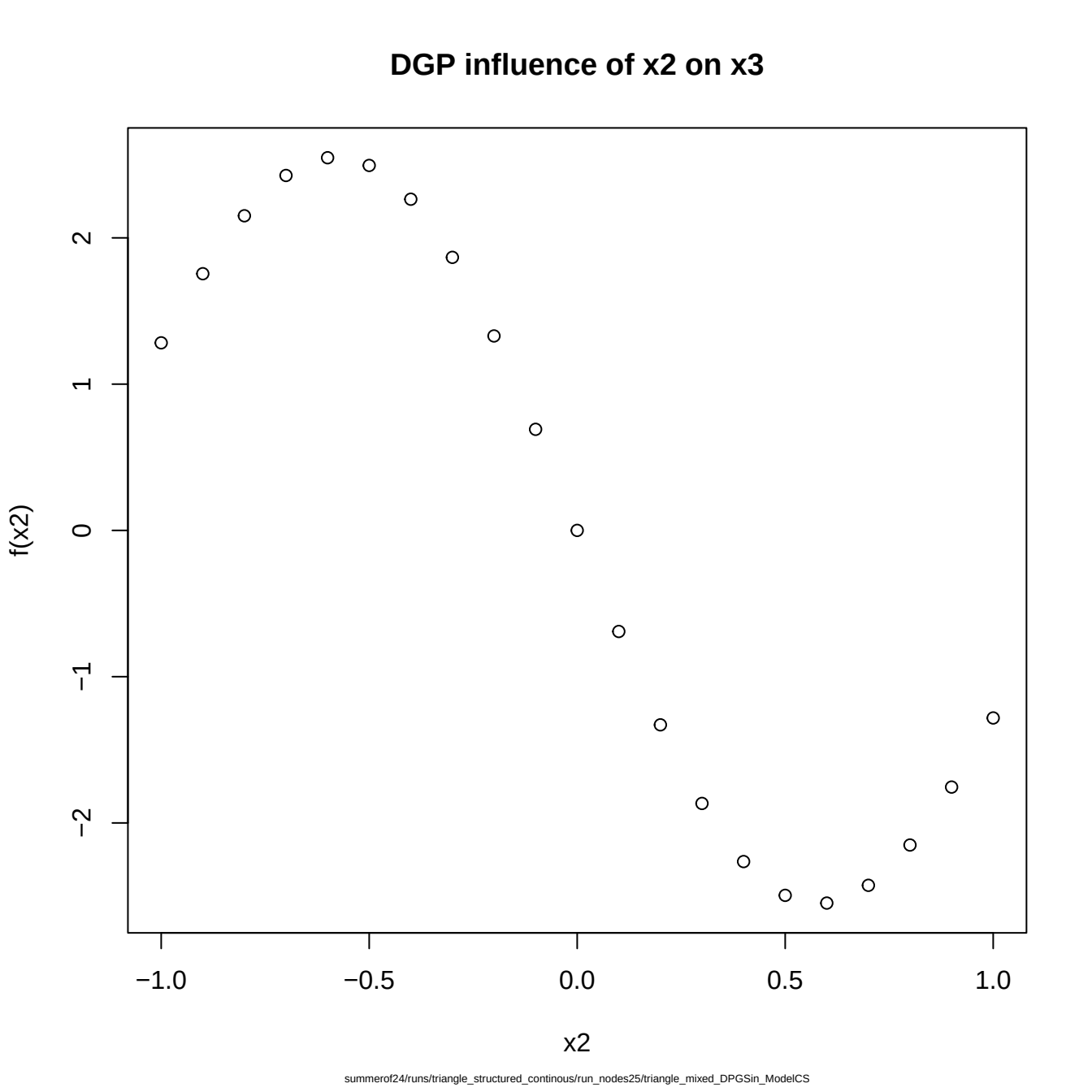
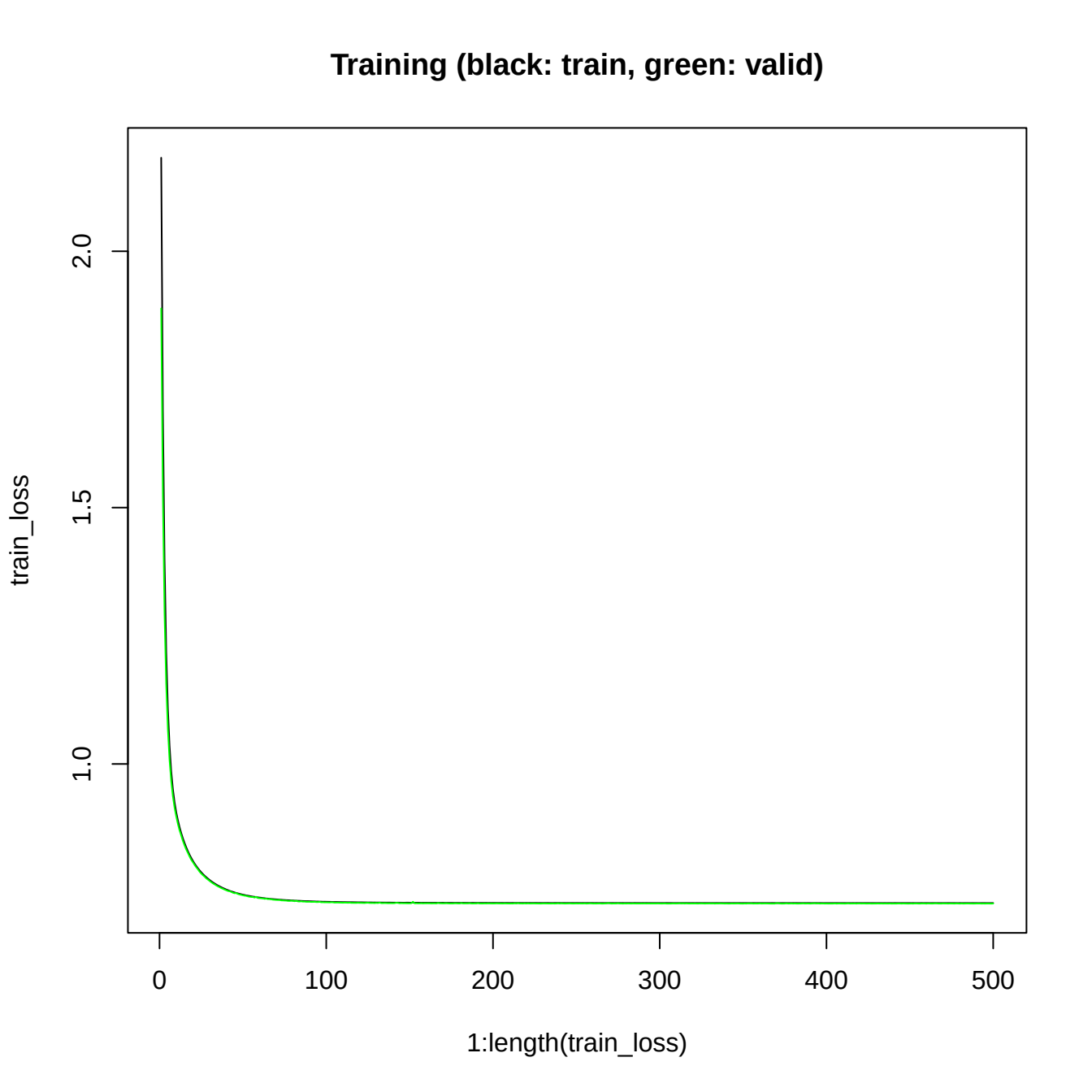
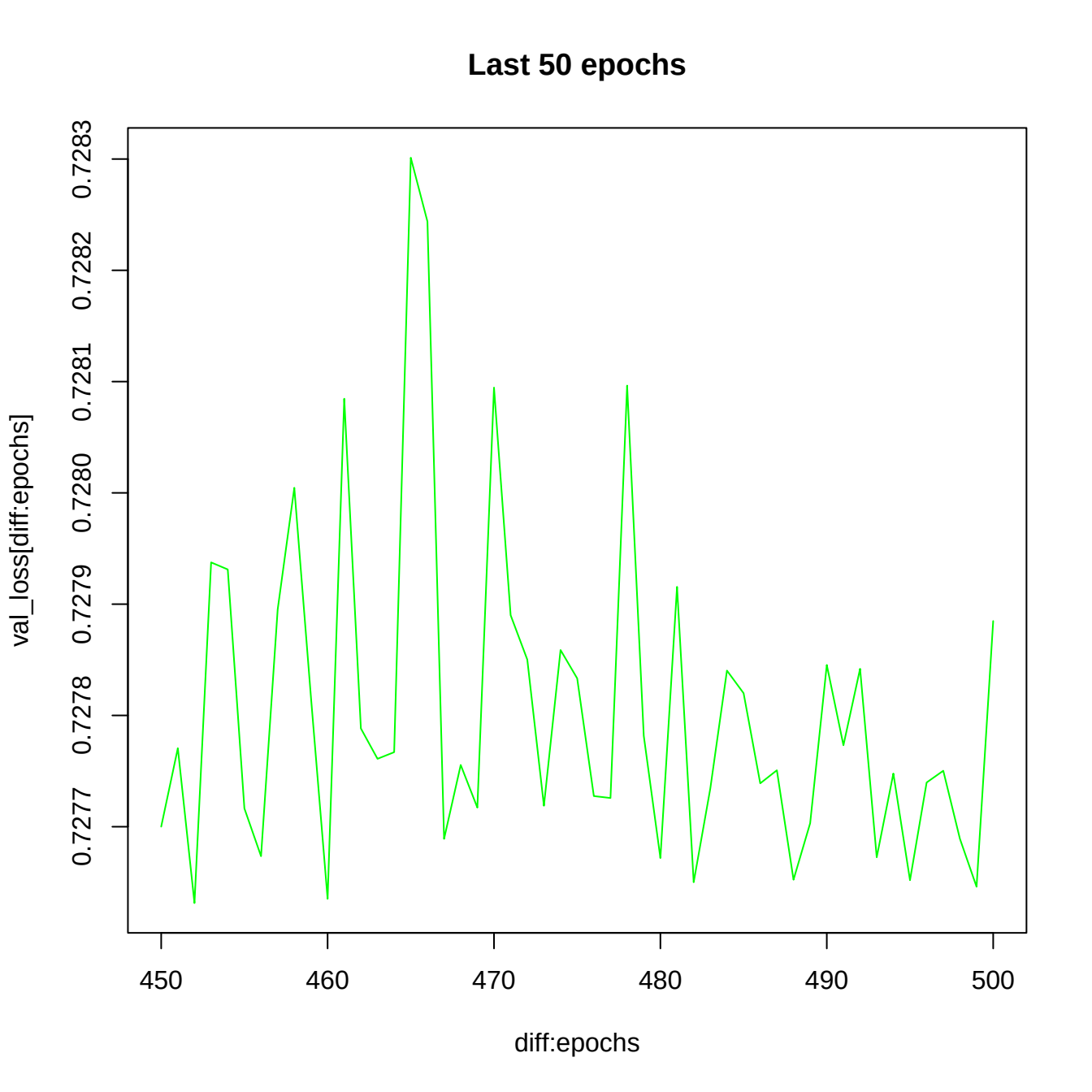
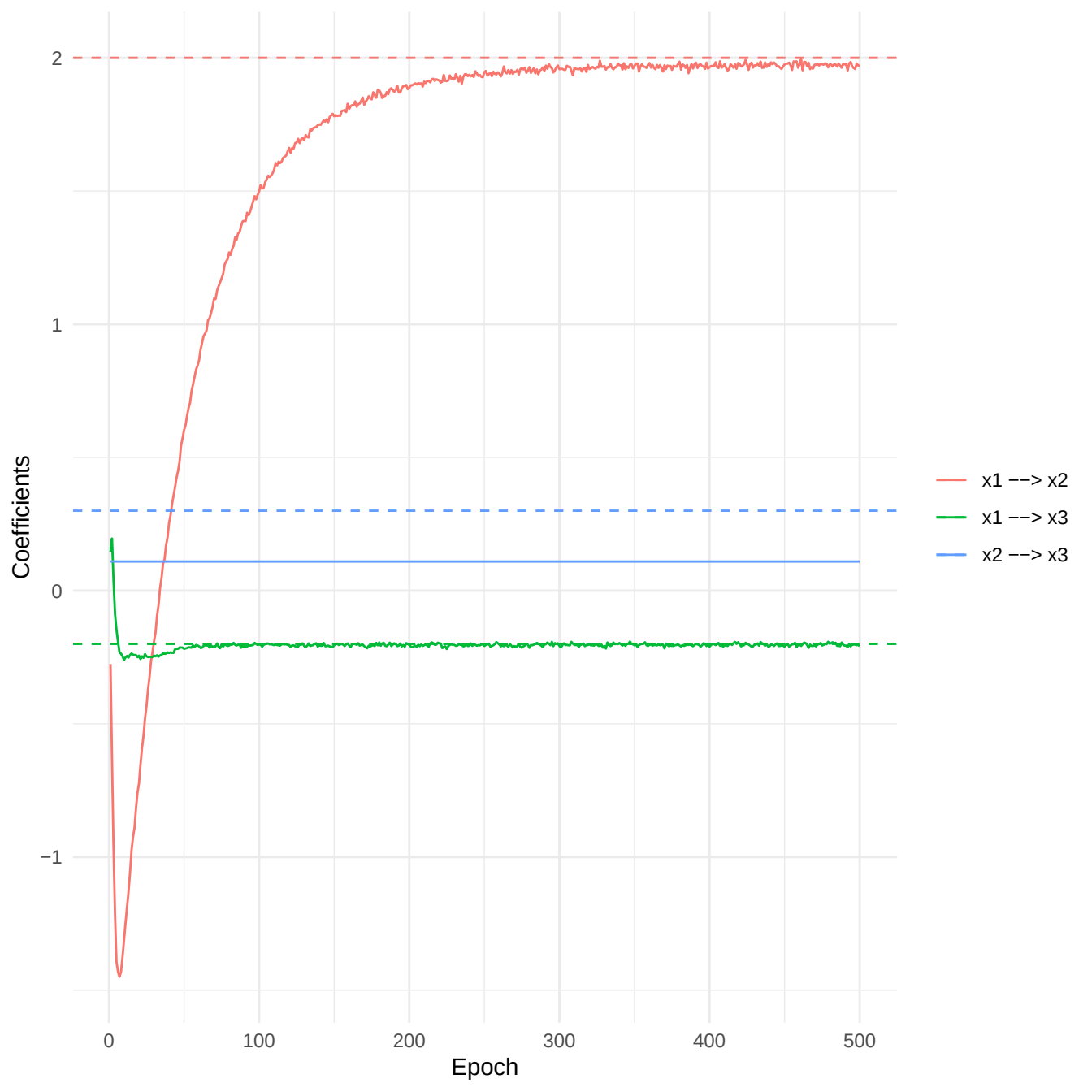
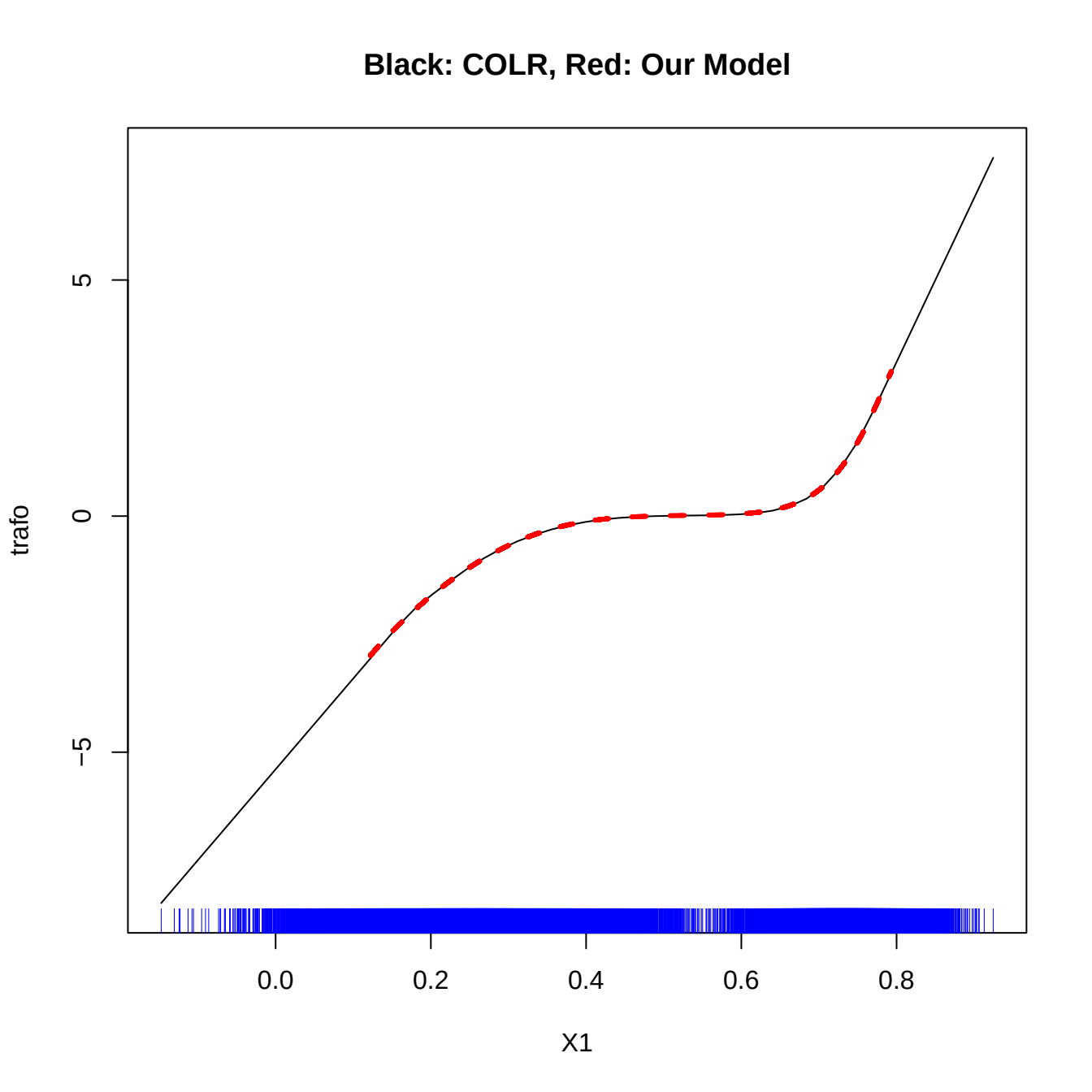
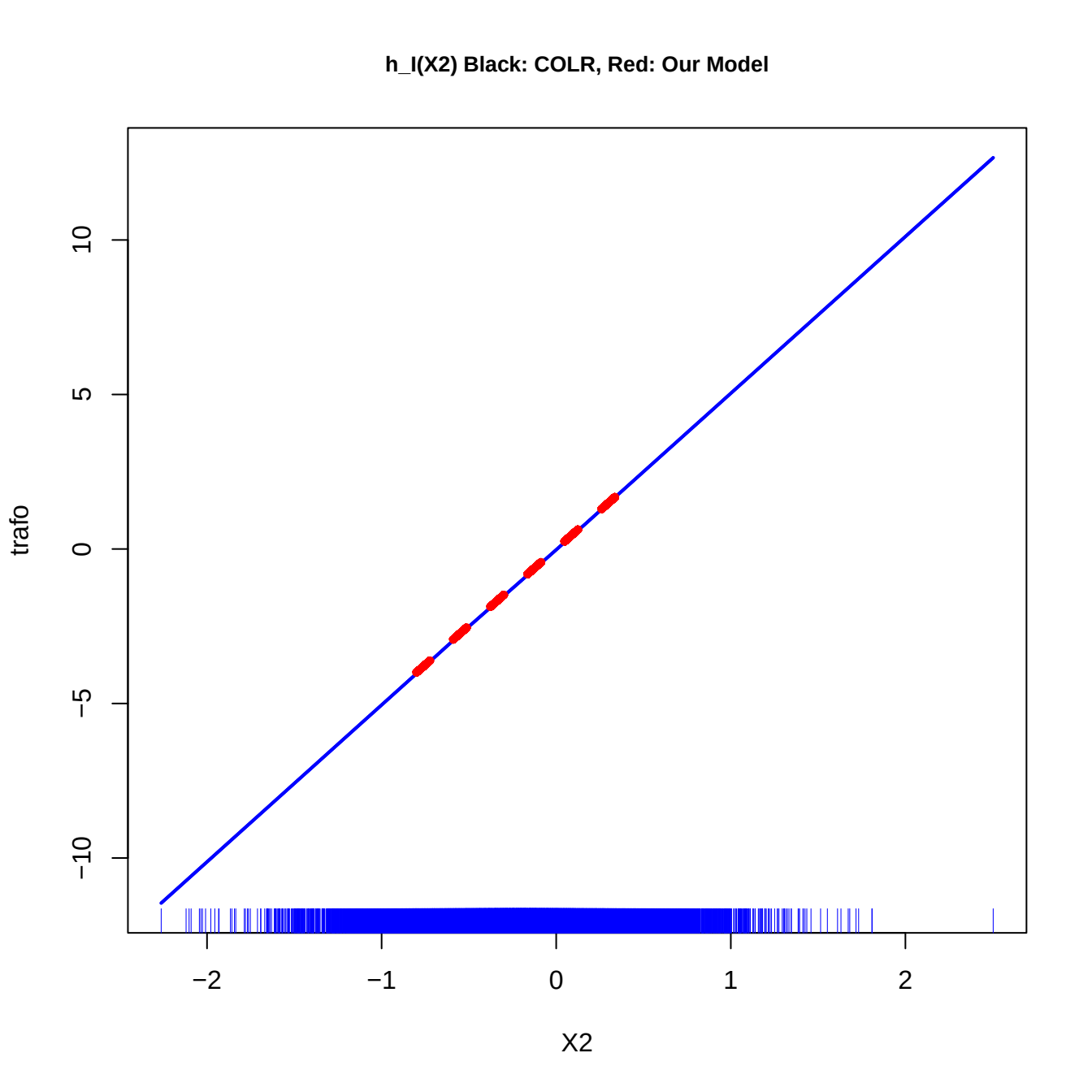

DGP influence of x2 on x3
f(x2)
2
1
0
−1
−2
−1.0
−0.5
0.0
0.5
1.0
x2
summerof24/runs/triangle_structured_continous/run_nodes25/triangle_mixed_DPGSin_ModelCS

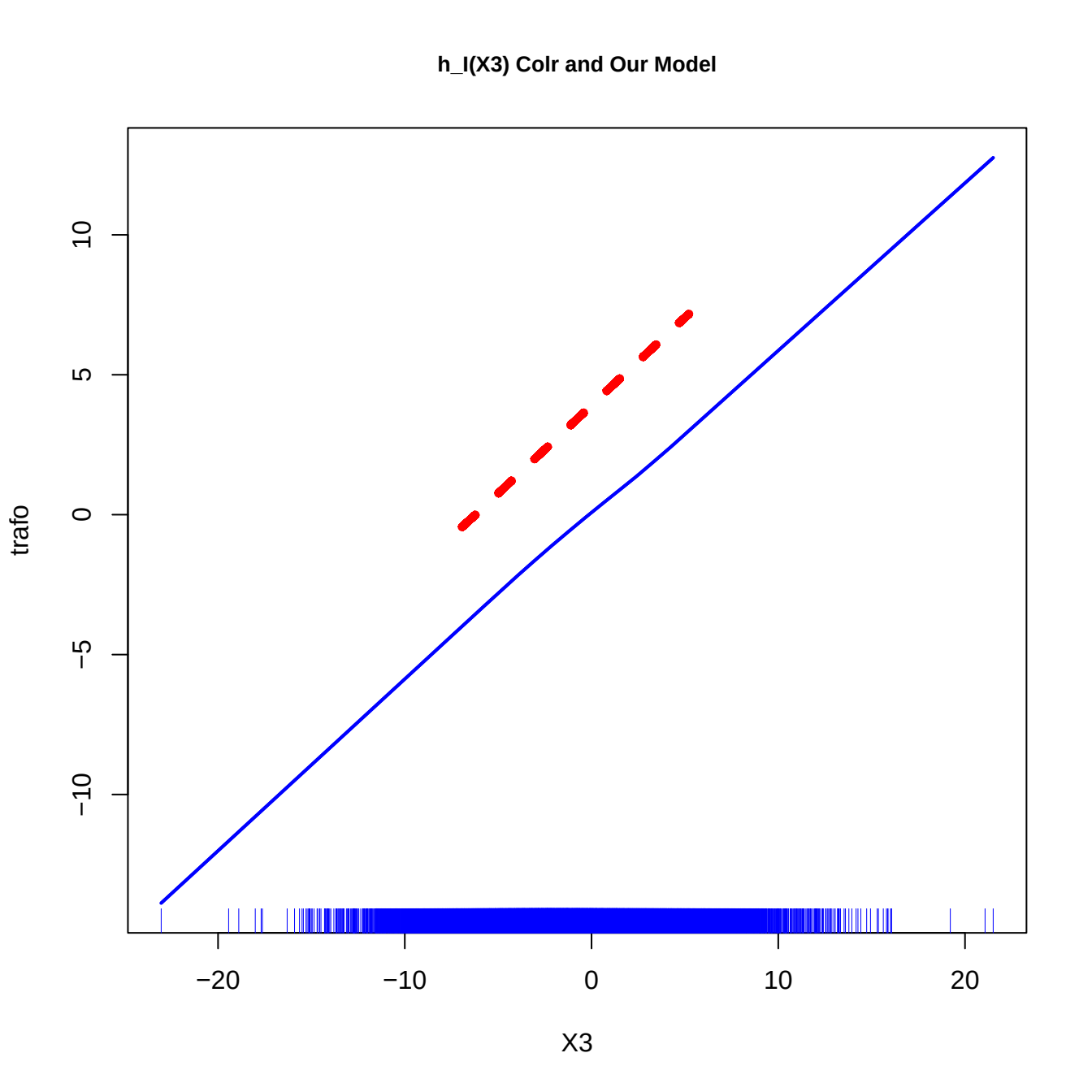

Training (black: train, green: valid)
train_loss
2.0
1.5
1.0
0
100
200
300
400
500
1:length(train_loss)

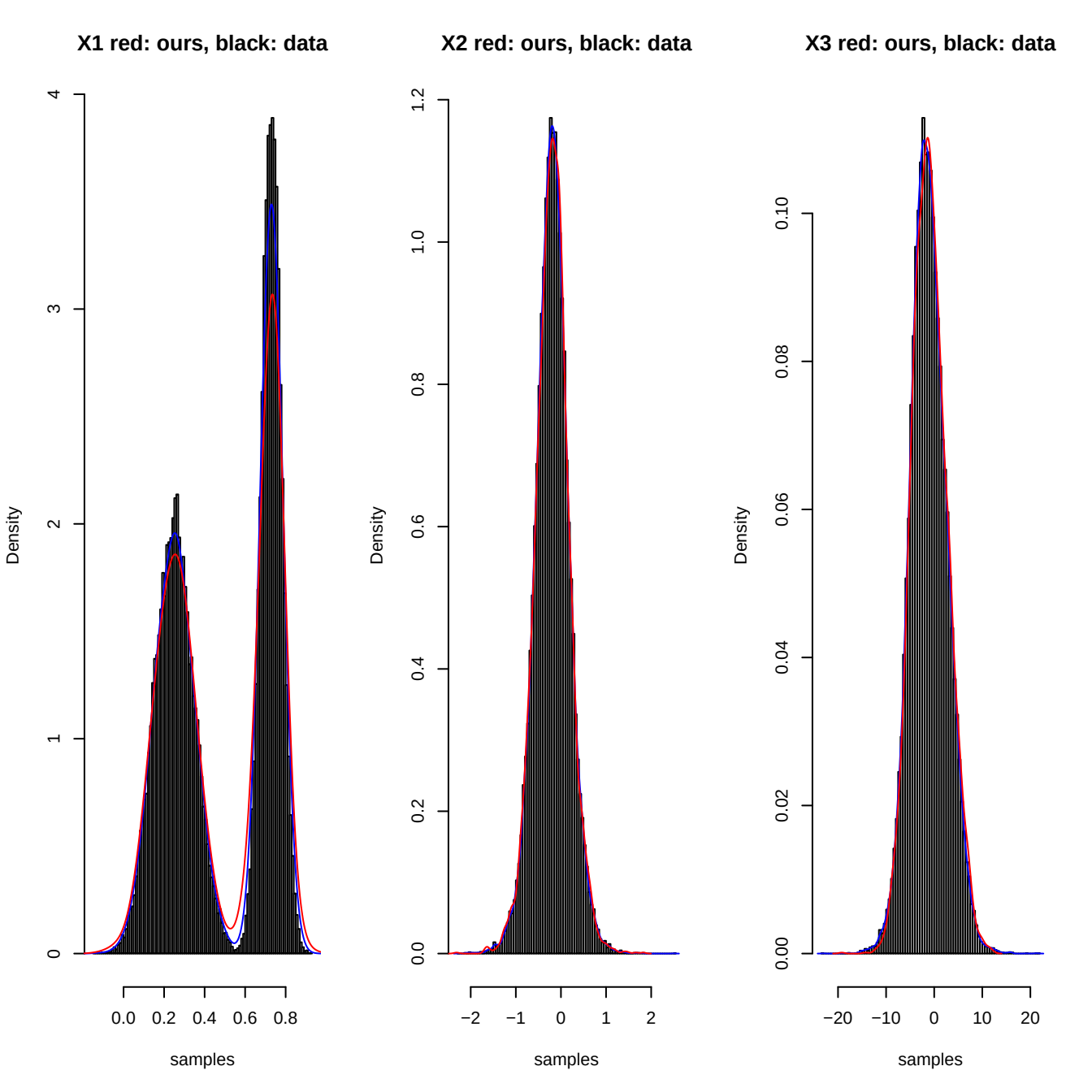

Last 50 epochs
val_loss[diff:epochs]
0.7277
0.7278
0.7279
0.7280
0.7281
0.7282
0.7283
450
460
470
480
490
500
diff:epochs

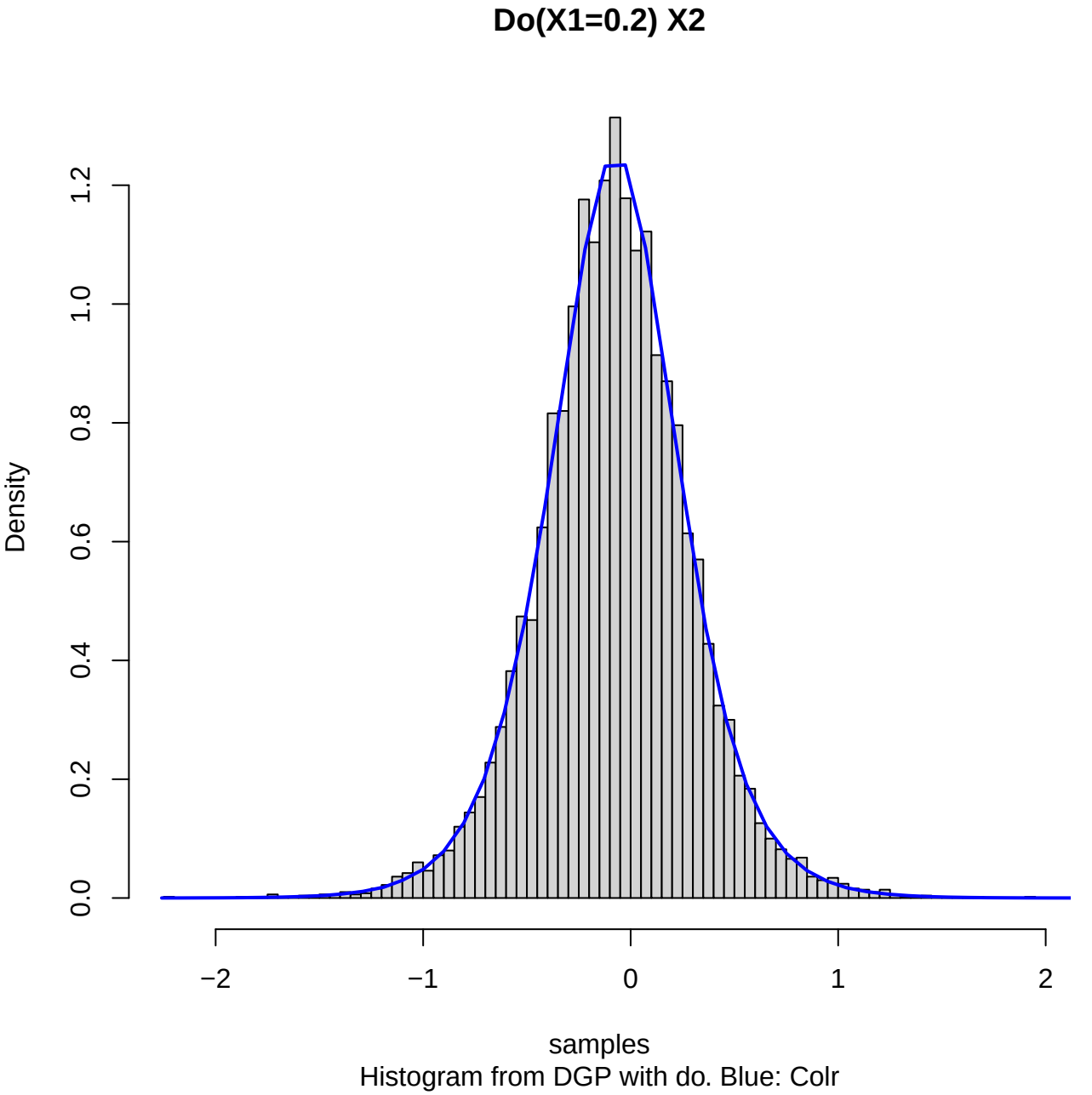

2
1
0
−1
Coefficients
0
100
200
300
400
500
Epoch
x1 −−> x2
x1 −−> x3
x2 −−> x3

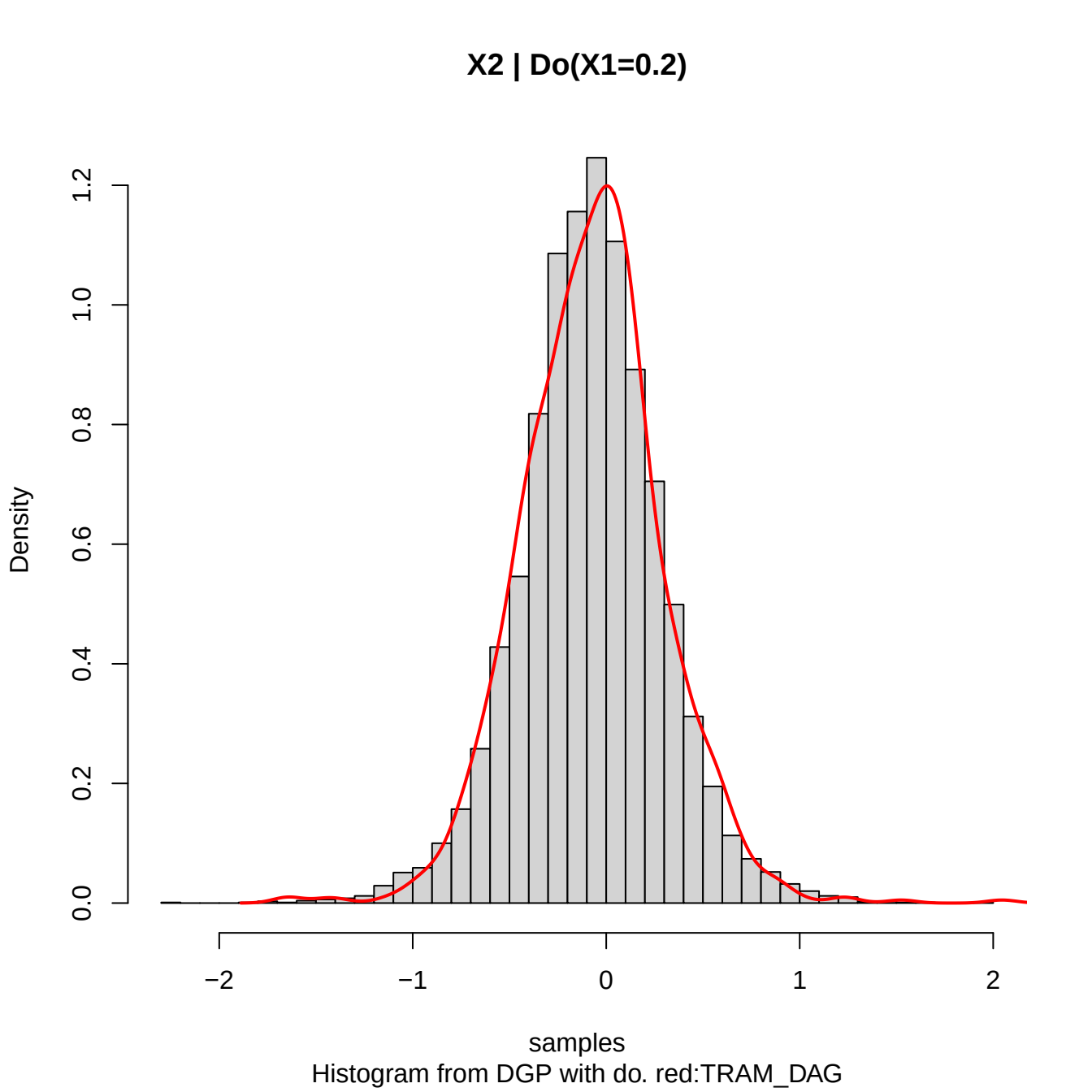

Black: COLR, Red: Our Model
trafo
5
0
−5
0.0
0.2
0.4
0.6
0.8
X1

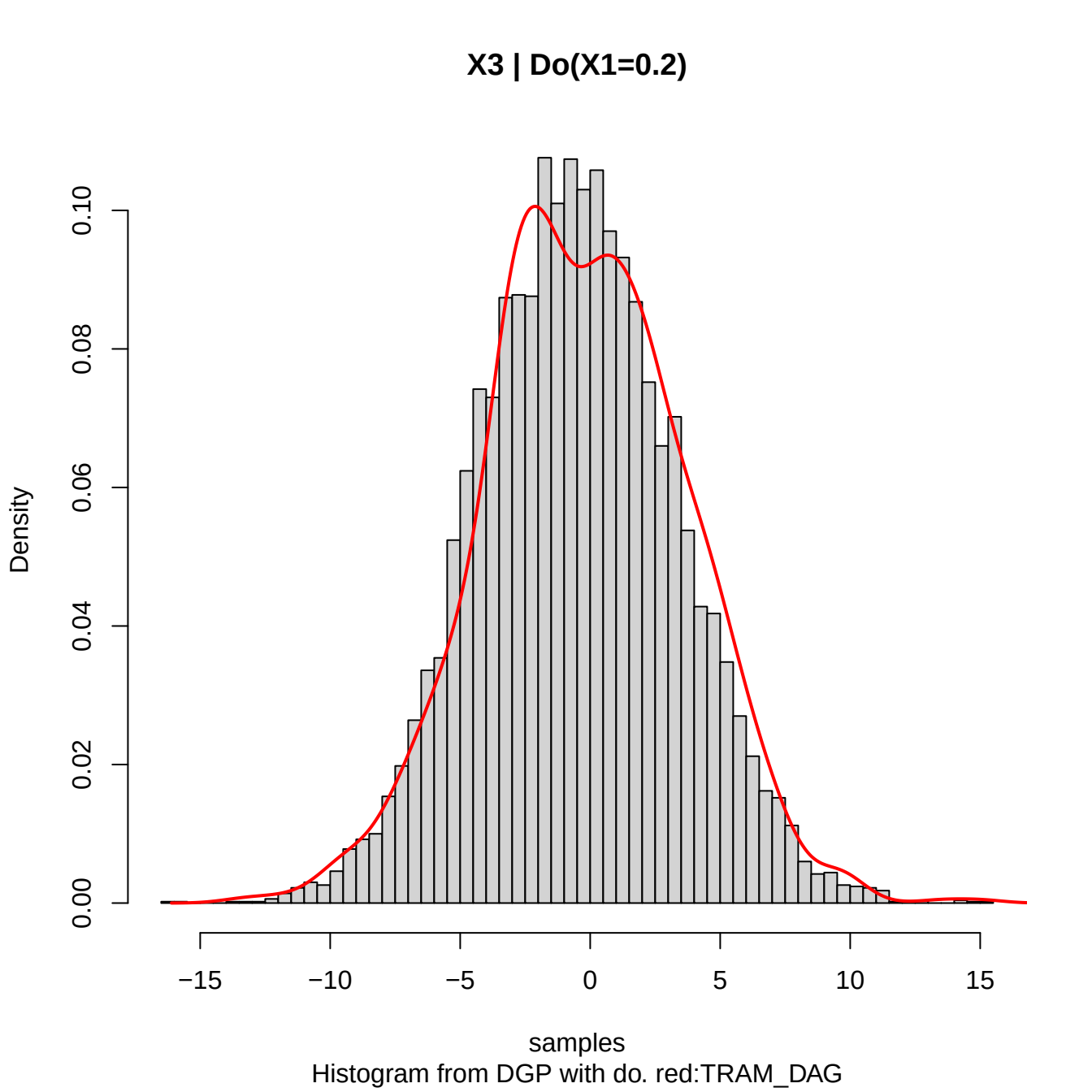

h_I(X2) Black: COLR, Red: Our Model
trafo
10
5
0
−5
−10
−2
−1
0
1
2
X2

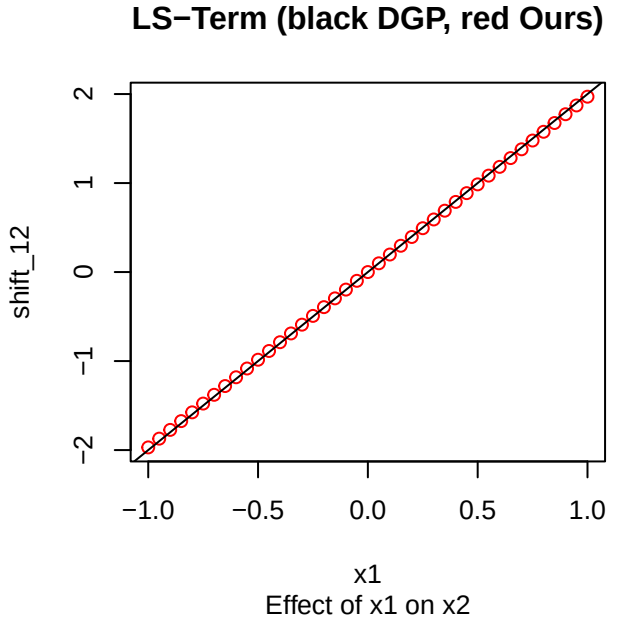

h_I(X3) Colr and Our Model
trafo
10
5
0
−5
−10
−20
−10
0
10
20
X3

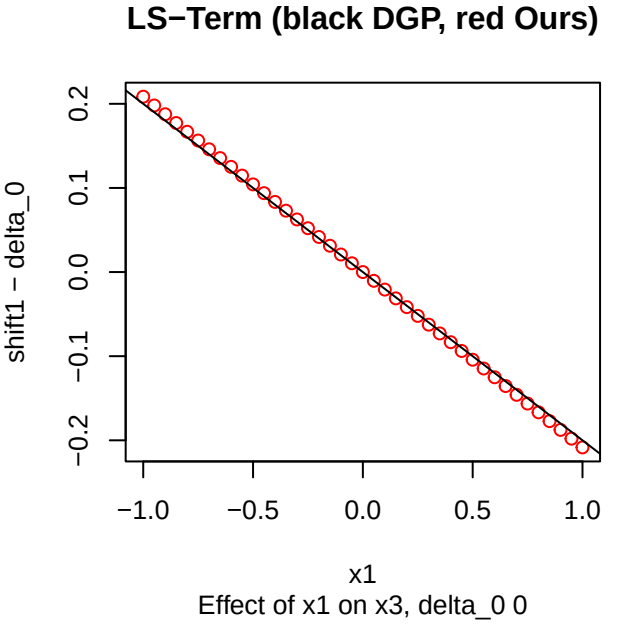

X1 red: ours, black: data
X2 red: ours, black: data
X3 red: ours, black: data
Density
samples
0.0 0.2 0.4 0.6 0.8
−2 −1 0 1 2
−20 −10 0 10 20
0 1 2 3 4
0.0 0.2 0.4 0.6 0.8 1.0 1.2
0.00 0.02 0.04 0.06 0.08 0.10

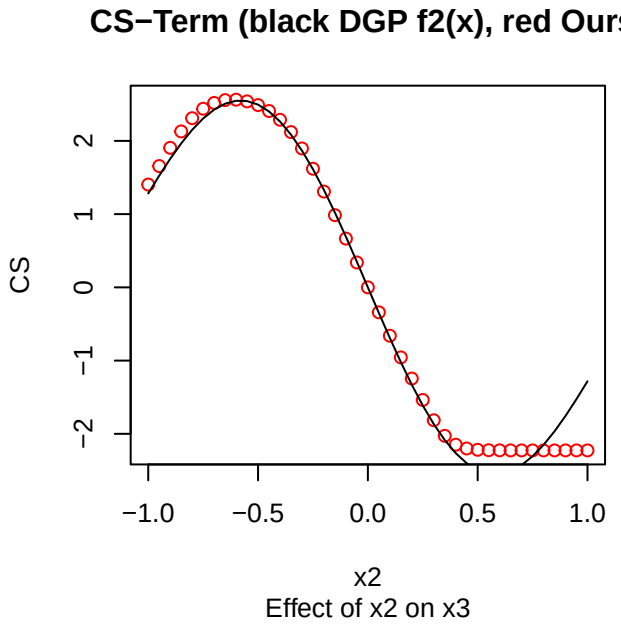

Do(X1=0.2) X2
Density
0.0
0.2
0.4
0.6
0.8
1.0
1.2
−2
−1
0
1
2
samples
Histogram from DGP with do. Blue: Colr

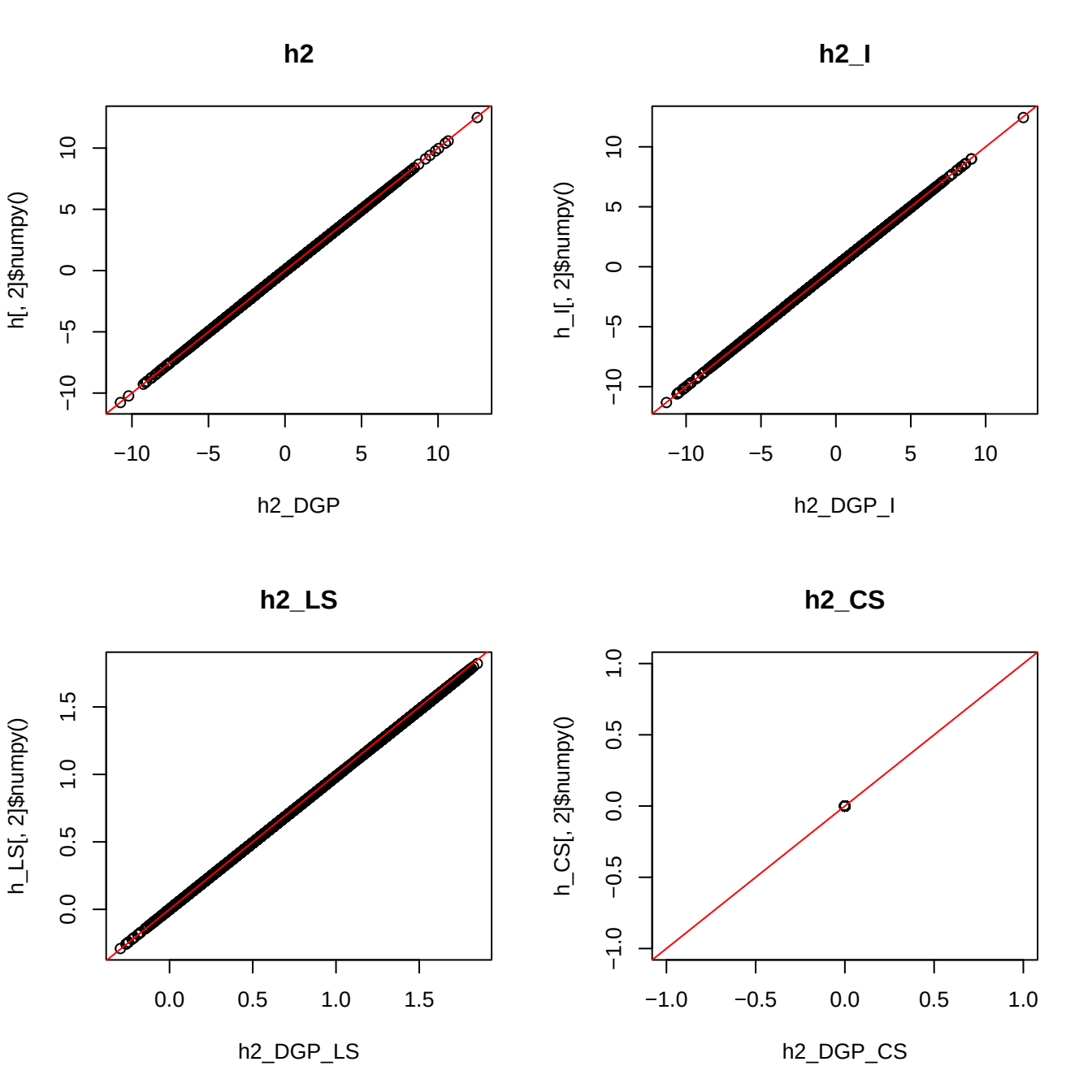

X2 | Do(X1=0.2)
Density
0.0
0.2
0.4
0.6
0.8
1.0
1.2
−2
−1
0
1
2
samples
Histogram from DGP with do. red:TRAM_DAG

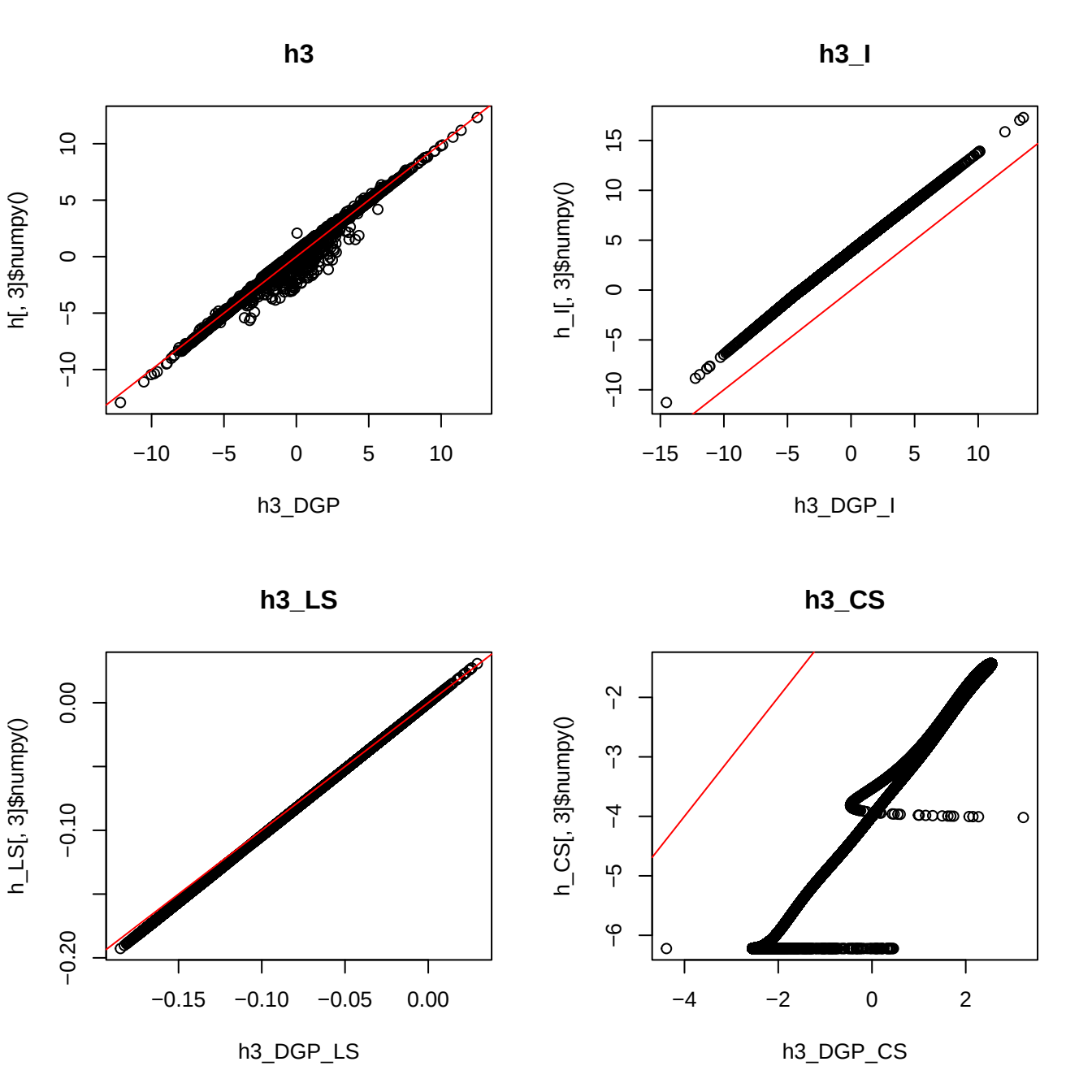

X3 | Do(X1=0.2)
Density
0.00
0.02
0.04
0.06
0.08
0.10
−15
−10
−5
0
5
10
15
samples
Histogram from DGP with do. red:TRAM_DAG


LS−Term (black DGP, red Ours)
shift_12
2
1
0
−1
−2
−1.0
−0.5
0.0
0.5
1.0
x1
Effect of x1 on x2


LS−Term (black DGP, red Ours)
shift1 − delta_0
0.2
0.1
0.0
−0.1
−0.2
−1.0
−0.5
0.0
0.5
1.0
x1
Effect of x1 on x3, delta_0 0


CS−Term (black DGP f2(x), red Ours)
CS
2
1
0
−1
−2
−1.0
−0.5
0.0
0.5
1.0
x2
Effect of x2 on x3


h2
h[, 2]$numpy()
h2_DGP
h2_I
h_I[, 2]$numpy()
h2_DGP_I
h2_LS
h_LS[, 2]$numpy()
h2_DGP_LS
h2_CS
h_CS[, 2]$numpy()
h2_DGP_CS


h3
h[, 3]$numpy()
h3_DGP
h3_I
h_I[, 3]$numpy()
h3_DGP_I
h3_LS
h_LS[, 3]$numpy()
h3_DGP_LS
h3_CS
h_CS[, 3]$numpy()
h3_DGP_CS