`netcopula` package

Report at 2016-05-06

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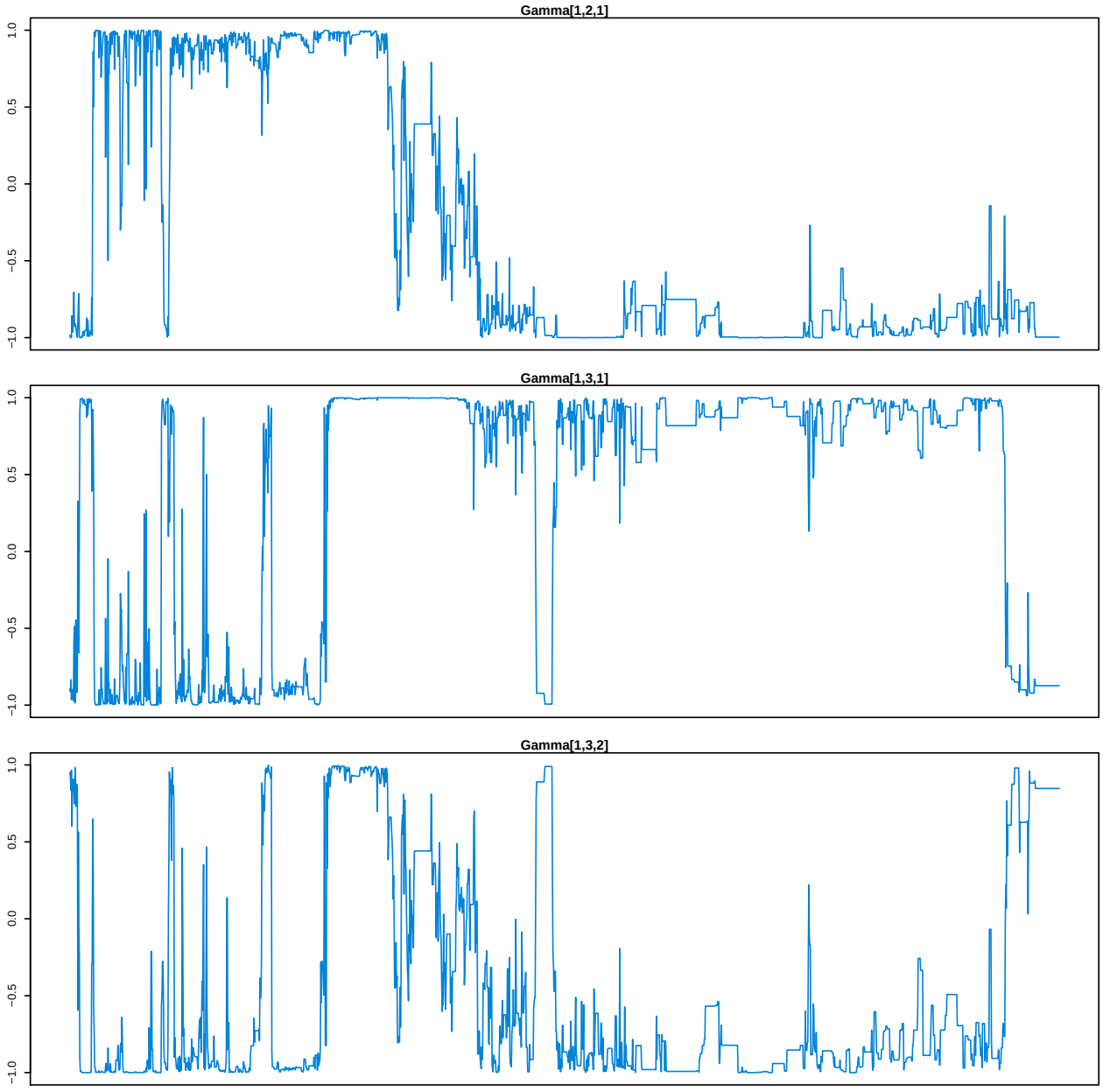
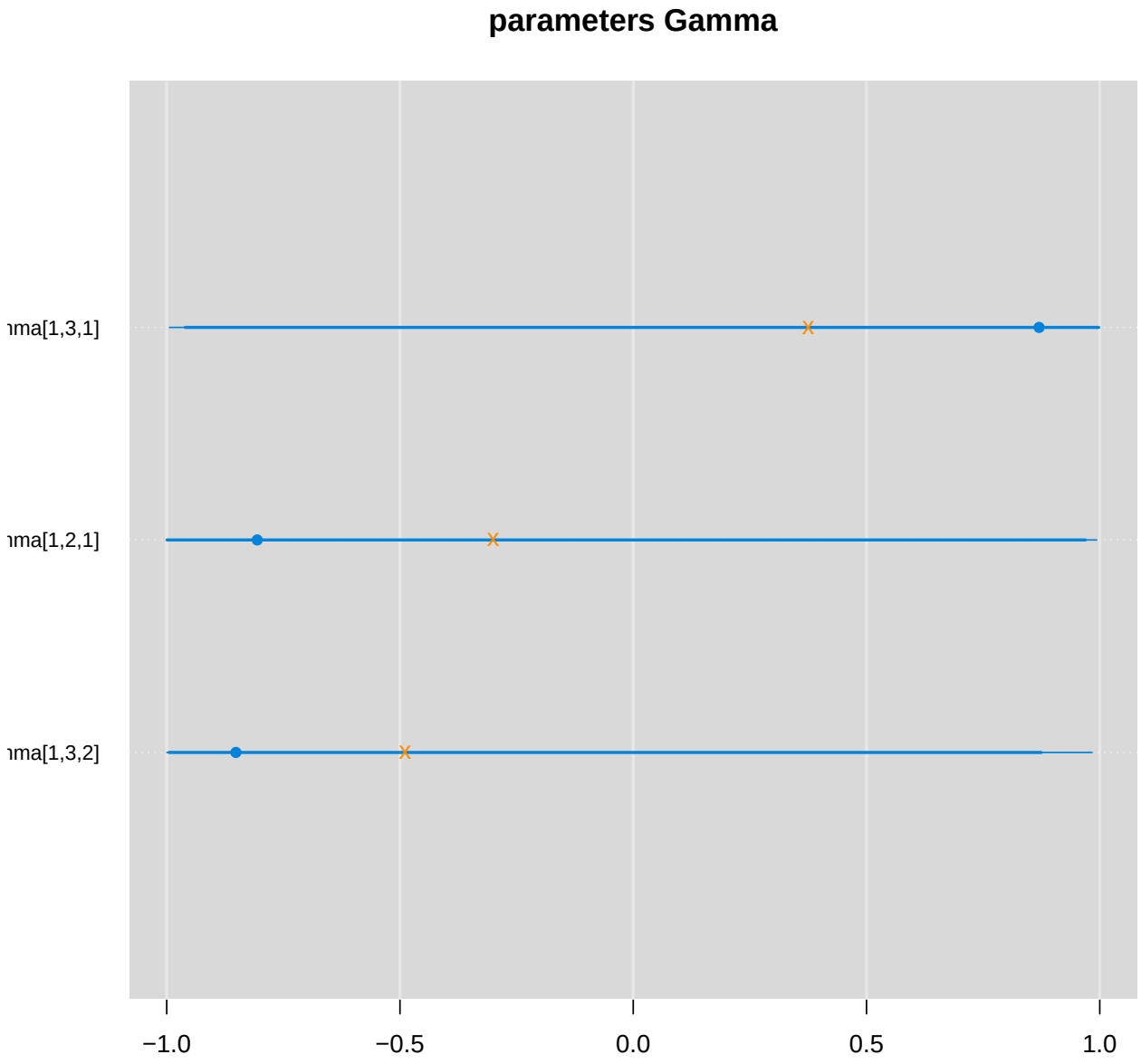
Using *all the data* from Achana et al. (2014) (i.e. imputing the missing outcomes)

All the latent variables are estimated, tha is, we do not use the imputation algorithm.

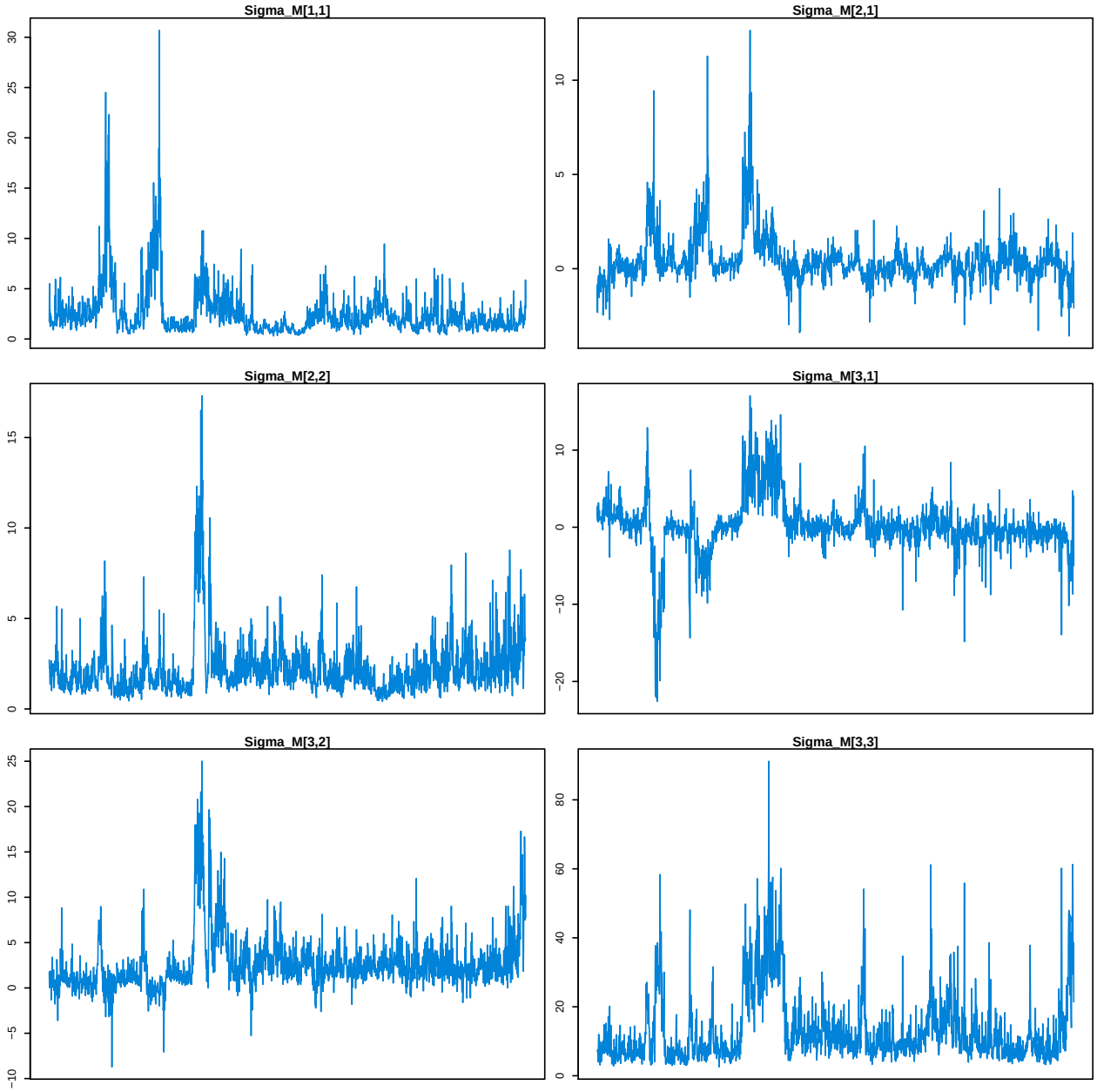
$\boldsymbol{\Gamma}$ (outcome copula correlation matrix)

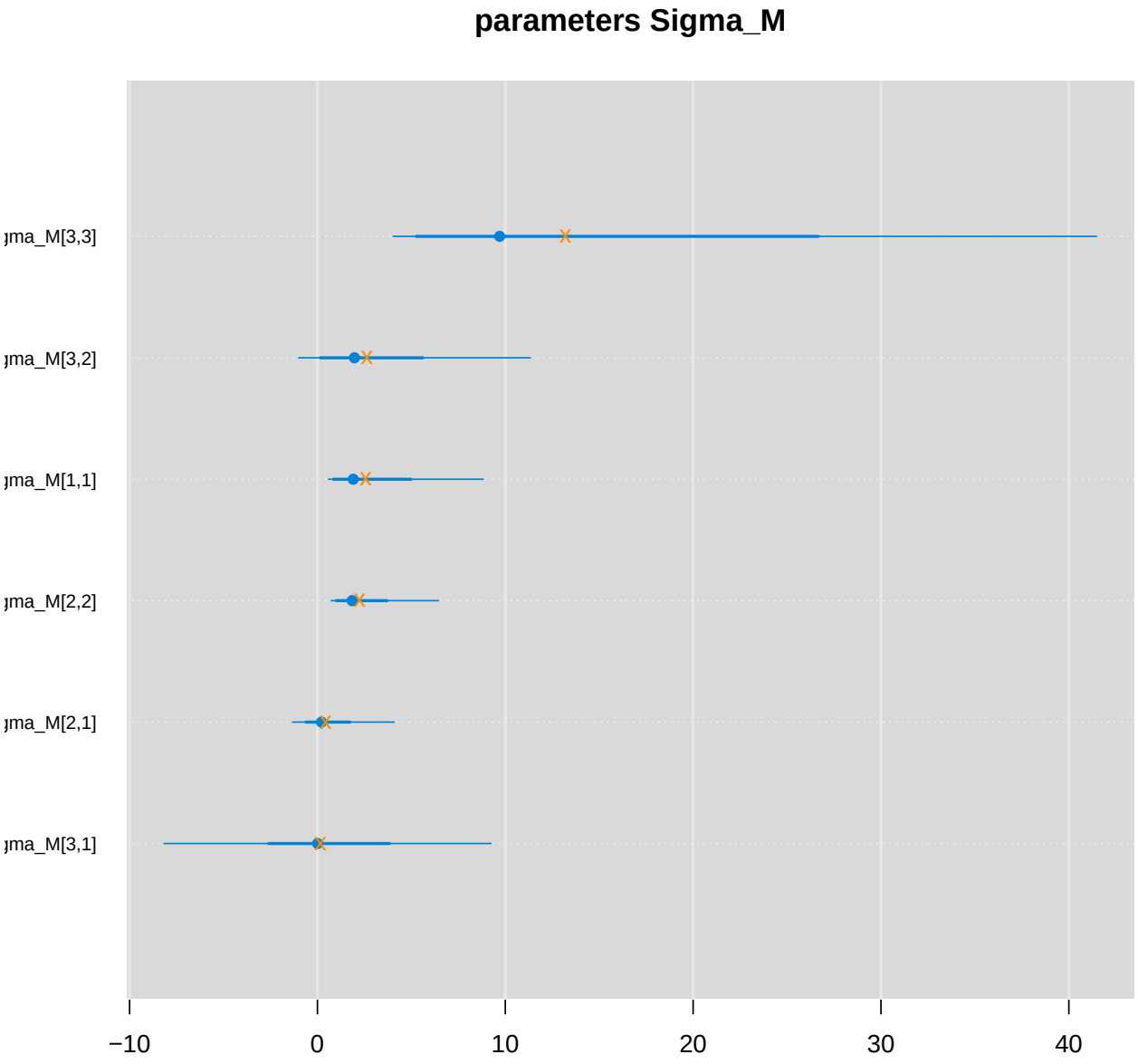
Here, the $\boldsymbol{\Gamma}$ matrix is estimated.

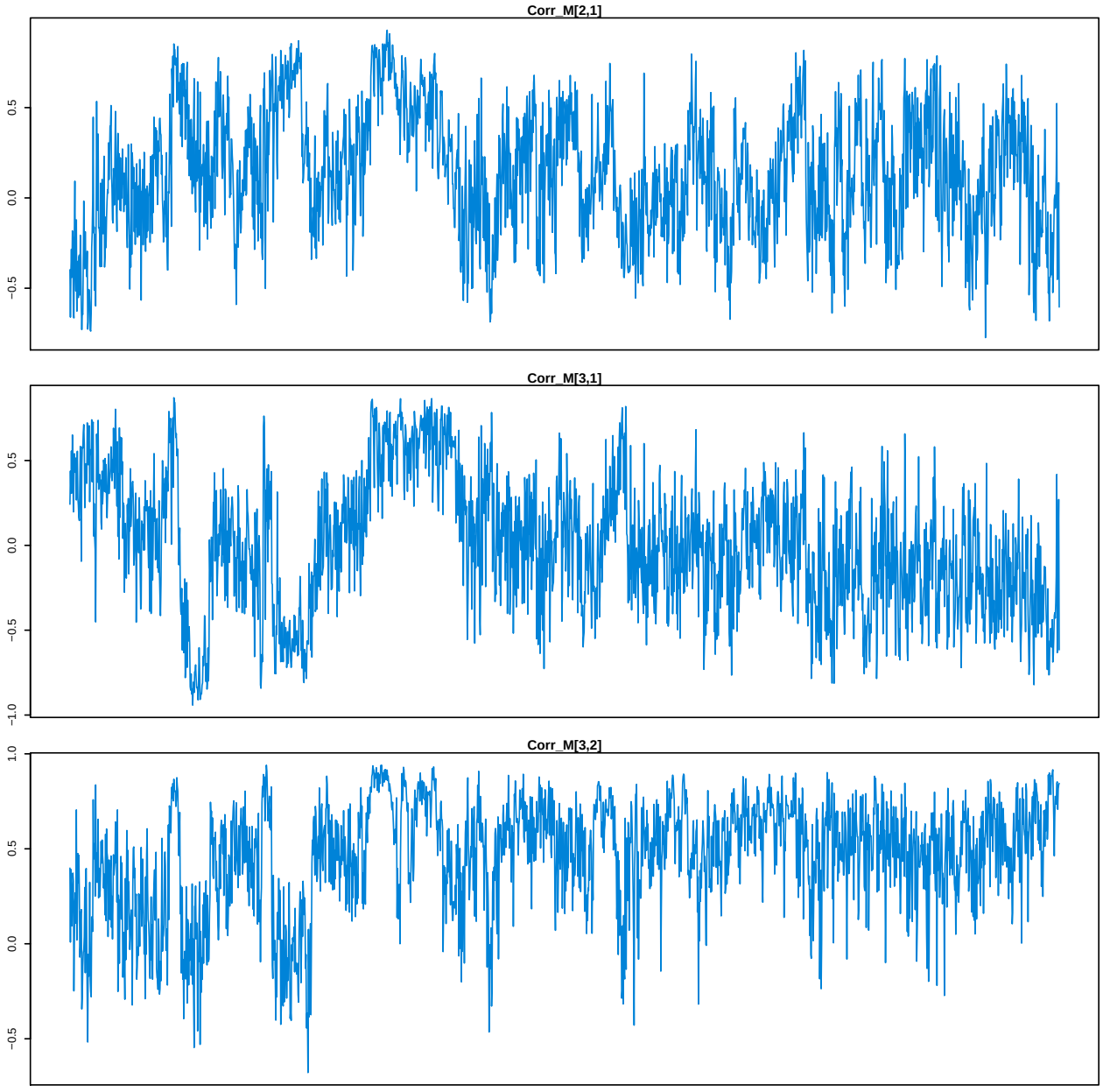

Gamma[1,2,1]
1.0
0.5
0.0
−0.5
−1.0
Gamma[1,3,1]
1.0
0.5
0.0
−0.5
−1.0
Gamma[1,3,2]
1.0
0.5
0.0
−0.5
−1.0

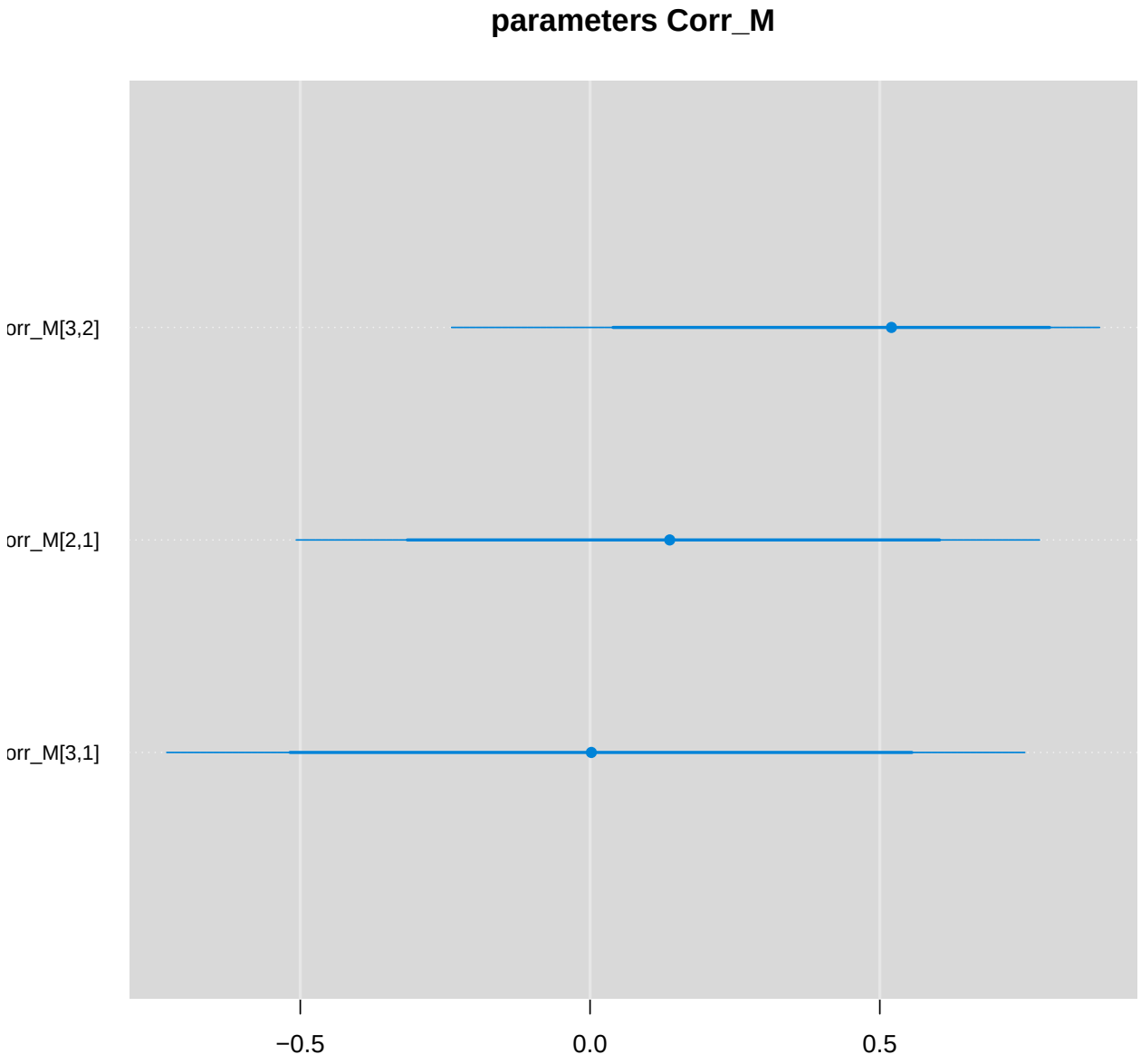

parameters Gamma
ıma[1,3,1]
ıma[1,2,1]
ıma[1,3,2]
−1.0
−0.5
0.0
0.5
1.0

Σ_M (common between-study covariance structure)

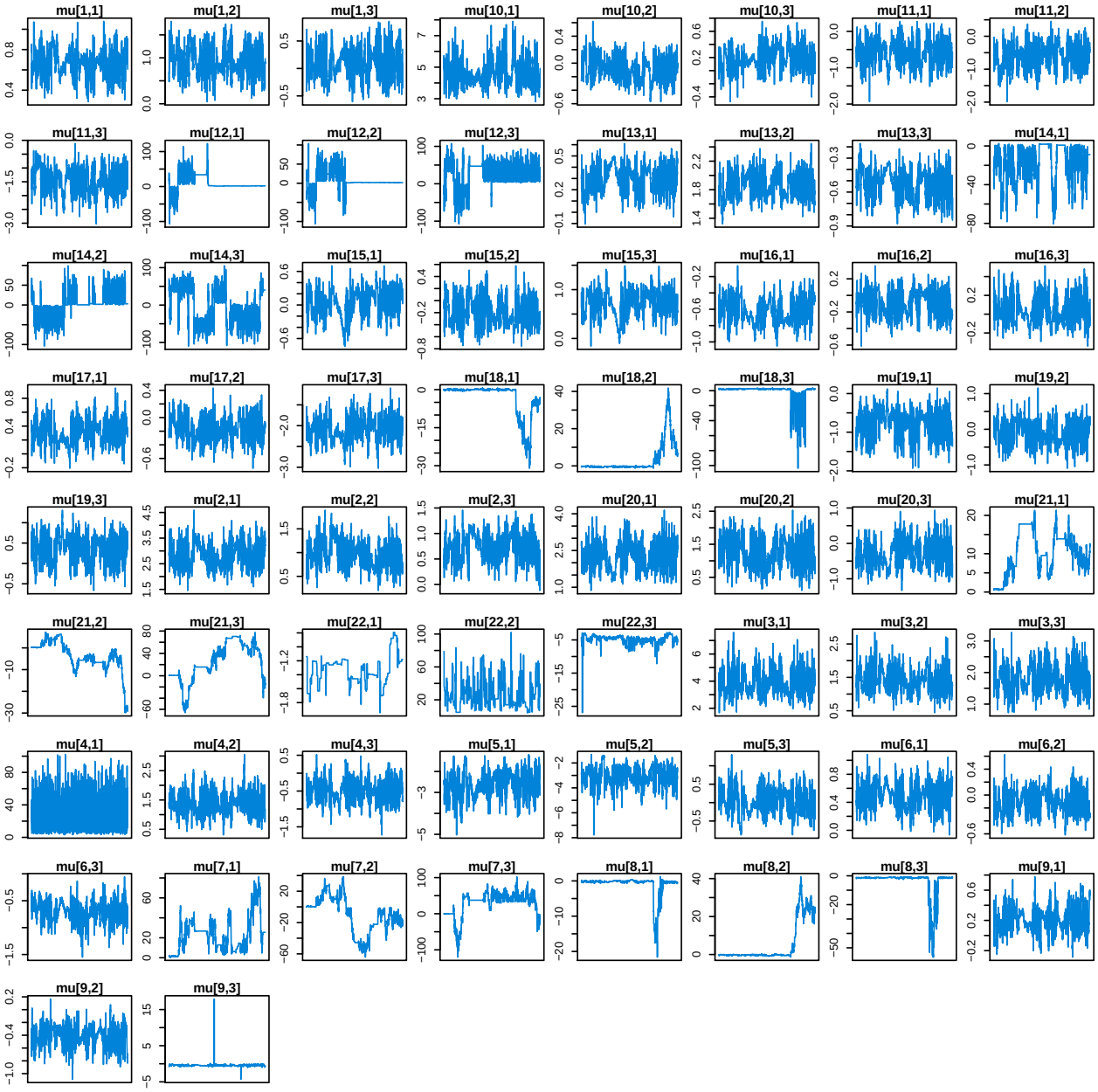


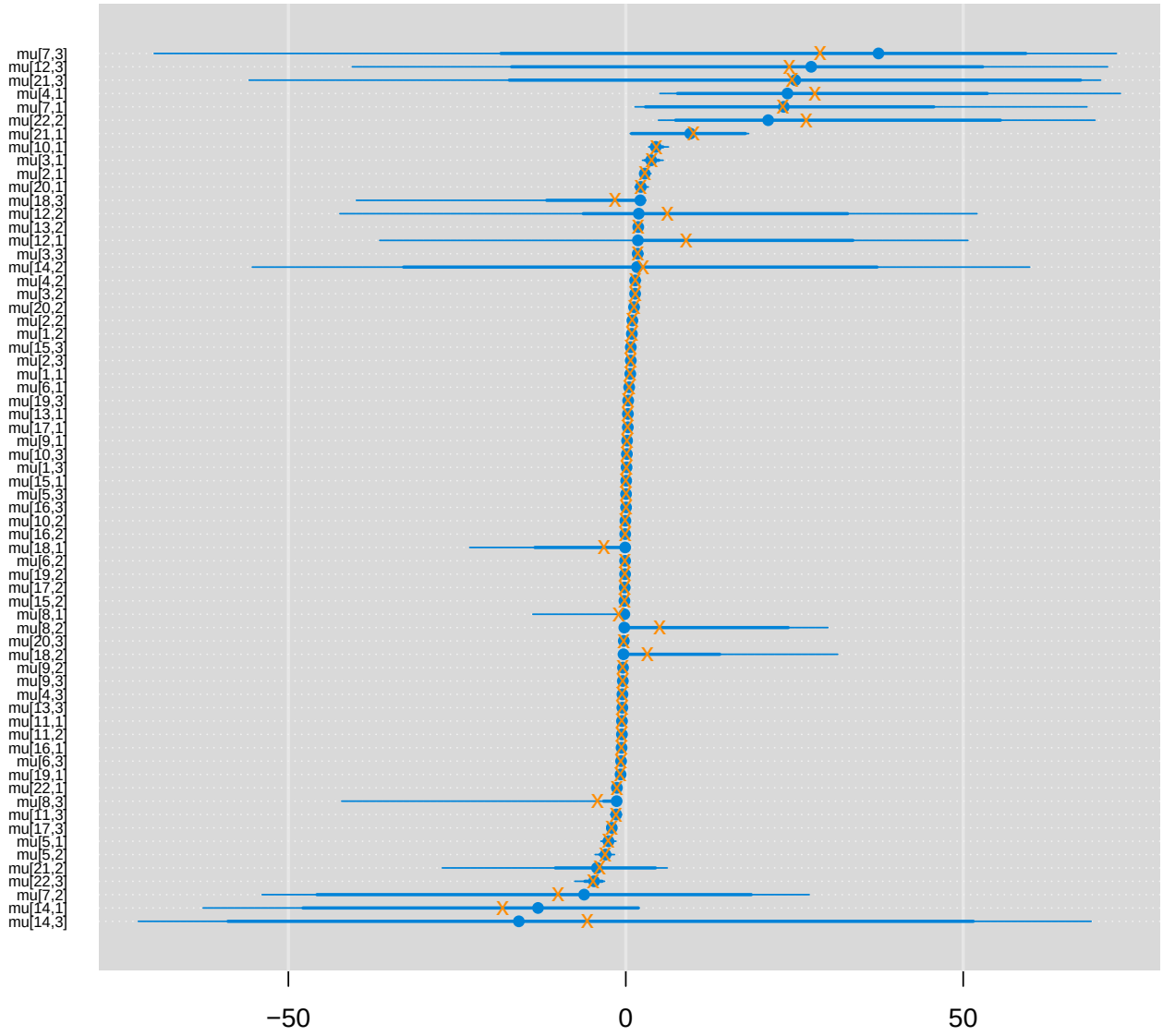

parameters Sigma_M
gma_M[3,3]
gma_M[3,2]
gma_M[1,1]
gma_M[2,2]
gma_M[2,1]
gma_M[3,1]
−10
0
10
20
30
40


Corr_M[2,1]
0.5
0.0
−0.5
Corr_M[3,1]
0.5
0.0
−0.5
−1.0
Corr_M[3,2]
1.0
0.5
0.0
−0.5

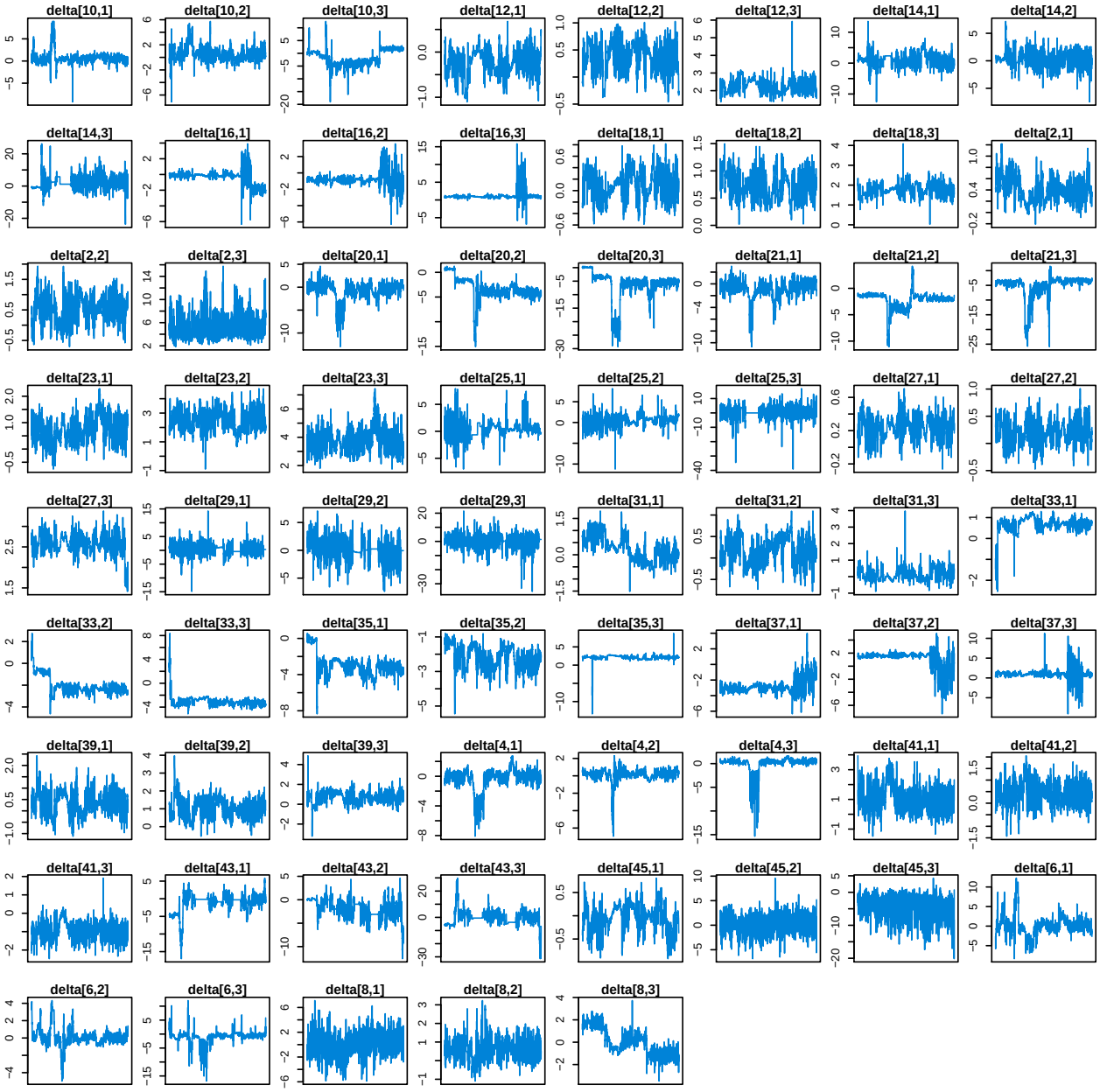

parameters Corr_M
orr_M[3,2]
orr_M[2,1]
orr_M[3,1]
−0.5
0.0
0.5

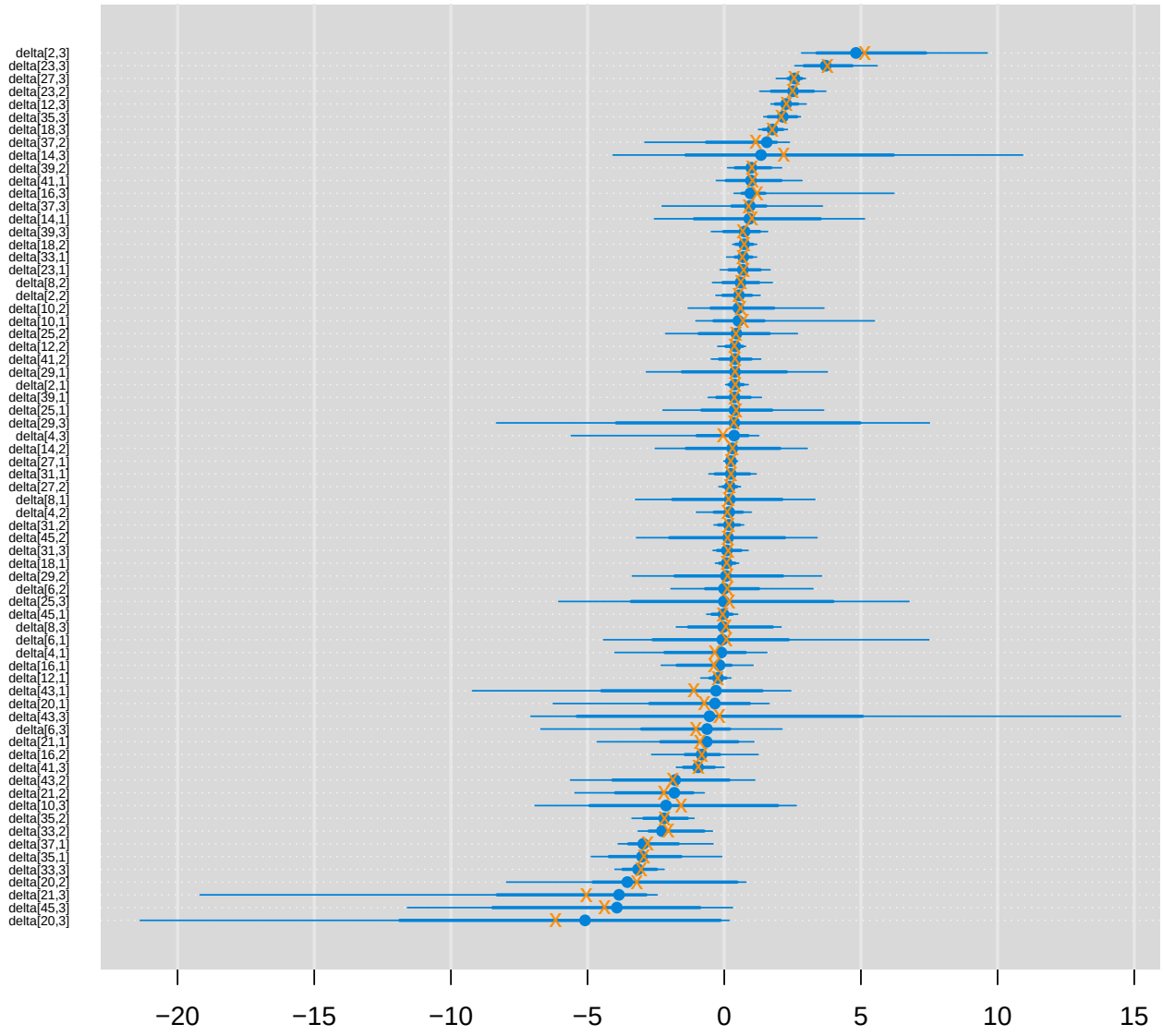
μ (study-specific baseline effects)



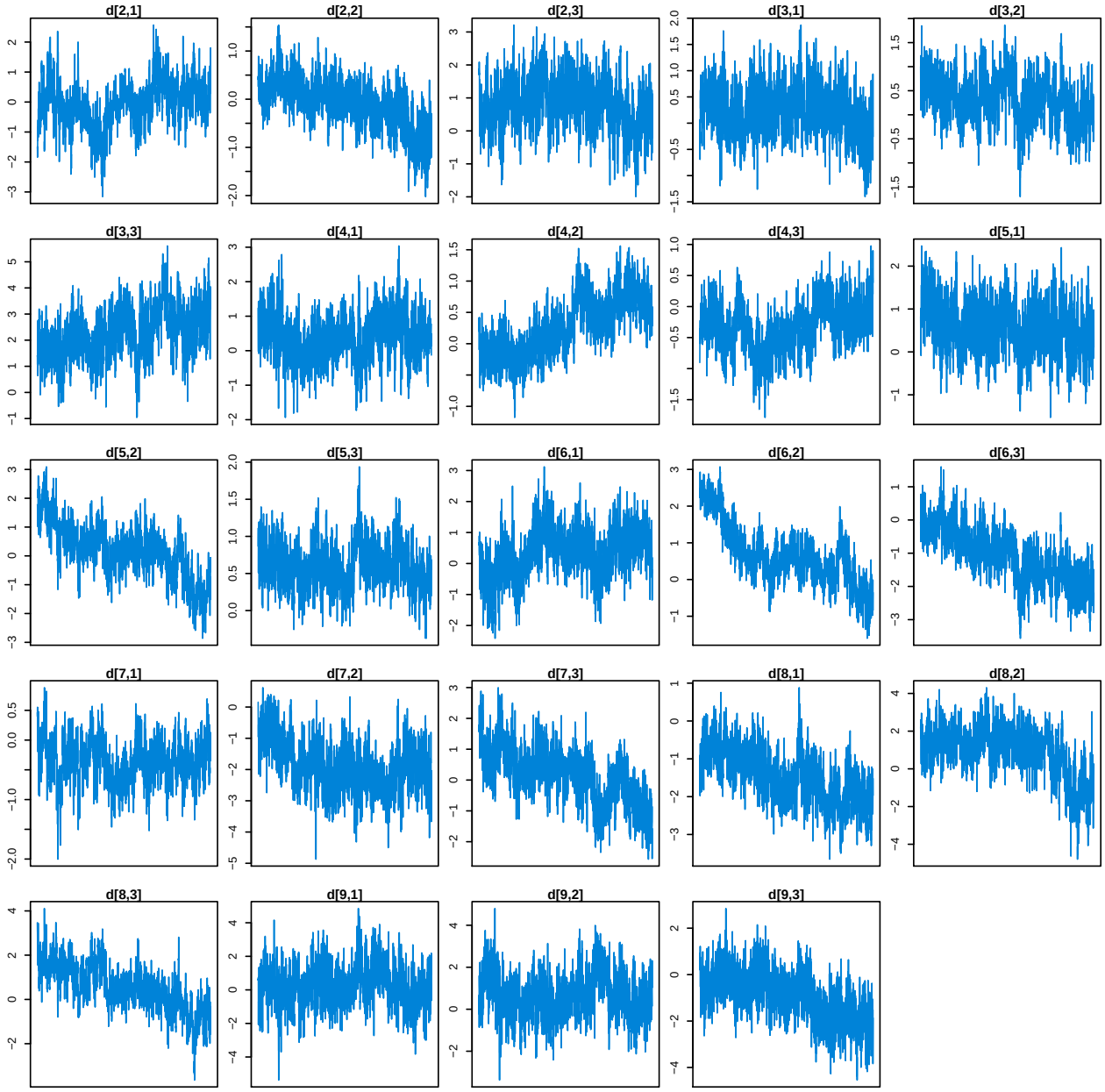

parameters mu
mu[7,3]
mu[12,3]
mu[21,3]
mu[4,1]
mu[7,1]
mu[22,2]
mu[21,1]
mu[10,1]
mu[3,1]
mu[2,1]
mu[20,1]
mu[18,3]
mu[12,2]
mu[13,2]
mu[12,1]
mu[3,3]
mu[14,2]
mu[4,2]
mu[3,2]
mu[20,2]
mu[2,2]
mu[1,2]
mu[15,3]
mu[2,3]
mu[1,1]
mu[6,1]
mu[19,3]
mu[13,1]
mu[17,1]
mu[9,1]
mu[10,3]
mu[1,3]
mu[15,1]
mu[5,3]
mu[16,3]
mu[10,2]
mu[16,2]
mu[18,1]
mu[6,2]
mu[19,2]
mu[17,2]
mu[15,2]
mu[8,1]
mu[8,2]
mu[20,3]
mu[18,2]
mu[9,2]
mu[9,3]
mu[4,3]
mu[13,3]
mu[11,1]
mu[11,2]
mu[16,1]
mu[6,3]
mu[19,1]
mu[22,1]
mu[8,3]
mu[11,3]
mu[17,3]
mu[5,1]
mu[5,2]
mu[21,2]
mu[22,3]
mu[7,2]
mu[14,1]
mu[14,3]
−50
0
50

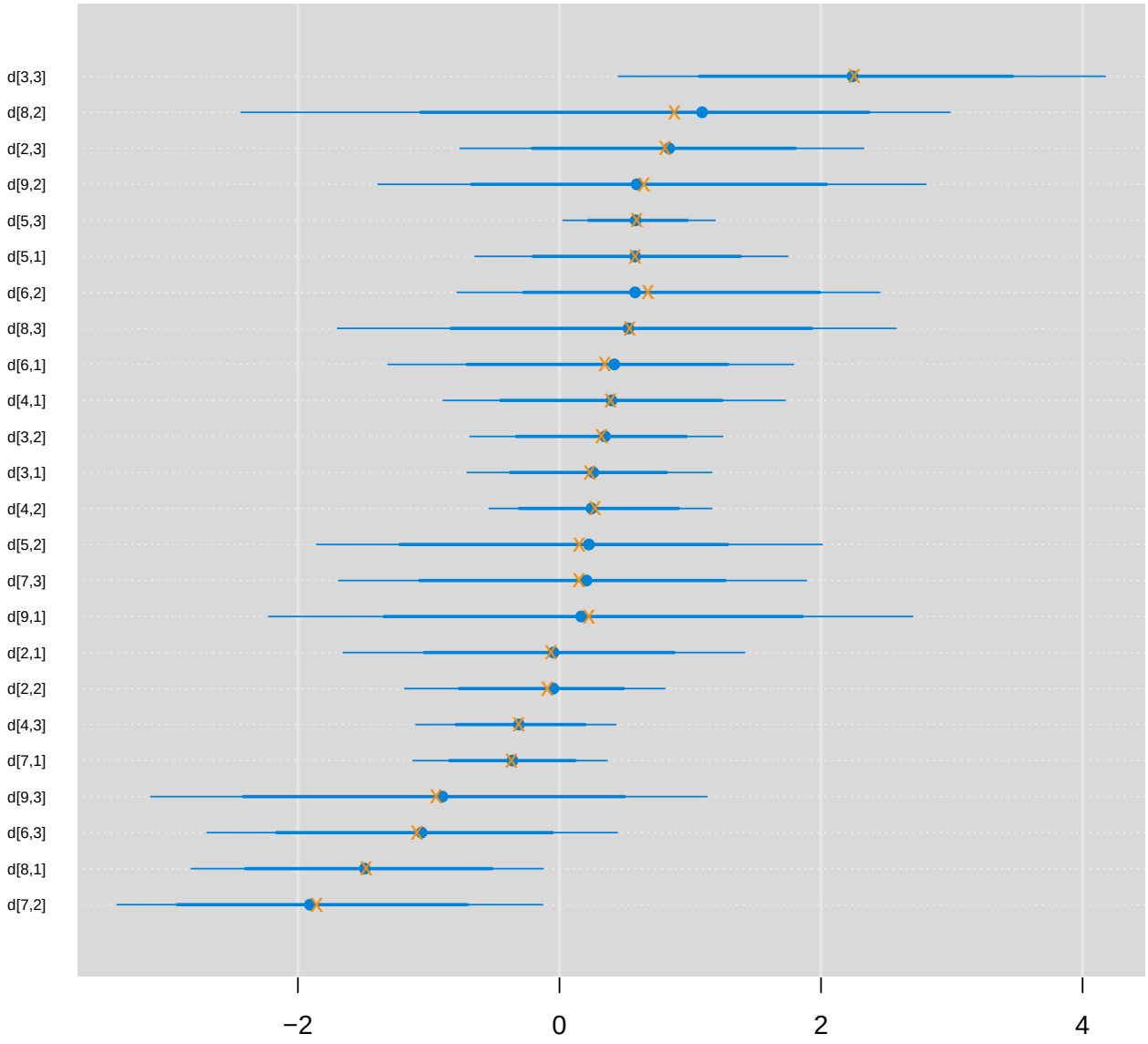
δ (study-specific [random] treatment effects)



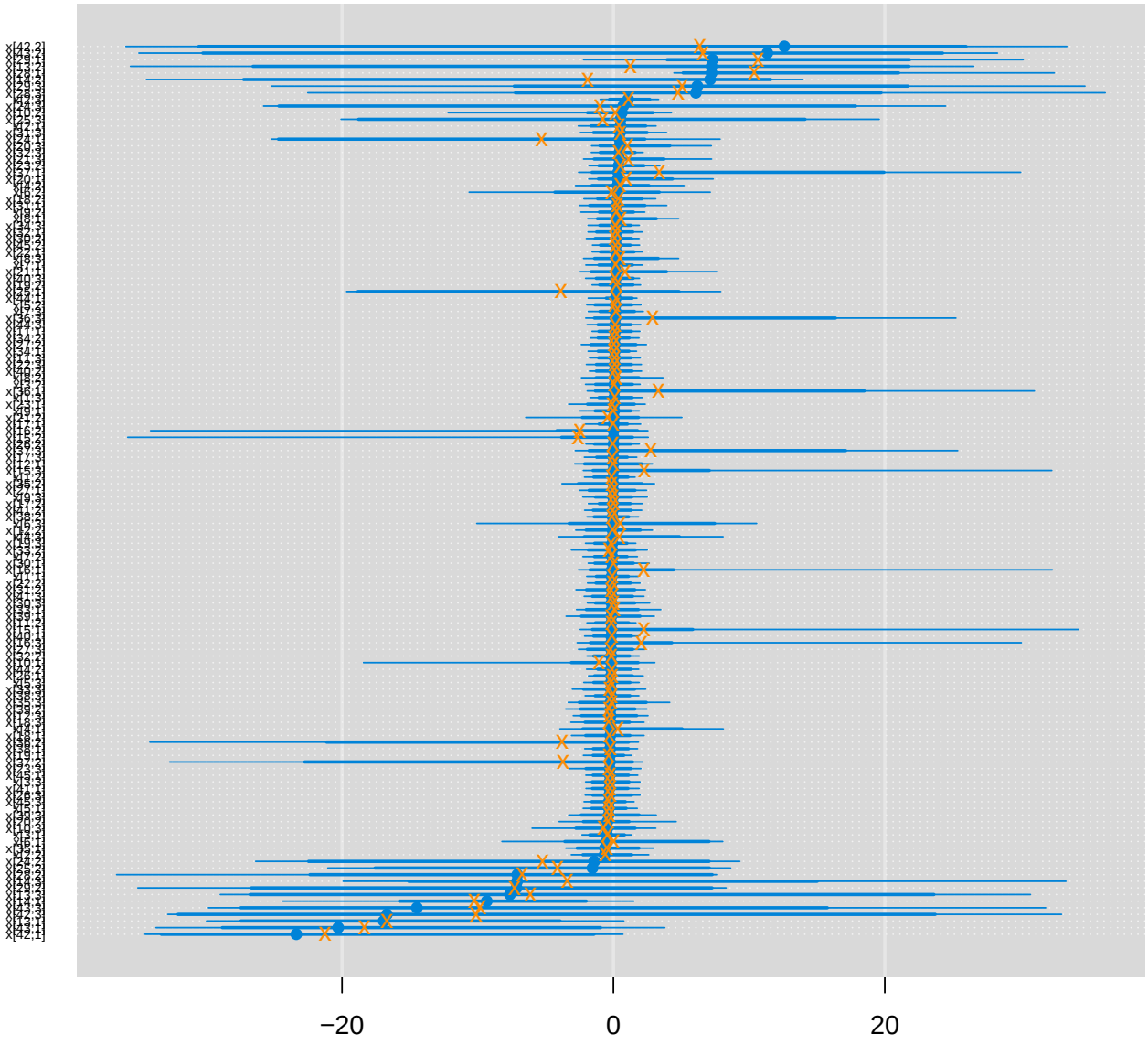

parameters delta
delta[2,3]
delta[23,3]
delta[27,3]
delta[23,2]
delta[12,3]
delta[35,3]
delta[18,3]
delta[37,2]
delta[14,3]
delta[39,2]
delta[41,1]
delta[16,3]
delta[37,3]
delta[14,1]
delta[39,3]
delta[18,2]
delta[33,1]
delta[23,1]
delta[8,2]
delta[2,2]
delta[10,2]
delta[10,1]
delta[25,2]
delta[12,2]
delta[41,2]
delta[29,1]
delta[2,1]
delta[39,1]
delta[25,1]
delta[29,3]
delta[4,3]
delta[14,2]
delta[27,1]
delta[31,1]
delta[27,2]
delta[8,1]
delta[4,2]
delta[31,2]
delta[45,2]
delta[31,3]
delta[18,1]
delta[29,2]
delta[6,2]
delta[25,3]
delta[45,1]
delta[8,3]
delta[6,1]
delta[4,1]
delta[16,1]
delta[12,1]
delta[43,1]
delta[20,1]
delta[43,3]
delta[6,3]
delta[21,1]
delta[16,2]
delta[41,3]
delta[43,2]
delta[21,2]
delta[10,3]
delta[35,2]
delta[33,2]
delta[37,1]
delta[35,1]
delta[33,3]
delta[20,2]
delta[21,3]
delta[45,3]
delta[20,3]
−20
−15
−10
−5
0
5
10
15

d (pooled treatment effects across trials)




parameters d
d[3,3]
d[8,2]
d[2,3]
d[9,2]
d[5,3]
d[5,1]
d[6,2]
d[8,3]
d[6,1]
d[4,1]
d[3,2]
d[3,1]
d[4,2]
d[5,2]
d[7,3]
d[9,1]
d[2,1]
d[2,2]
d[4,3]
d[7,1]
d[9,3]
d[6,3]
d[8,1]
d[7,2]
−2
0
2
4

x (latent variables)

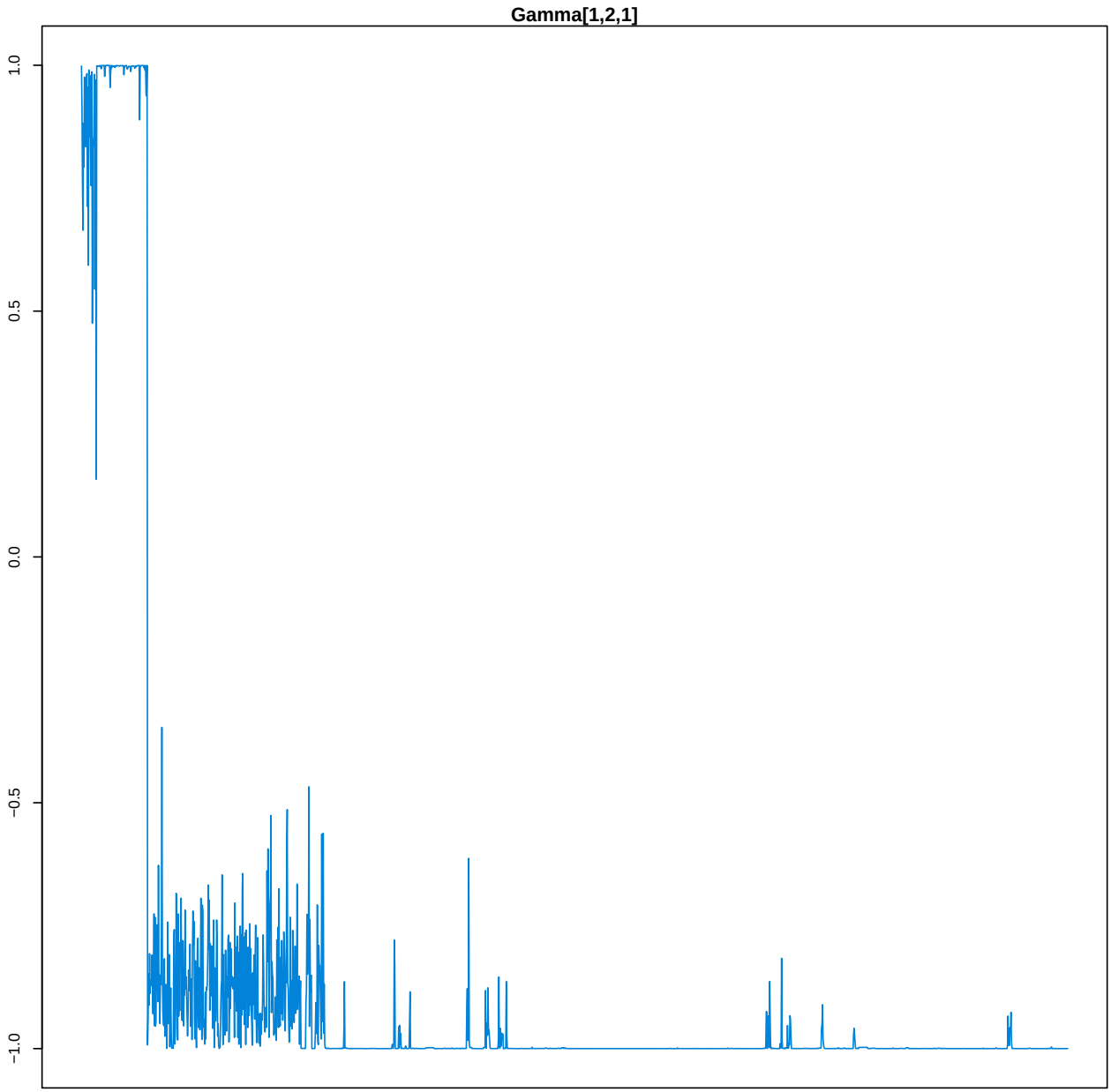


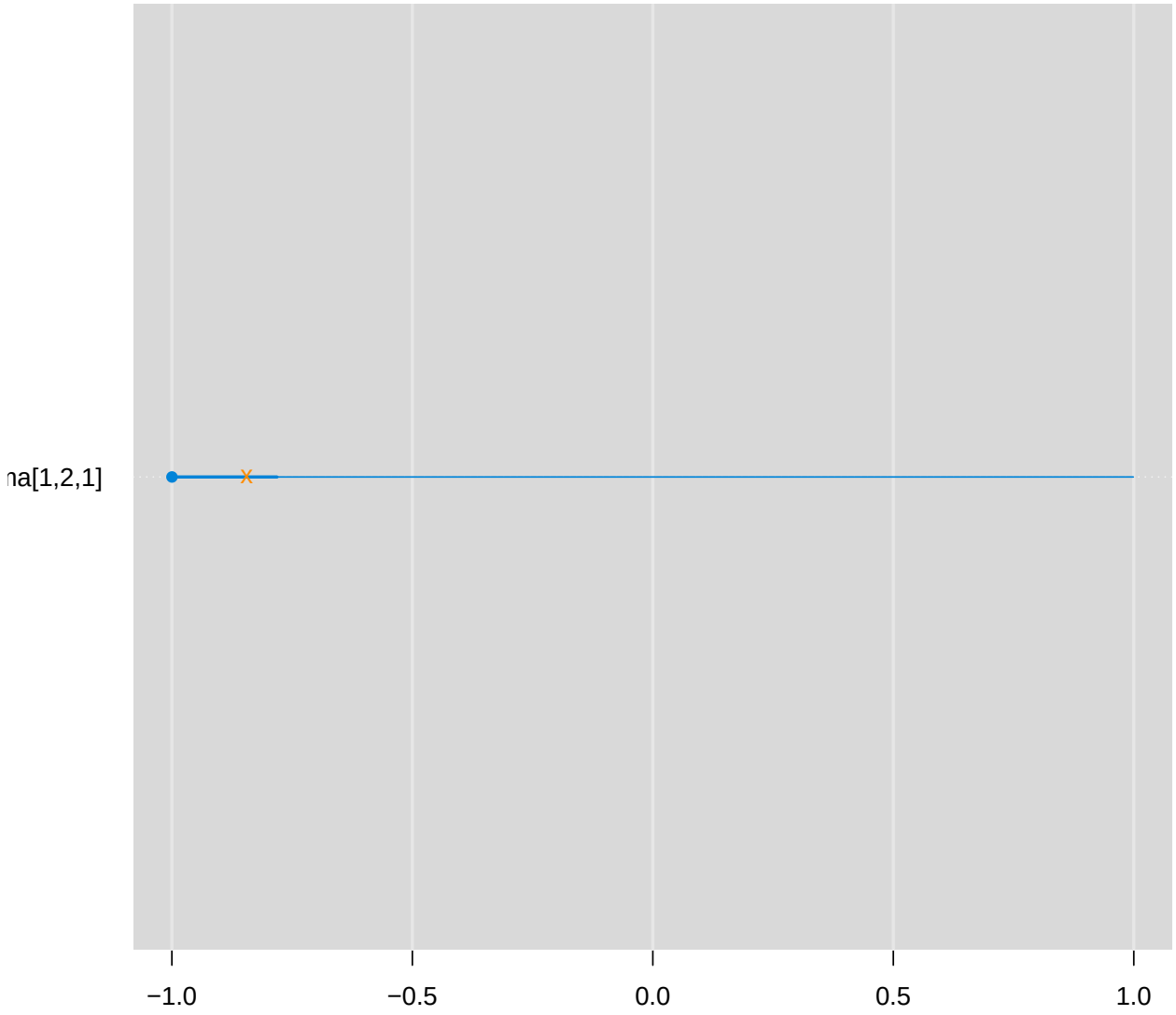
Using *only complete data* for the first two outcomes from Achana et al. (2014)

All the latent variables are estimated, tha is, we do not use the imputation algorithm.

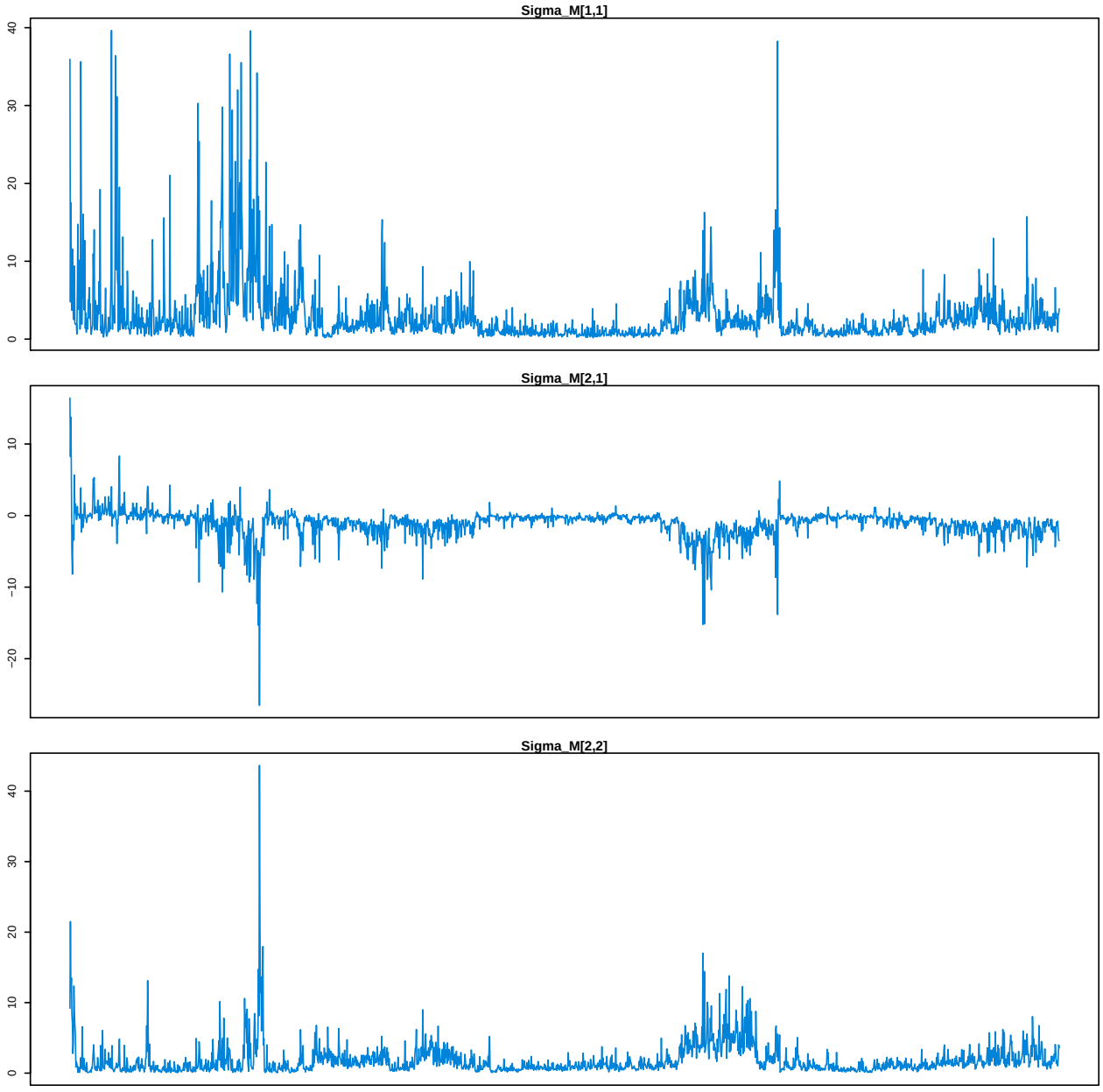
$\boldsymbol{\Gamma}$ (outcome copula correlation matrix)

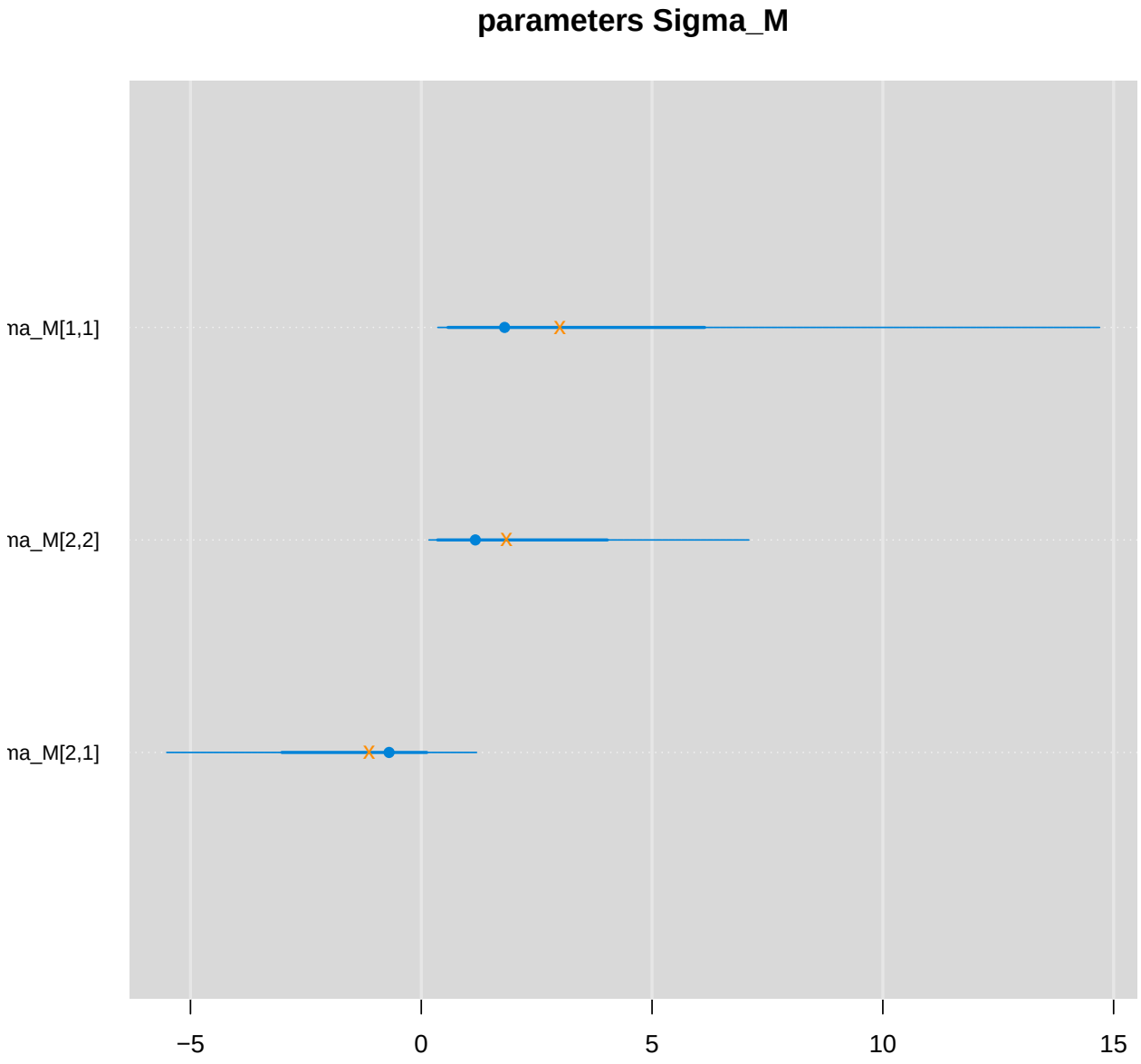
Here, the $\boldsymbol{\Gamma}$ matrix is estimated.

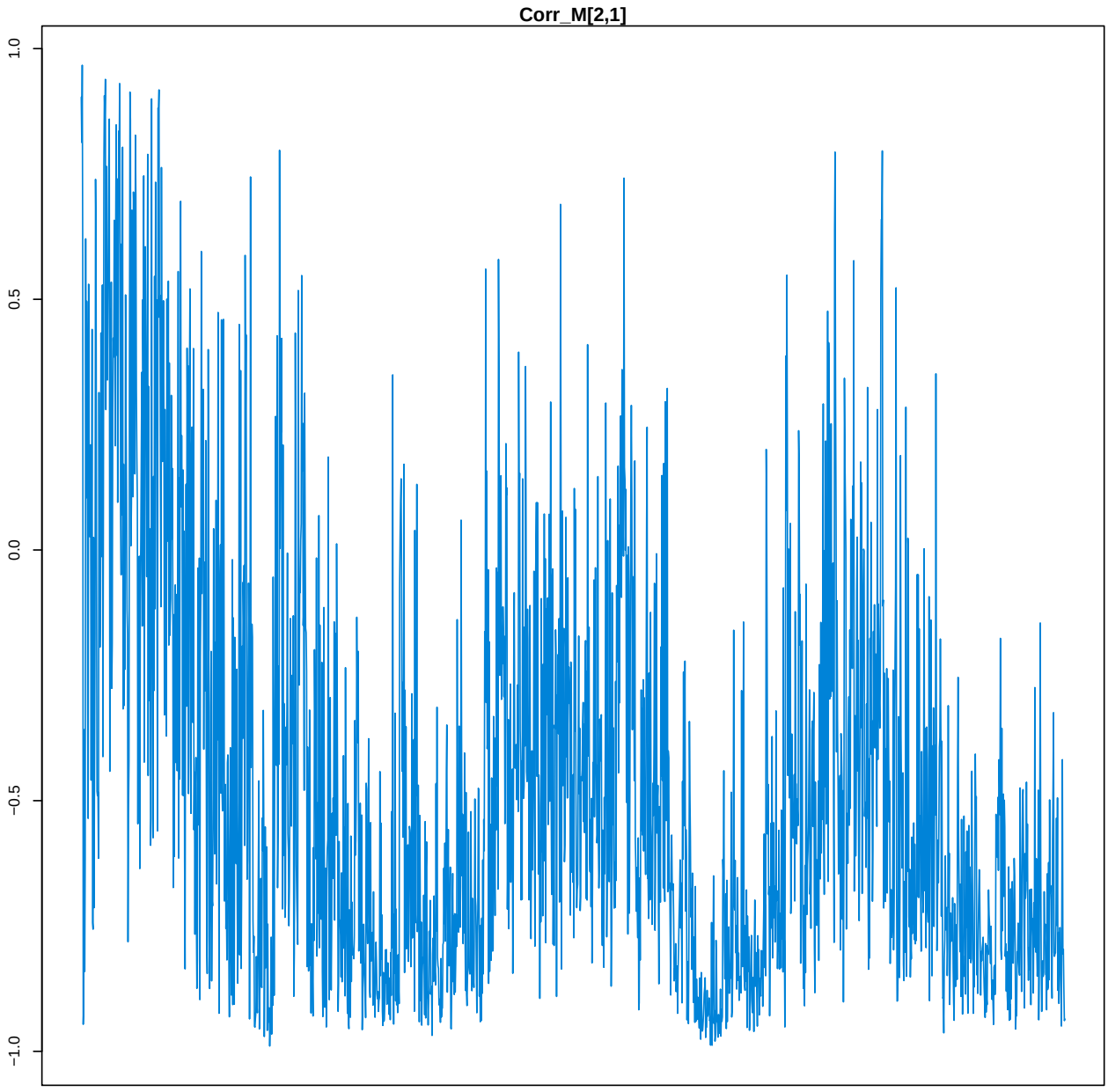

Gamma[1,2,1]
1.0
0.5
0.0
−0.5
−1.0

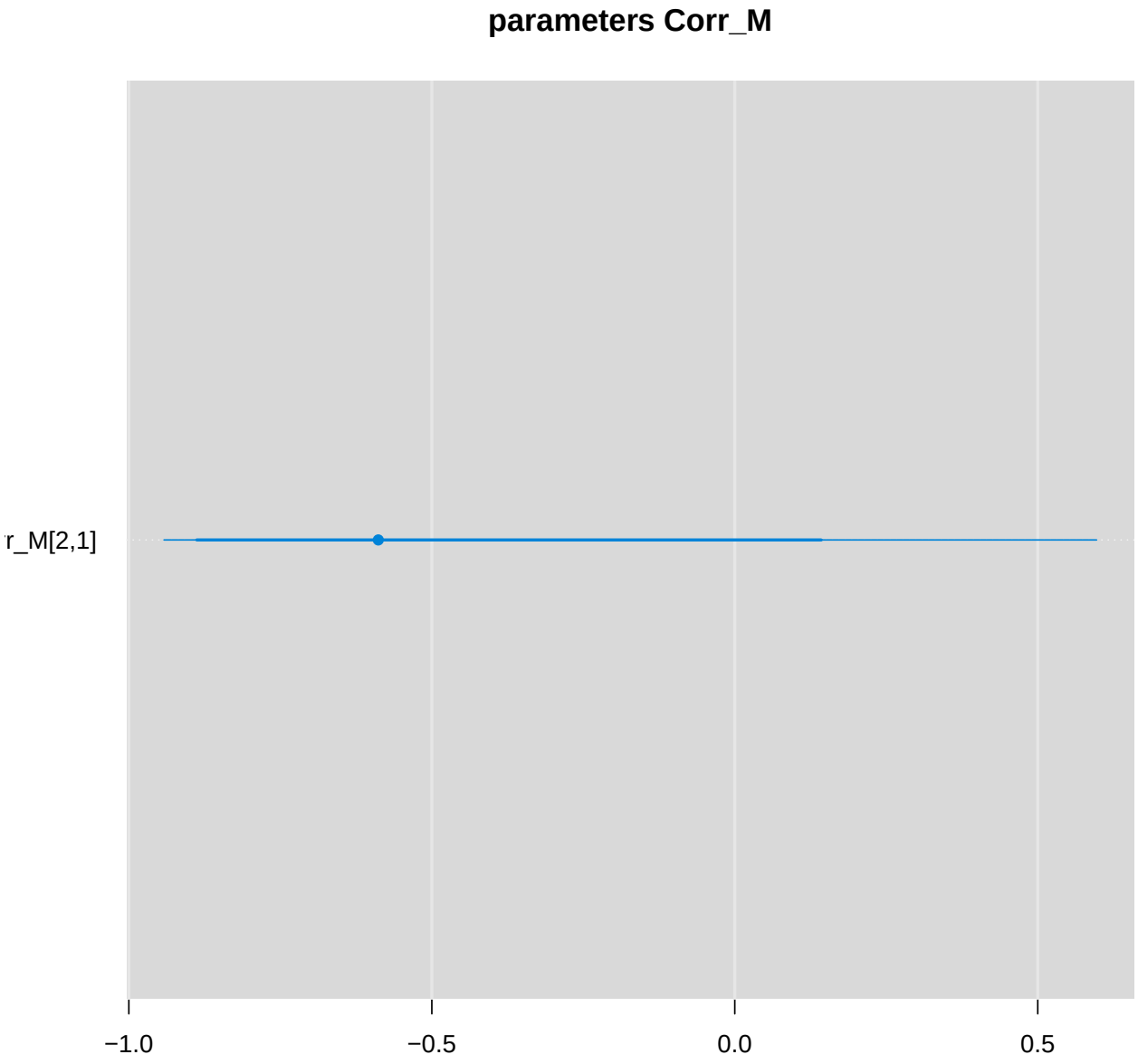

parameters Gamma
ıa[1,2,1]
−1.0
−0.5
0.0
0.5
1.0

Σ_M (common between-study covariance structure)

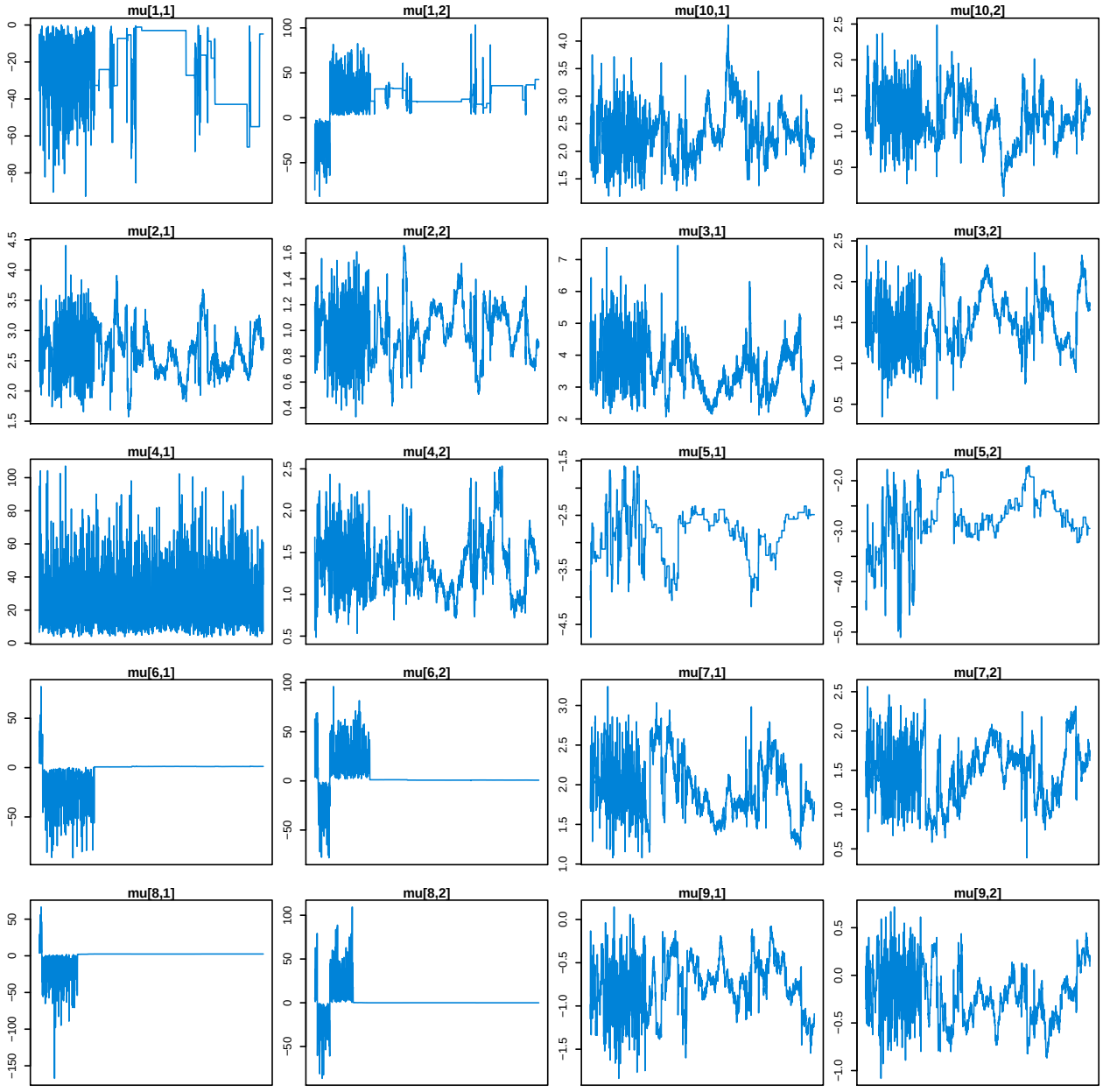


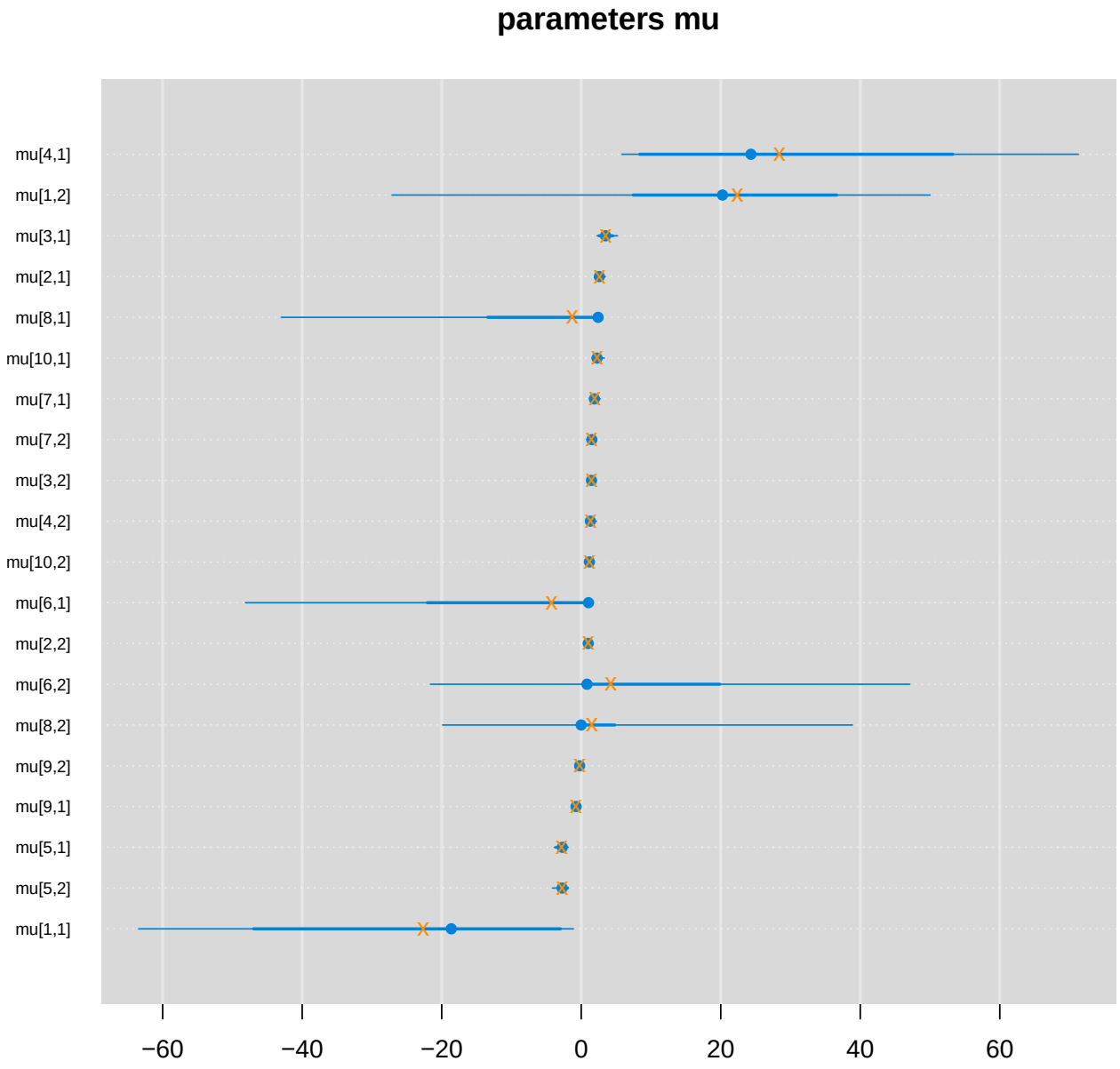

parameters Sigma_M
na_M[1,1]
na_M[2,2]
na_M[2,1]
−5
0
5
10
15


Corr_M[2,1]
1.0
0.5
0.0
−0.5
−1.0

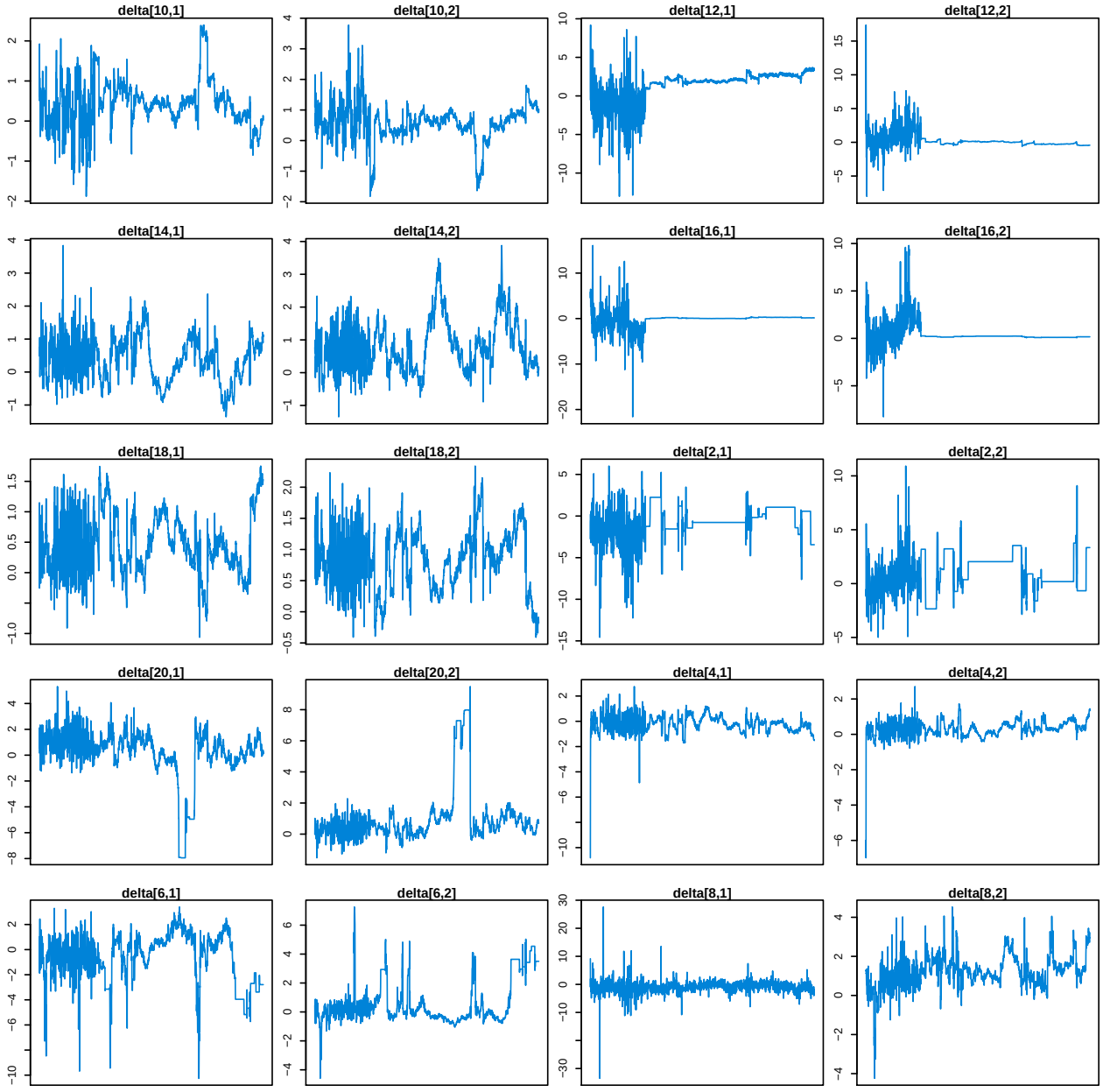

parameters Corr_M
r_M[2,1]
−1.0
−0.5
0.0
0.5

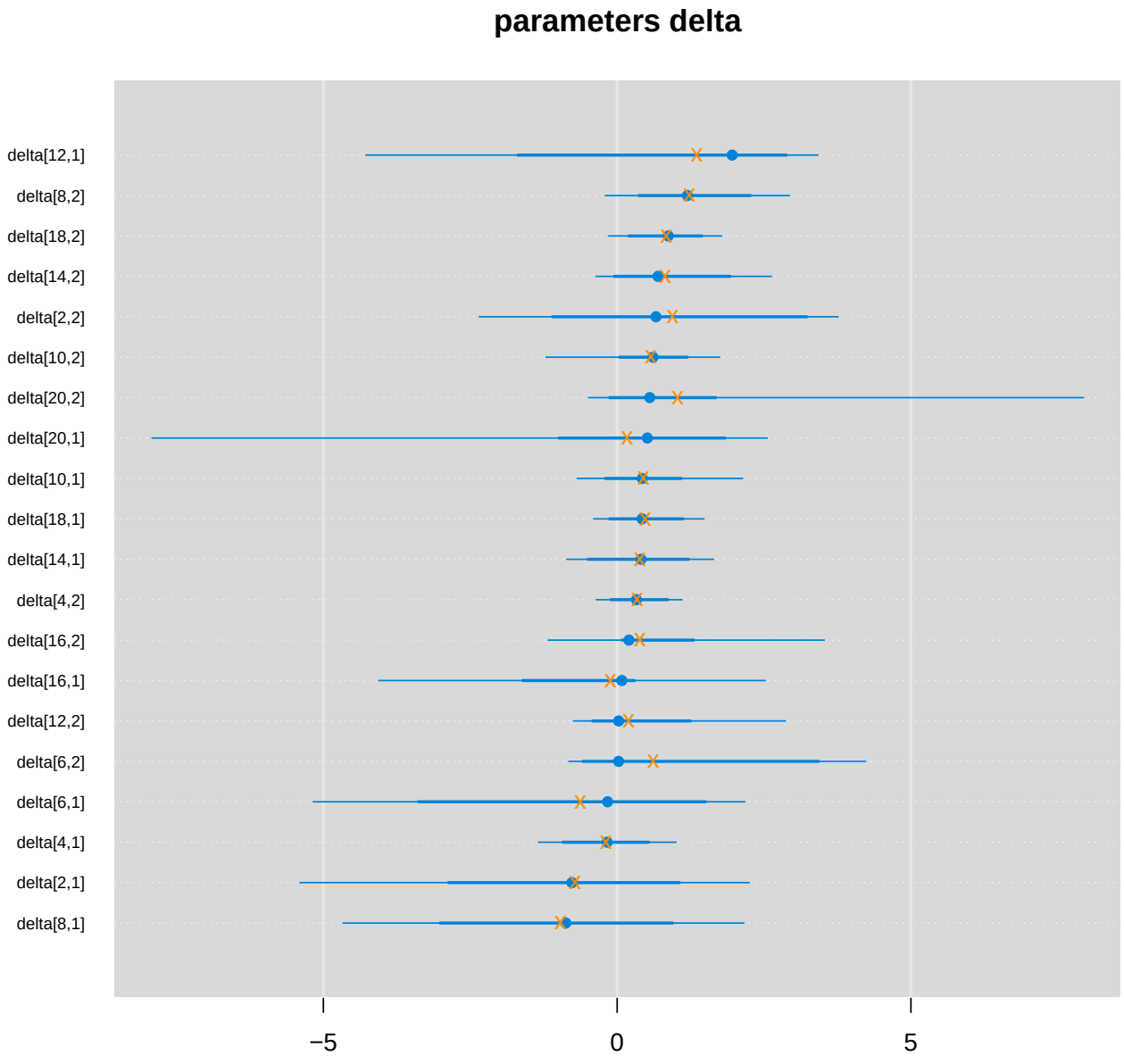
μ (study-specific baseline effects)



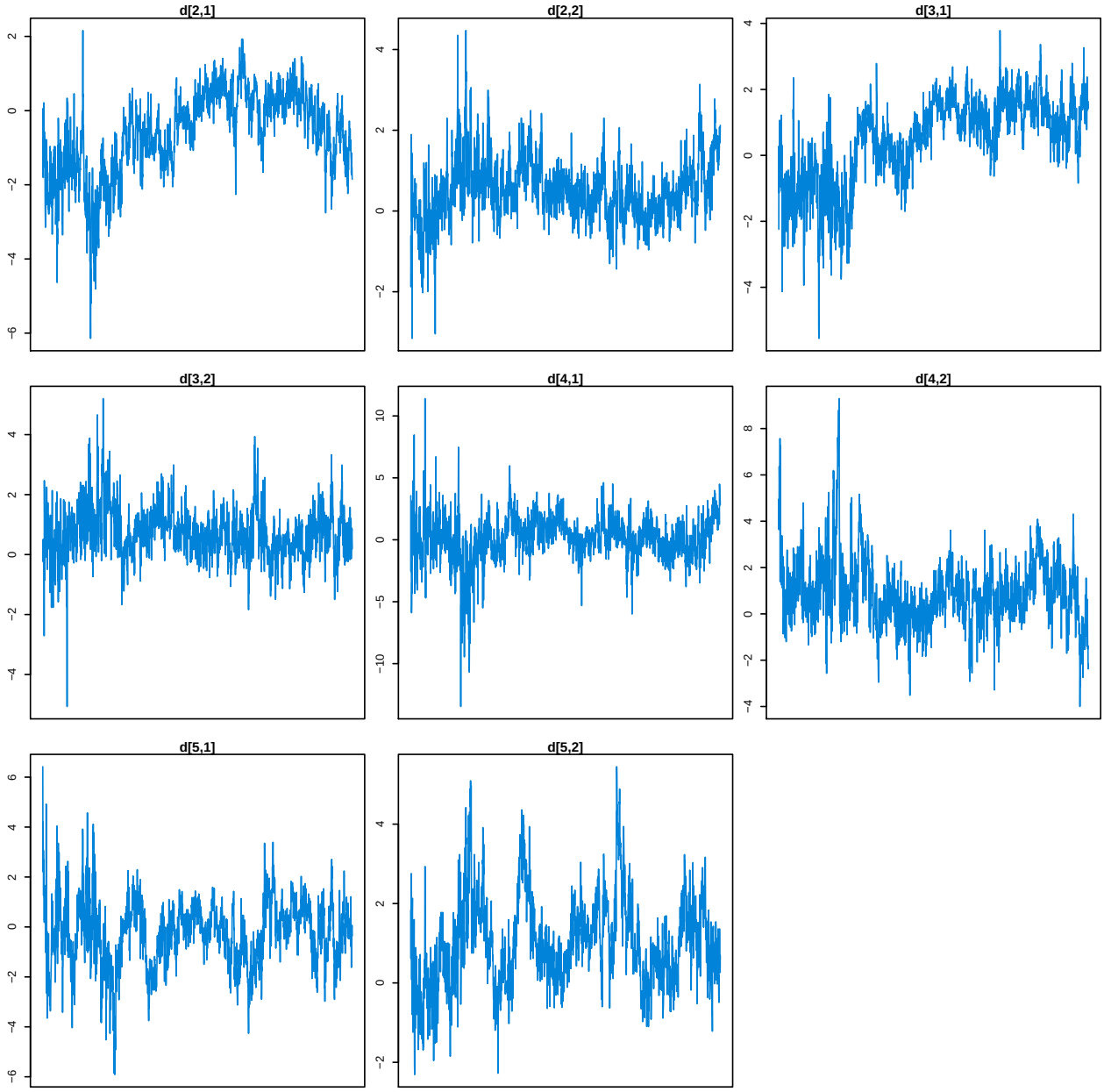

parameters mu
mu[4,1]
mu[1,2]
mu[3,1]
mu[2,1]
mu[8,1]
mu[10,1]
mu[7,1]
mu[7,2]
mu[3,2]
mu[4,2]
mu[10,2]
mu[6,1]
mu[2,2]
mu[6,2]
mu[8,2]
mu[9,2]
mu[9,1]
mu[5,1]
mu[5,2]
mu[1,1]
−60
−40
−20
0
20
40
60

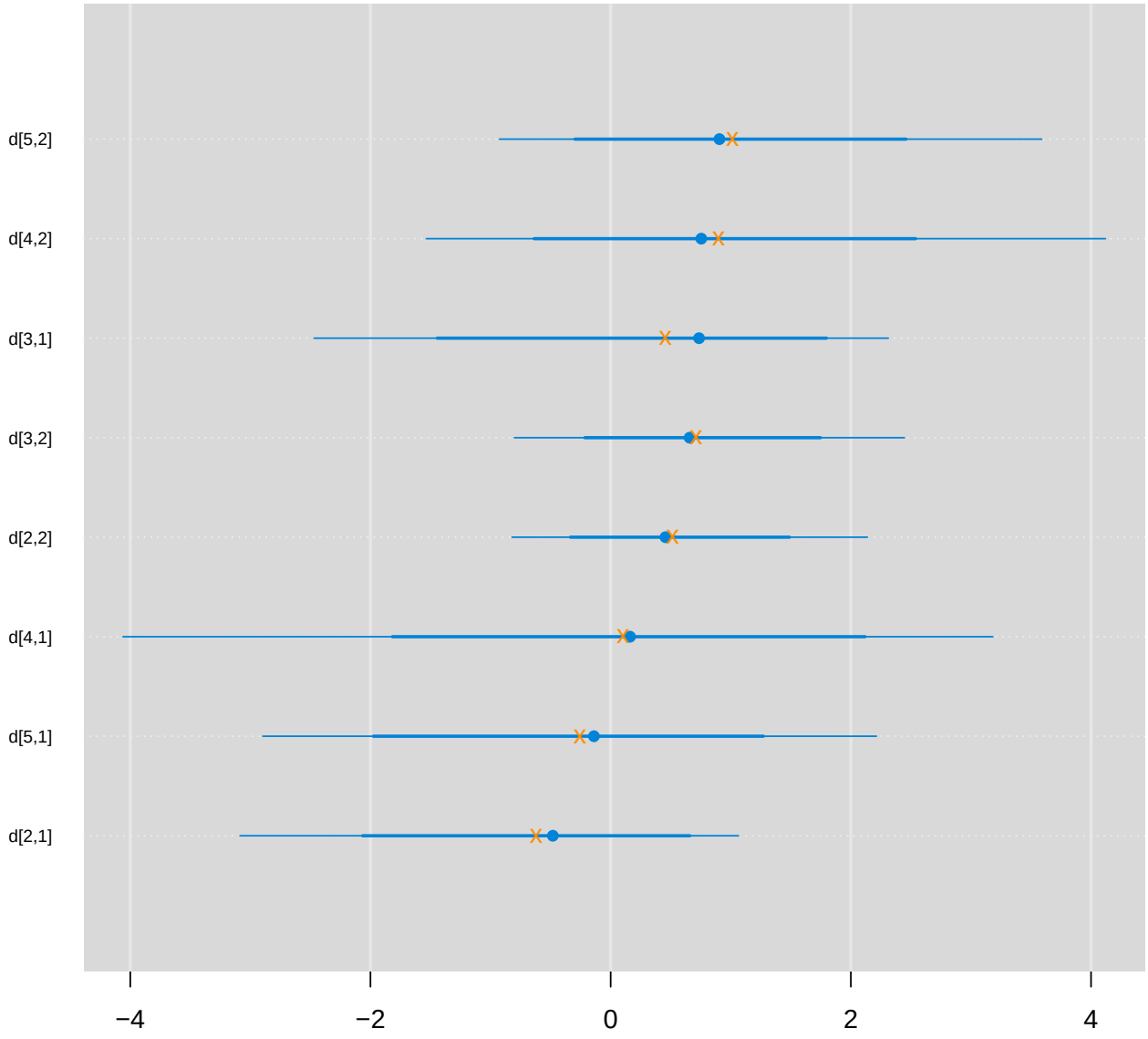
δ (study-specific [random] treatment effects)



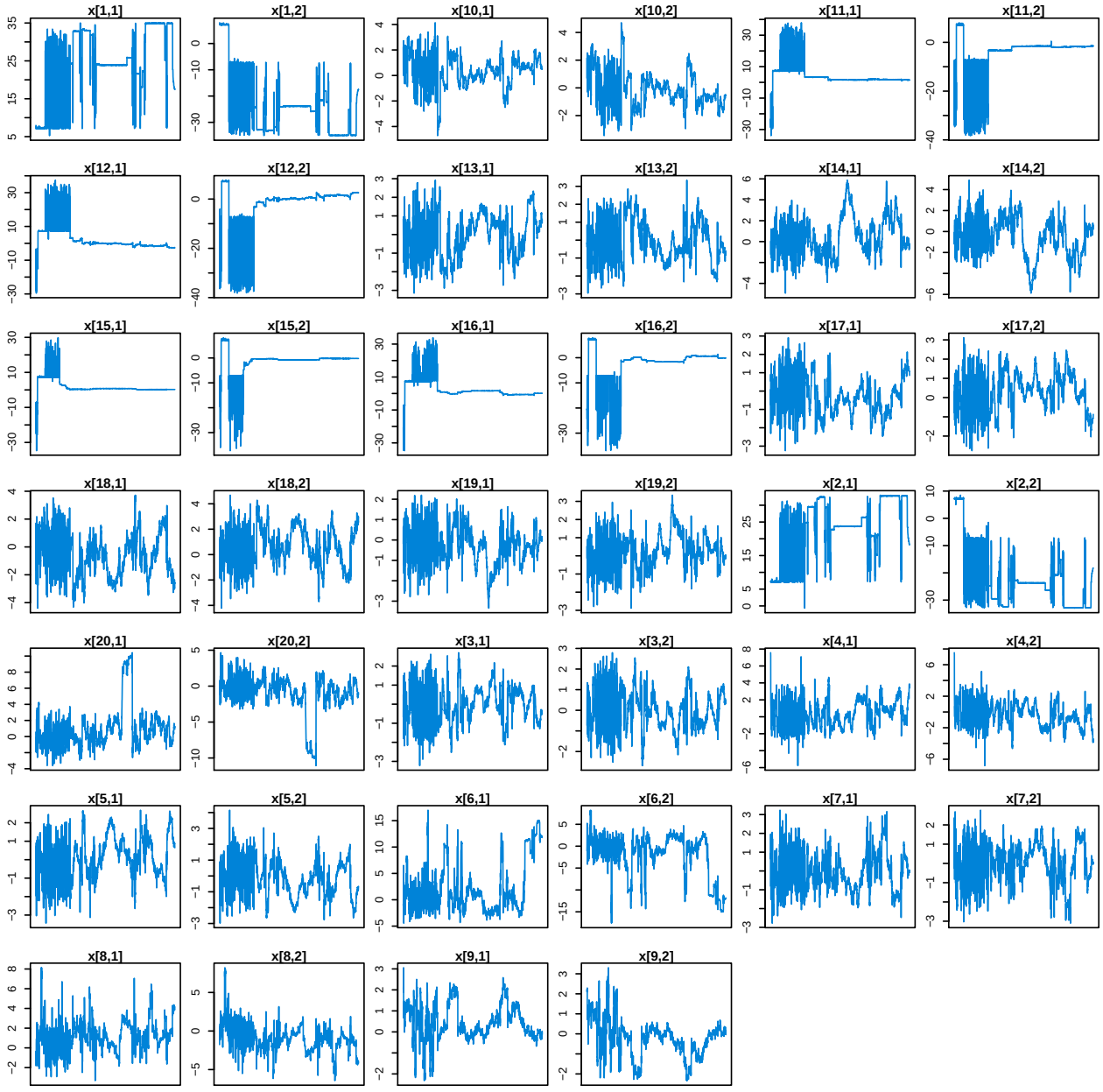

parameters delta
delta[12,1]
delta[8,2]
delta[18,2]
delta[14,2]
delta[2,2]
delta[10,2]
delta[20,2]
delta[20,1]
delta[10,1]
delta[18,1]
delta[14,1]
delta[4,2]
delta[16,2]
delta[16,1]
delta[12,2]
delta[6,2]
delta[6,1]
delta[4,1]
delta[2,1]
delta[8,1]
−5
0
5

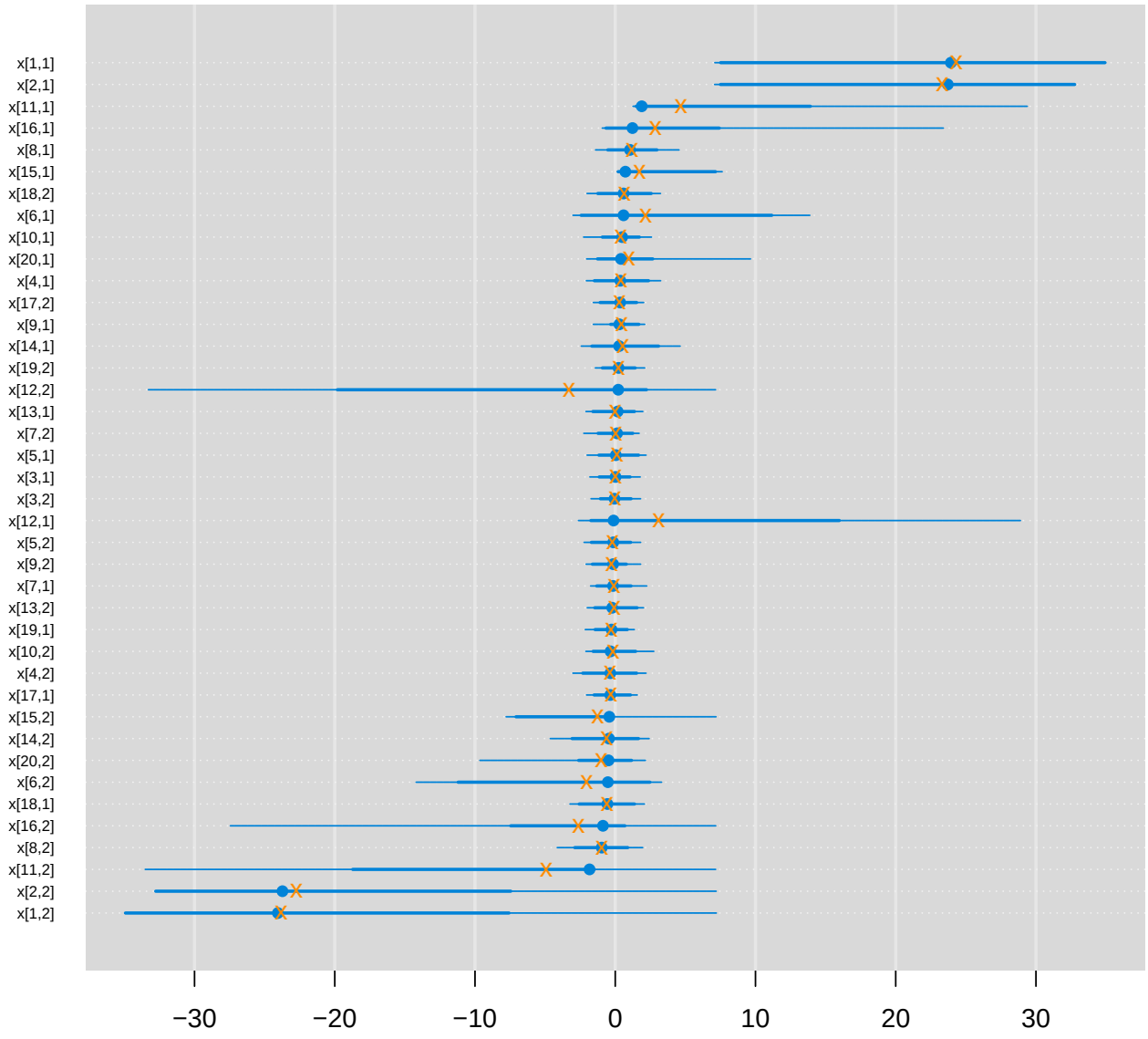
d (pooled treatment effects across trials)




parameters d
d[5,2]
d[4,2]
d[3,1]
d[3,2]
d[2,2]
d[4,1]
d[5,1]
d[2,1]
−4
−2
0
2
4

x (latent variables)




parameters x
x[1,1]
x[2,1]
x[11,1]
x[16,1]
x[8,1]
x[15,1]
x[18,2]
x[6,1]
x[10,1]
x[20,1]
x[4,1]
x[17,2]
x[9,1]
x[14,1]
x[19,2]
x[12,2]
x[13,1]
x[7,2]
x[5,1]
x[3,1]
x[3,2]
x[12,1]
x[5,2]
x[9,2]
x[7,1]
x[13,2]
x[19,1]
x[10,2]
x[4,2]
x[17,1]
x[15,2]
x[14,2]
x[20,2]
x[6,2]
x[18,1]
x[16,2]
x[8,2]
x[11,2]
x[2,2]
x[1,2]
−30
−20
−10
0
10
20
30