

Validation process for LETICIA

The epidemiology research group, EAFIT

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Chapter 1. Extension number1

1.1. Basic information

The extension to be validated consists of the time series from the data1 to the 18. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was 1000.

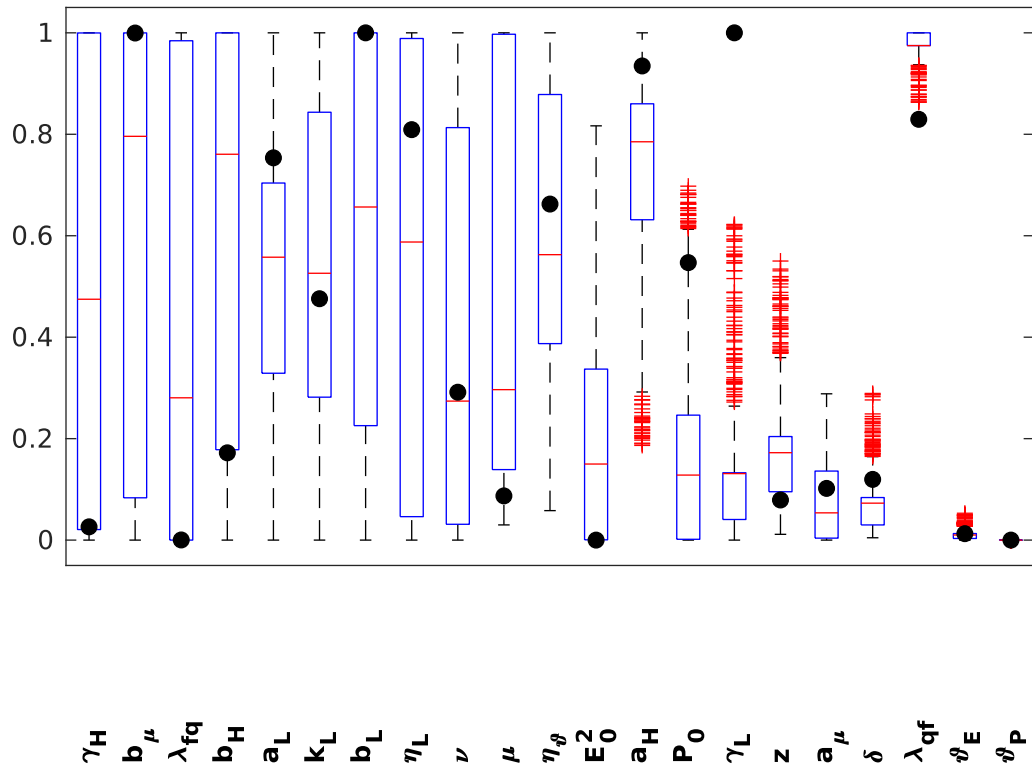
1.2. Estimated parameters with their intervals

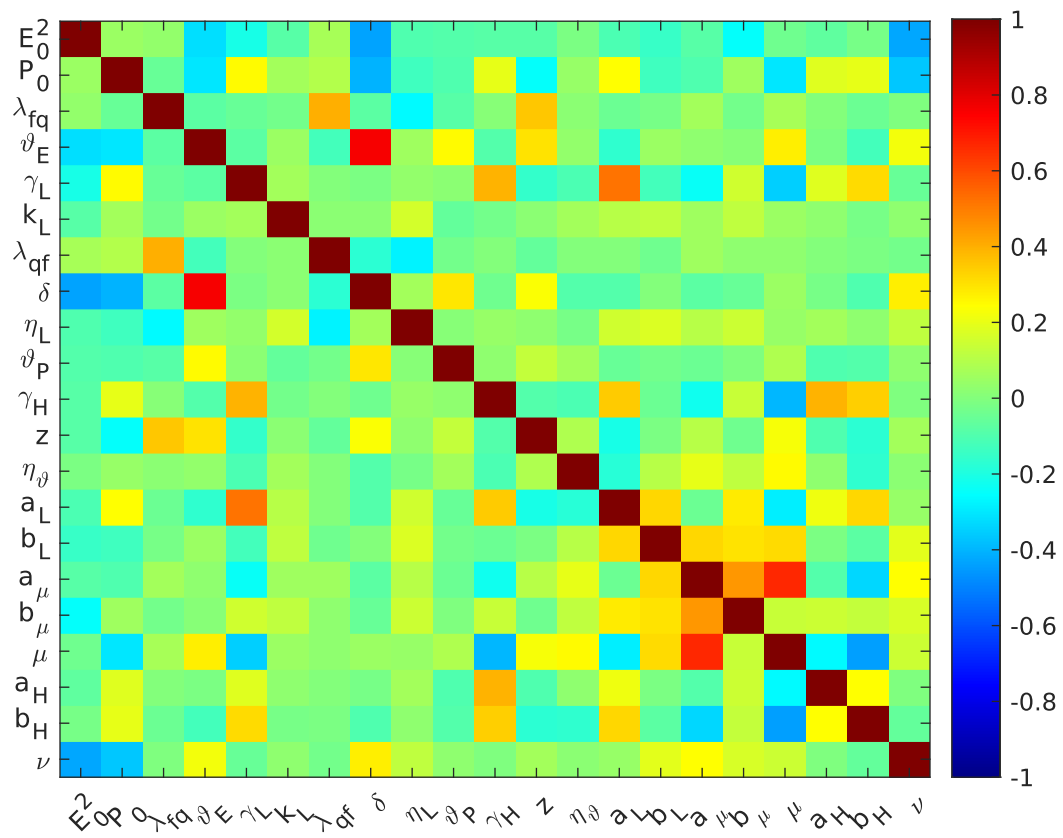
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

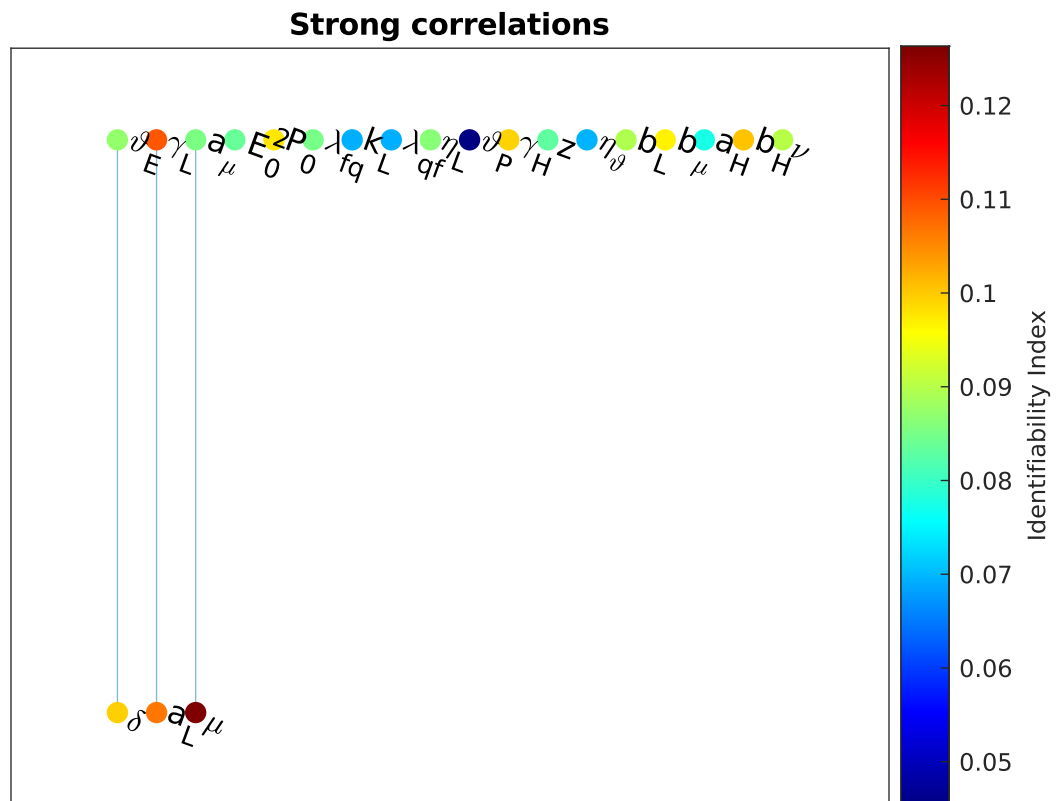
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
E^2_0	'0'	'0'	'299.894'	'0'	'0.0839'
P_0	'176.6135'	'230.1006'	'51.2681'	'218.7967'	'0.0977'
λ_{fq}	'0'	'0.0005'	'0.2805'	'0.0003'	'0.0852'
ϑ_E	'0.0108'	'0.0197'	'0.01'	'0.0127'	'0.0874'
γ_L	'0.565'	'1'	'0.1311'	'1'	'0.1093'
k_L	'1.4334'	'9.5613'	'5.7341'	'5.2825'	'0.0694'
λ_{qf}	'0'	'0.9025'	'0.9748'	'0.8295'	'0.0692'
δ	'0.0157'	'0.0209'	'0.0109'	'0.018'	'0.0995'
η_L	'0.3012'	'0.9441'	'0.5876'	'0.8091'	'0.0864'
ϑ_P	'0'	'0'	'0'	'0'	'0.0455'
γ_H	'0'	'0.0588'	'0.4748'	'0.0262'	'0.0994'
z	'2.0363'	'2.8263'	'5.1687'	'2.3718'	'0.0832'
η_{ϑ}	'0.6368'	'0.6831'	'0.5627'	'0.6624'	'0.0695'
a_L	'10.7734'	'11.8584'	'8.8075'	'11.5502'	'0.1065'
b_L	'13.0854'	'15'	'10.193'	'14.9996'	'0.0896'
a_{μ}	'1.3615'	'2.5479'	'1.752'	'2.427'	'0.0855'
b_{μ}	'5.4308'	'15'	'12.1435'	'14.9946'	'0.0967'
μ	'0.0733'	'0.1038'	'0.2966'	'0.0871'	'0.1263'
a_H	'7.2912'	'15'	'11.9932'	'14.0858'	'0.0776'
b_H	'1'	'12.3715'	'11.6488'	'3.4087'	'0.1007'
ν	'116.1907'	'462.1111'	'137.0144'	'145.7589'	'0.09'

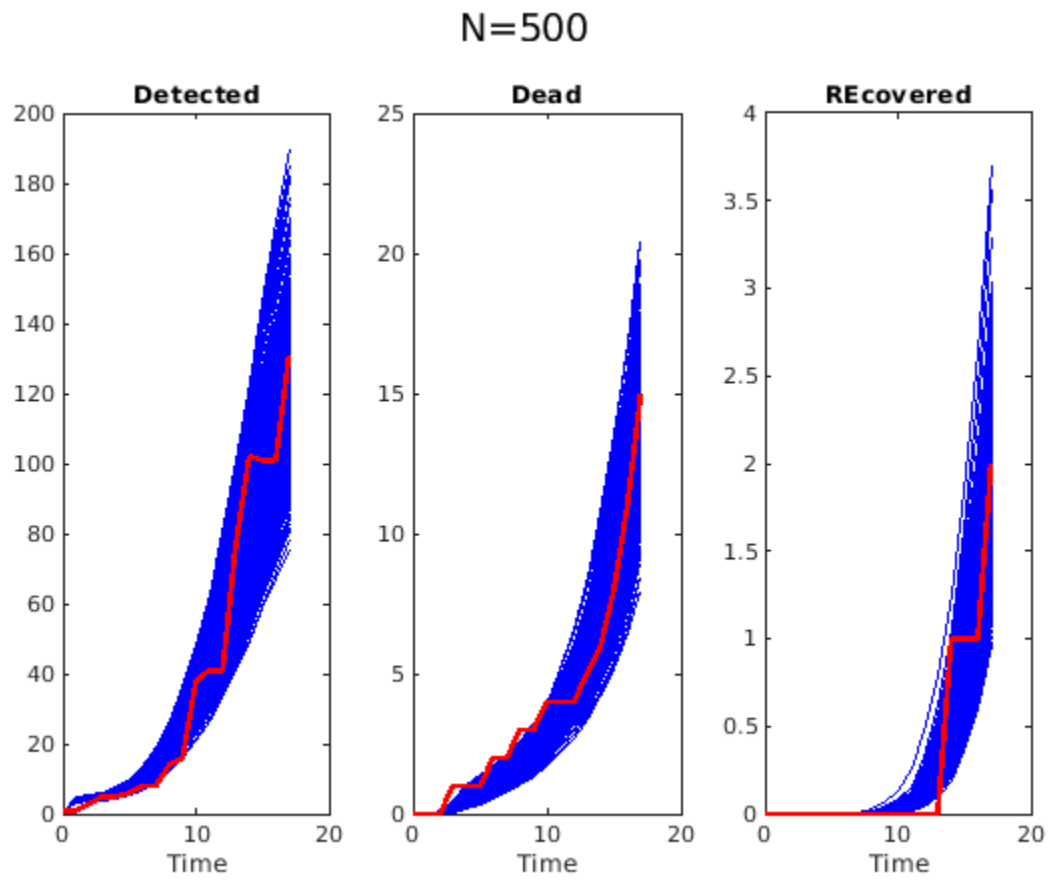
1.3. Identifiability analysis







1.4. Uncertainty analysis



Chapter 2. Extension number2

2.1. Basic information

The extension to be validated consists of the time series from the data18 to the 46. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

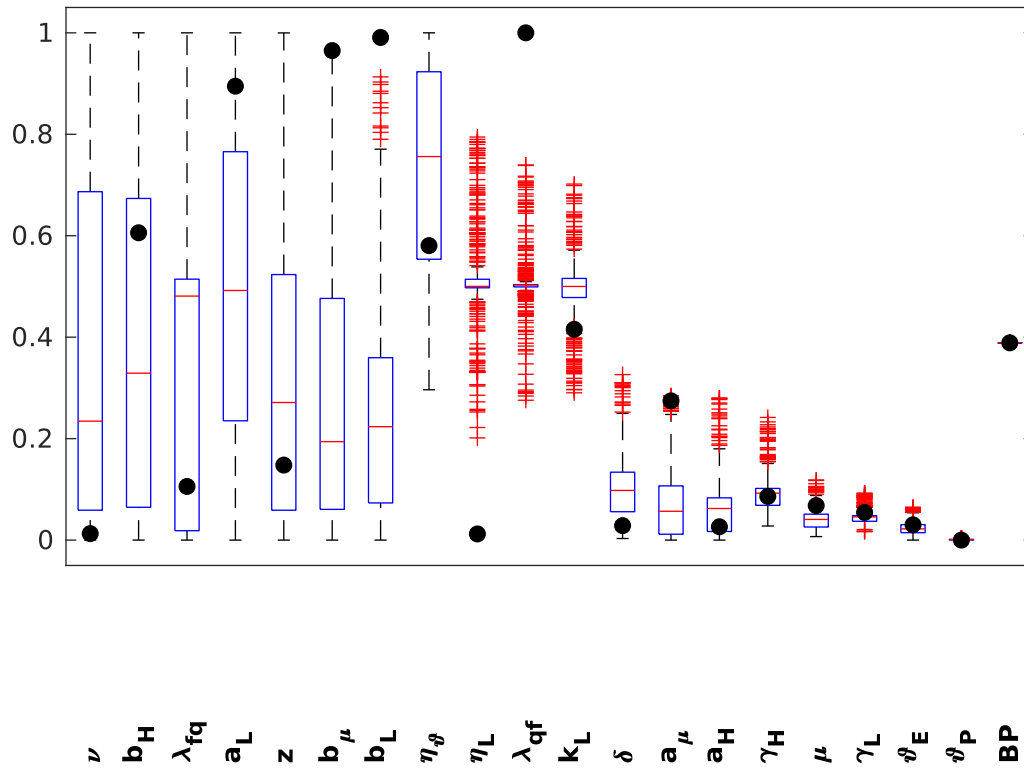
2.2. Estimated parameters with their intervals

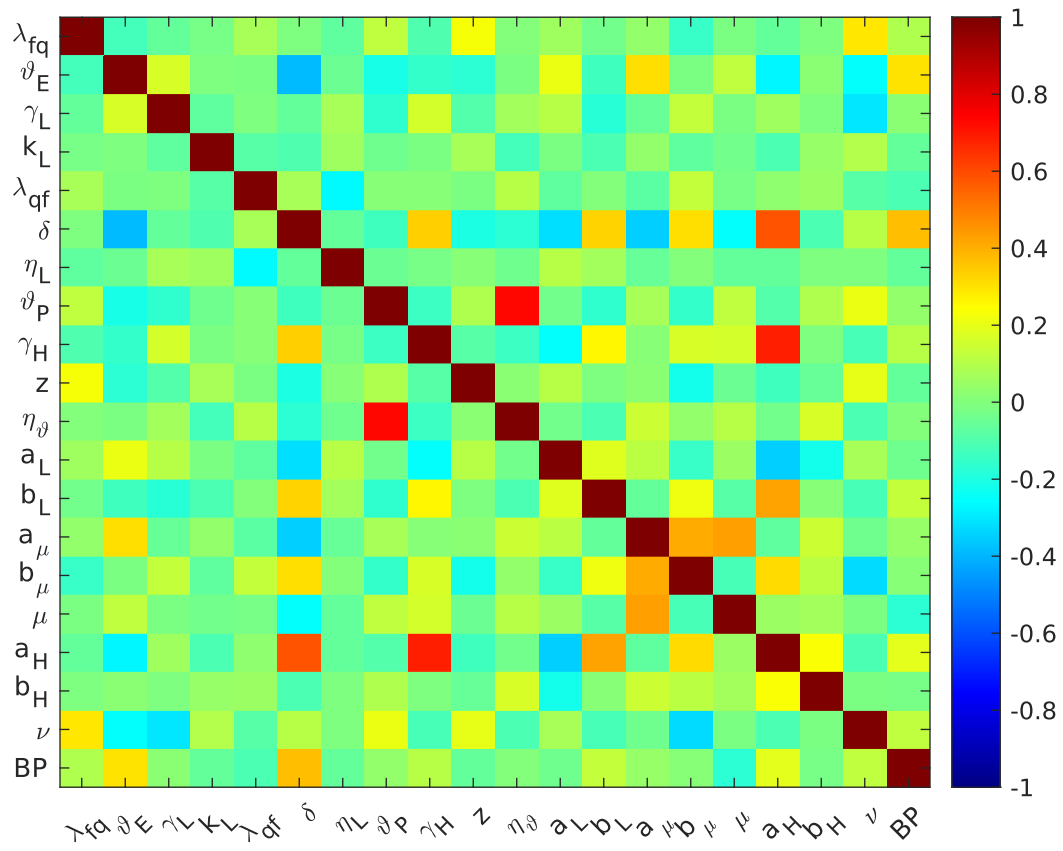
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

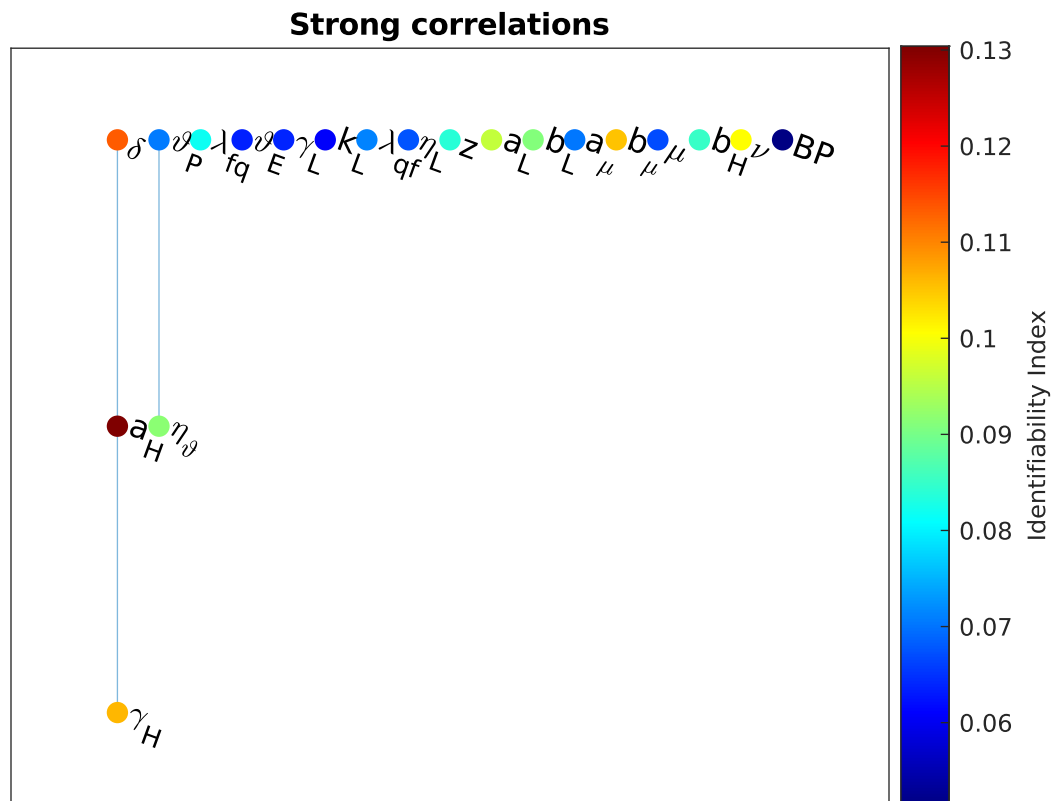
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0048'	'0.238'	'0.481'	'0.1058'	'0.0817'
ϑ_E	'0.0273'	'0.0469'	'0.0222'	'0.0301'	'0.0636'
γ_L	'0.0413'	'0.0688'	'0.0459'	'0.0546'	'0.064'
k_L	'1.162'	'9.1'	'5.5002'	'4.74'	'0.0611'
λ_{qf}	'0'	'1'	'0.5028'	'1'	'0.0715'
δ	'0.0002'	'0.0046'	'0.0147'	'0.0043'	'0.1133'
η_L	'0.0014'	'0.0274'	'0.5001'	'0.0122'	'0.0677'
ϑ_P	'0'	'0'	'0.0008'	'0'	'0.0707'
γ_H	'0.0403'	'0.1712'	'0.0926'	'0.0862'	'0.1062'
z	'4.388'	'9.7222'	'8.1374'	'4.4365'	'0.084'
η_{ϑ}	'0.5621'	'0.6082'	'0.7561'	'0.5805'	'0.0918'
a_L	'10.3412'	'13.7182'	'7.8892'	'13.5271'	'0.0961'
b_L	'9.9312'	'15'	'4.1405'	'14.8724'	'0.0913'
a_{μ}	'1.8178'	'6.6062'	'1.7981'	'4.8434'	'0.0706'
b_{μ}	'6.7427'	'14.6465'	'3.7351'	'14.5091'	'0.1052'
μ	'0.0413'	'0.07'	'0.0408'	'0.0681'	'0.067'
a_H	'1.1949'	'10.7431'	'1.8725'	'1.3682'	'0.1304'
b_H	'3.882'	'15'	'5.6069'	'9.4819'	'0.0851'
ν	'5.0984'	'19.3646'	'117.2376'	'6.3756'	'0.1007'
BP	'18.4697'	'20.7777'	'18.5'	'18.4999'	'0.0515'

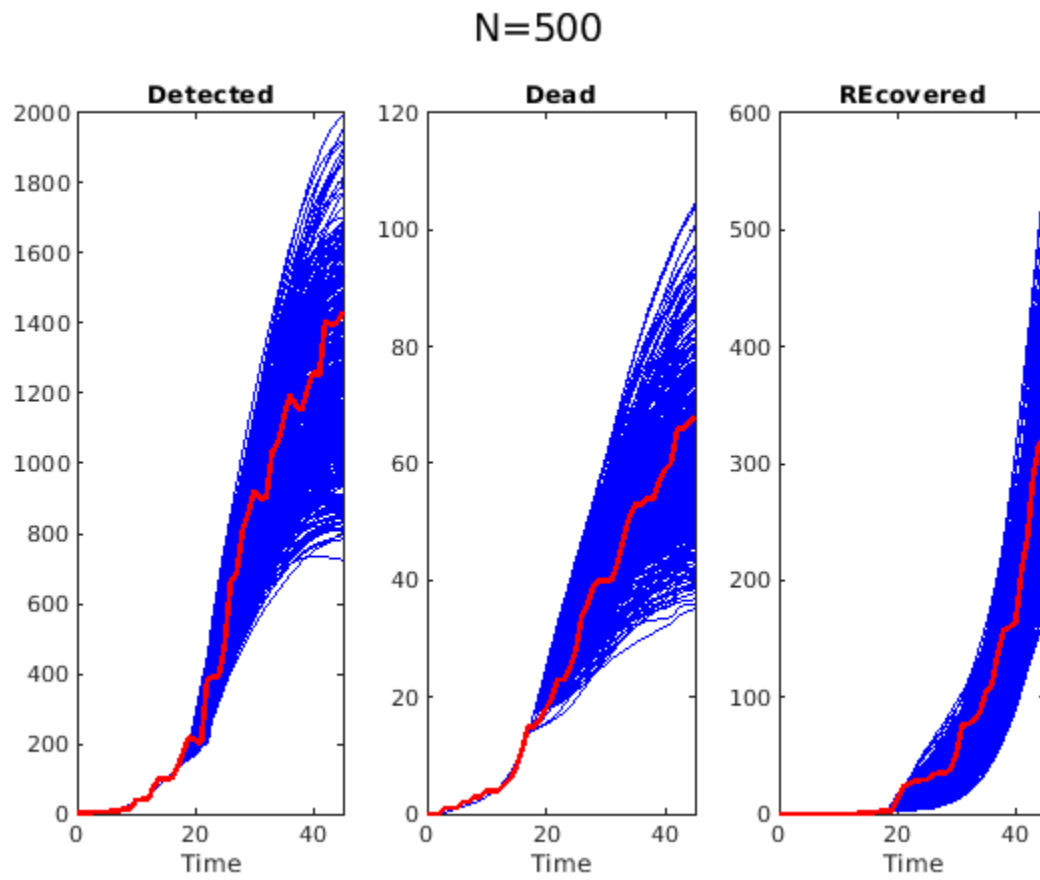
2.3. Identifiability analysis







2.4. Uncertainty analysis



Chapter 3. Extension number3

3.1. Basic information

The extension to be validated consists of the time series from the data46 to the 69. The status of the validation is: COMPLETED.

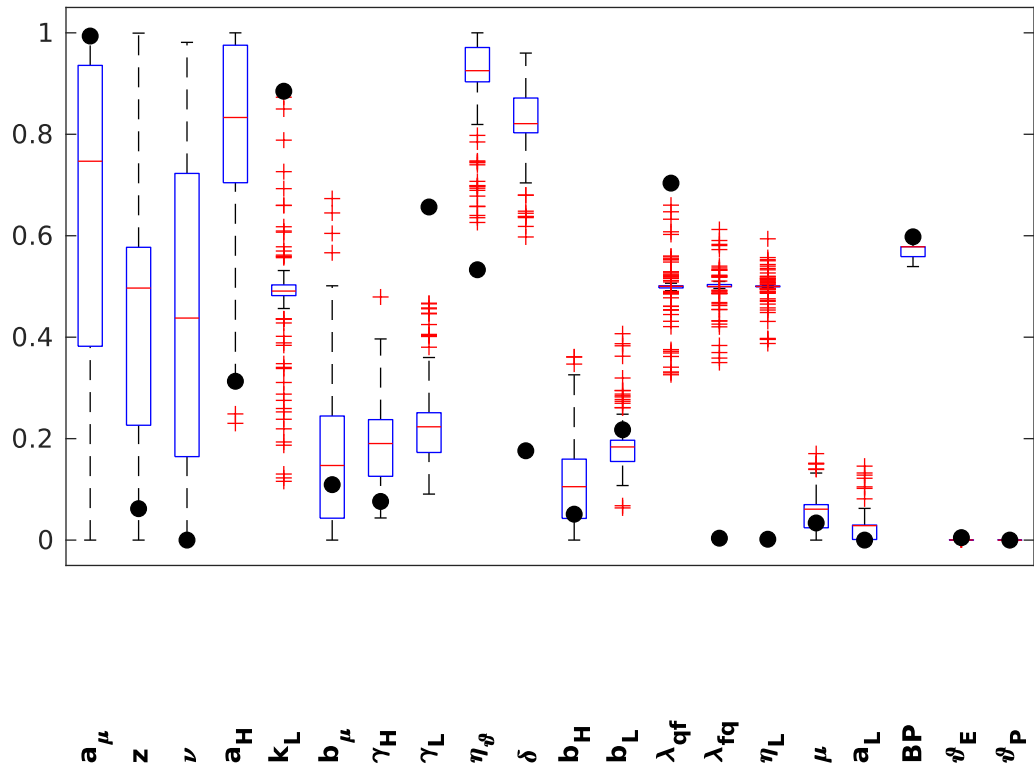
The number of estimations needed to perform the validation was1000.

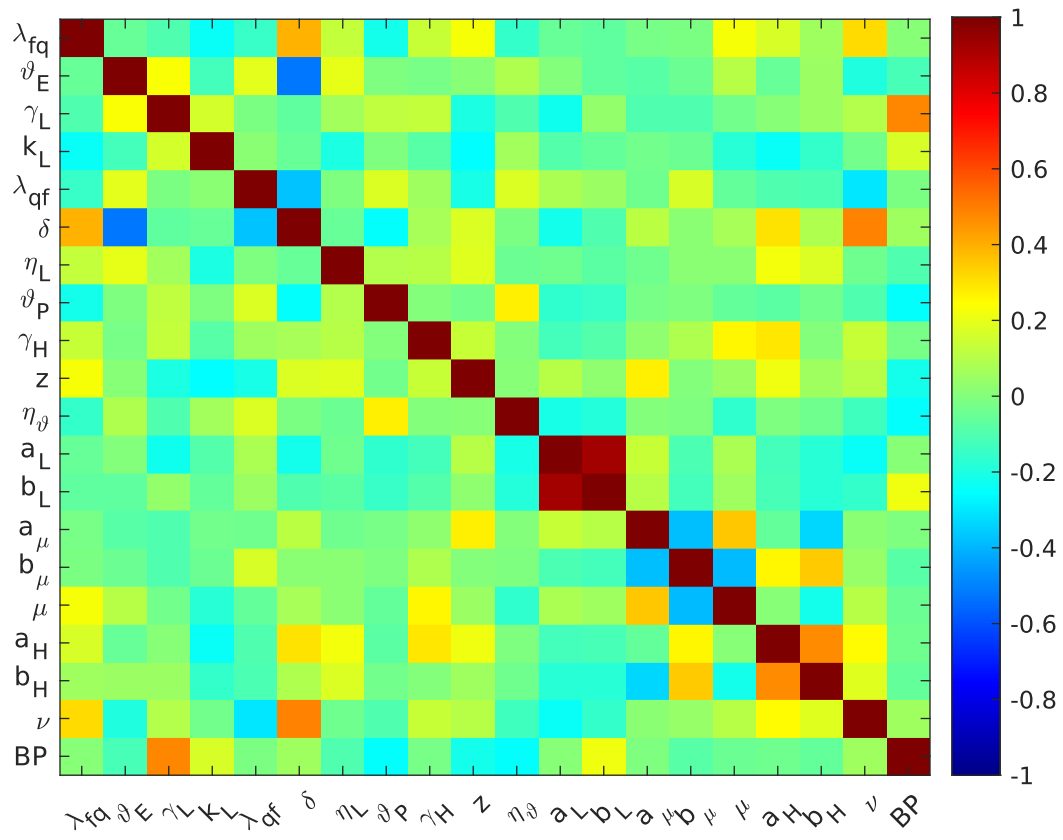
3.2. Estimated parameters with their intervals

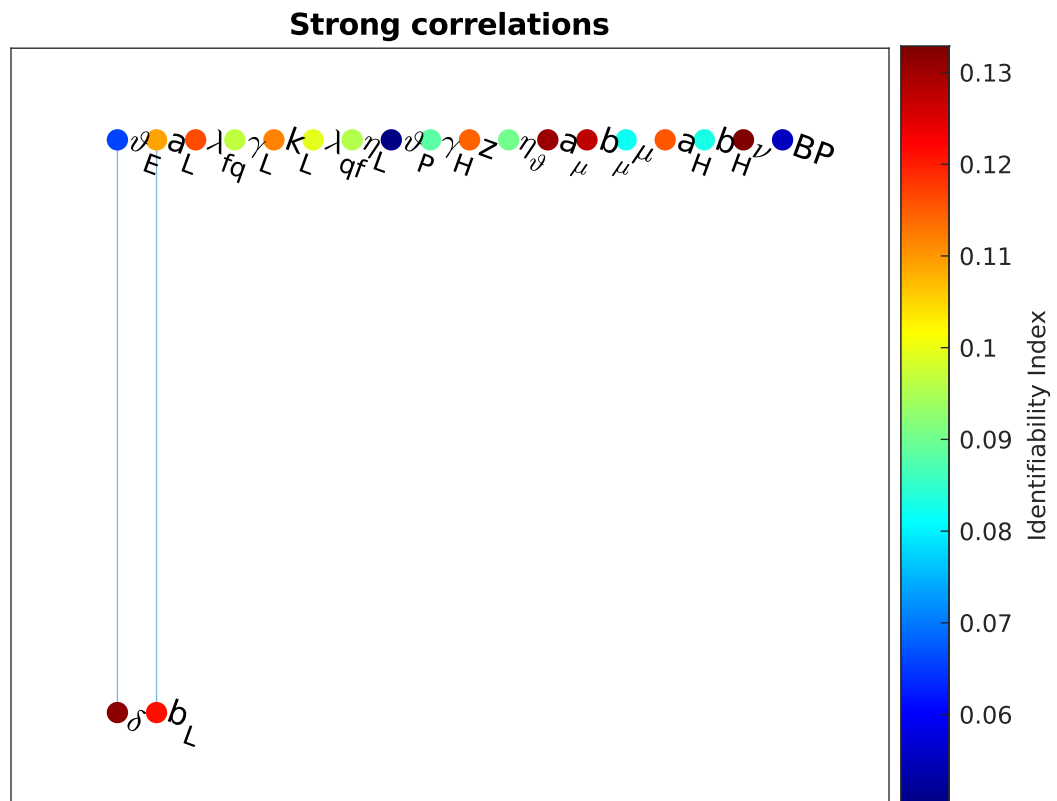
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4429'	'0.5568'	'0.4998'	'0.0038'	'0.1162'
\vartheta_E	'0'	'0.0029'	'0.0003'	'0.0048'	'0.066'
\gamma_L	'0.181'	'0.2657'	'0.2233'	'0.6567'	'0.0964'
k_L	'4.8837'	'5.9529'	'5.4183'	'8.9638'	'0.1117'
\lambda_{qf}	'0.4542'	'0.5464'	'0.5003'	'0.7037'	'0.0995'
\delta	'0.1154'	'0.1308'	'0.1231'	'0.0264'	'0.1317'
\eta_L	'0.4522'	'0.548'	'0.5001'	'0.0017'	'0.0954'
\vartheta_P	'0'	'0'	'0'	'0'	'0.0502'
\gamma_H	'0.1494'	'0.2313'	'0.1904'	'0.0762'	'0.0886'
z	'13.1602'	'16.6502'	'14.9052'	'1.8583'	'0.1144'
\eta_{\vartheta}	'0.8837'	'0.967'	'0.9254'	'0.5329'	'0.0903'
a_L	'1'	'1.9289'	'1.3987'	'1.0002'	'0.1093'
b_L	'2.8886'	'4.2538'	'3.5712'	'4.045'	'0.1211'
a_{\mu}	'10.3543'	'12.5583'	'11.4563'	'14.9114'	'0.1305'
b_{\mu}	'2.0151'	'4.103'	'3.0591'	'2.5303'	'0.1274'
\mu	'0.0349'	'0.087'	'0.061'	'0.0338'	'0.0822'
a_H	'11.9268'	'13.4002'	'12.6635'	'5.3832'	'0.1151'
b_H	'2.1465'	'2.8014'	'2.474'	'1.7154'	'0.083'
\nu	'183.577'	'254.1285'	'218.8528'	'0.008'	'0.1329'
BP	'47.3321'	'47.6413'	'47.4867'	'48.4912'	'0.0552'

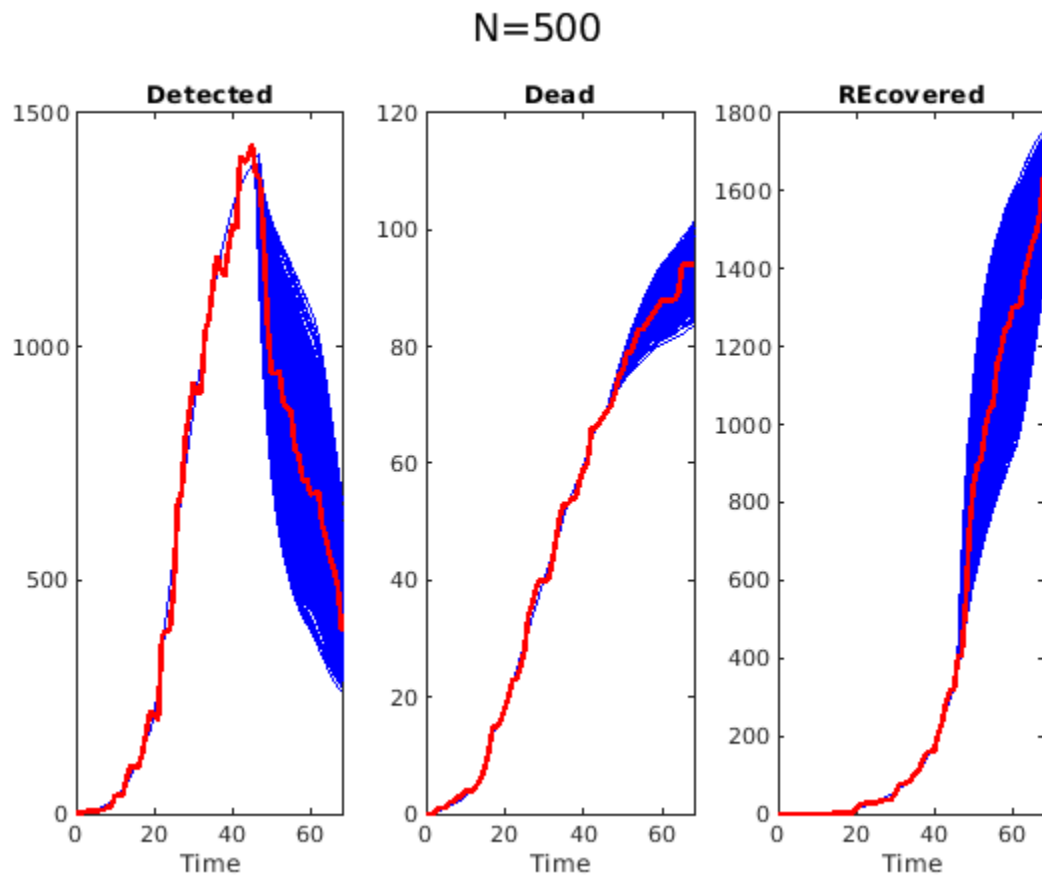
3.3. Identifiability analysys







3.4. Uncertainty analysis



Chapter 4. Extension number4

4.1. Basic information

The extension to be validated consists of the time series from the data69 to the 95. The status of the validation is: COMPLETED.

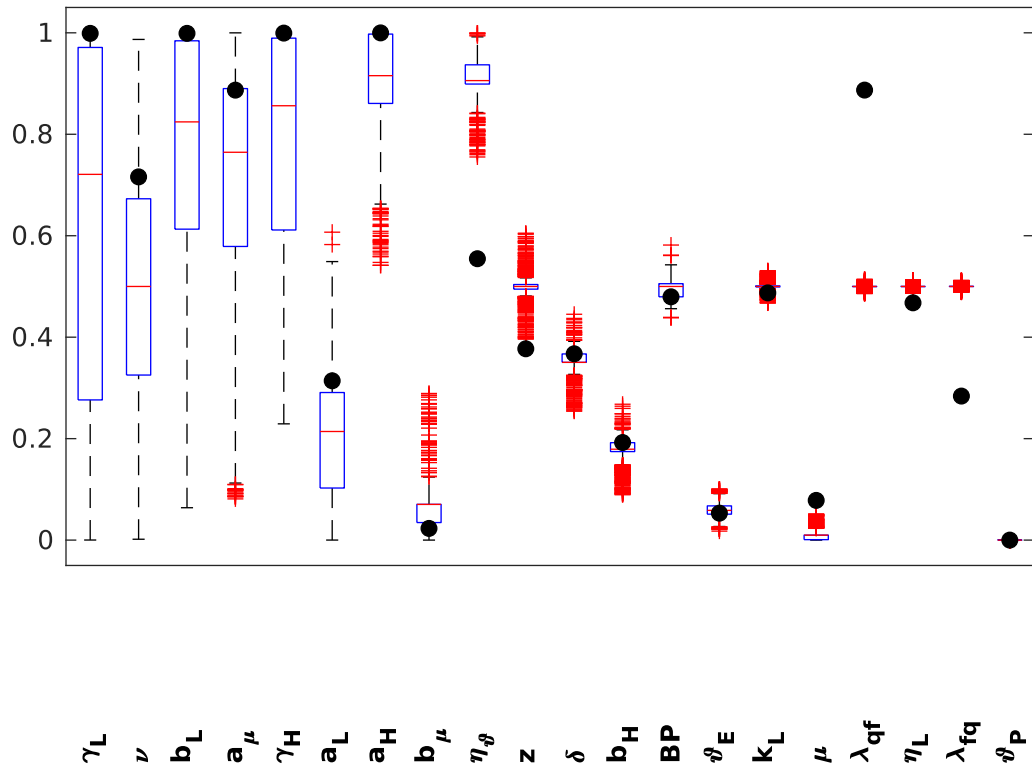
The number of estimations needed to perform the validation was1000.

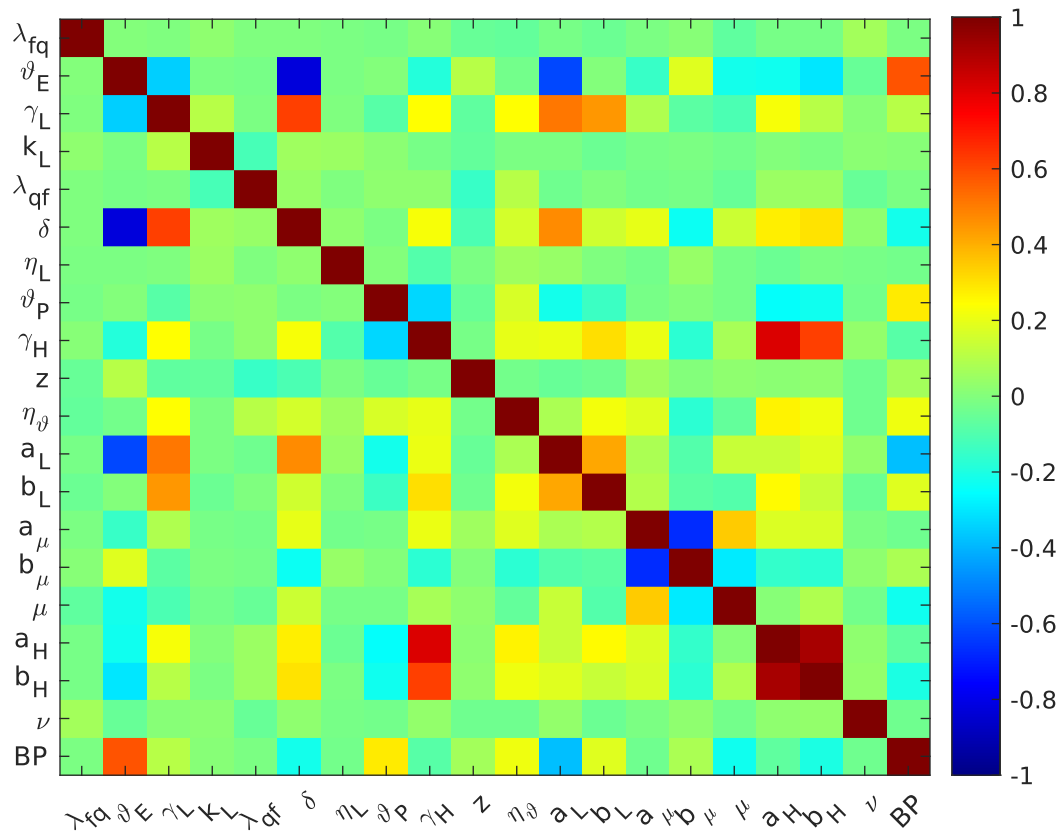
4.2. Estimated parameters with their intervals

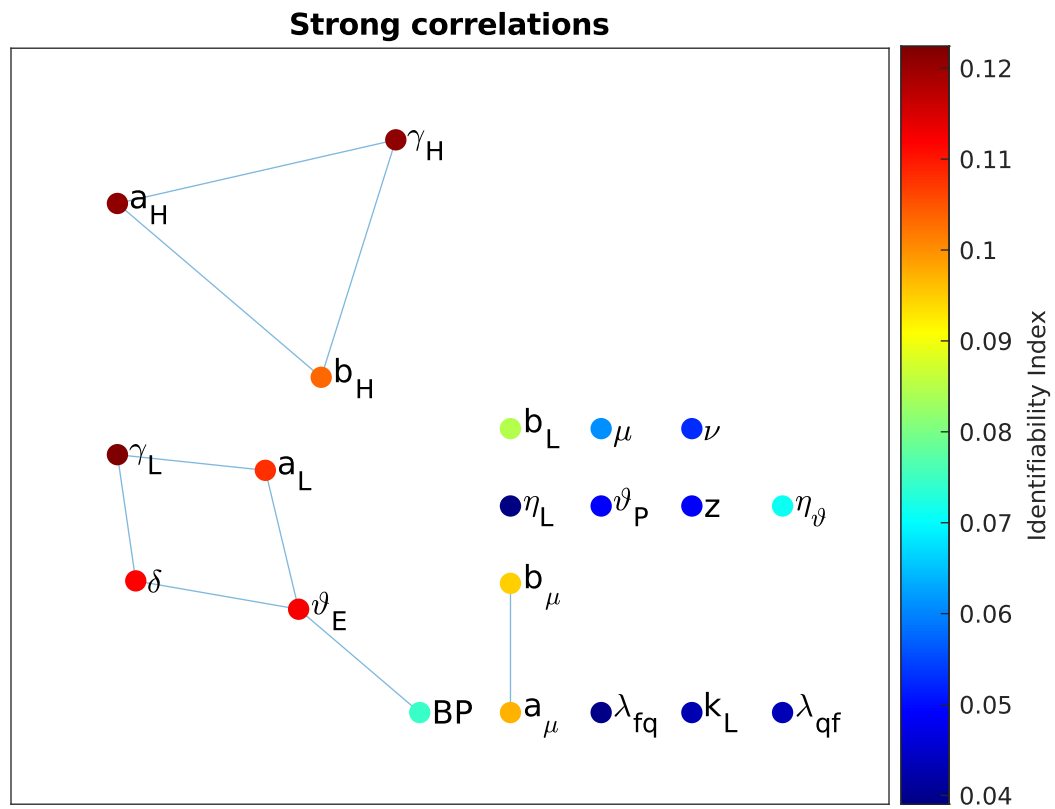
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4914'	'0.5086'	'0.5'	'0.2839'	'0.0395'
ϑ_E	'0.0567'	'0.0605'	'0.0586'	'0.0531'	'0.1124'
γ_L	'0.6914'	'0.7505'	'0.721'	'0.9989'	'0.1224'
k_L	'5.4087'	'5.5912'	'5.4999'	'5.3859'	'0.043'
λ_{qf}	'0.4915'	'0.5085'	'0.5'	'0.8871'	'0.0434'
δ	'0.051'	'0.0541'	'0.0526'	'0.0551'	'0.1118'
η_L	'0.4924'	'0.5076'	'0.5'	'0.4677'	'0.039'
ϑ_P	'0'	'0.0001'	'0'	'0'	'0.0489'
γ_H	'0.8336'	'0.8786'	'0.8561'	'0.9994'	'0.121'
z	'14.6399'	'15.3573'	'14.9986'	'11.3141'	'0.049'
η_{ϑ}	'0.8908'	'0.9207'	'0.9058'	'0.5547'	'0.0713'
a_L	'3.8411'	'4.1561'	'3.9986'	'5.3966'	'0.1079'
b_L	'12.1726'	'12.9096'	'12.5411'	'14.9849'	'0.0849'
a_{μ}	'11.307'	'12.0832'	'11.6951'	'13.418'	'0.0973'
b_{μ}	'1.6165'	'2.3567'	'1.9866'	'1.3226'	'0.0947'
μ	'0'	'0.0213'	'0.0098'	'0.0783'	'0.061'
a_H	'13.512'	'14.1203'	'13.8161'	'14.9977'	'0.121'
b_H	'3.4229'	'3.594'	'3.5085'	'3.6926'	'0.1033'
ν	'239.8924'	'260.0887'	'249.9906'	'358.0065'	'0.0529'
BP	'70.4044'	'70.5956'	'70.5'	'69.5007'	'0.0747'

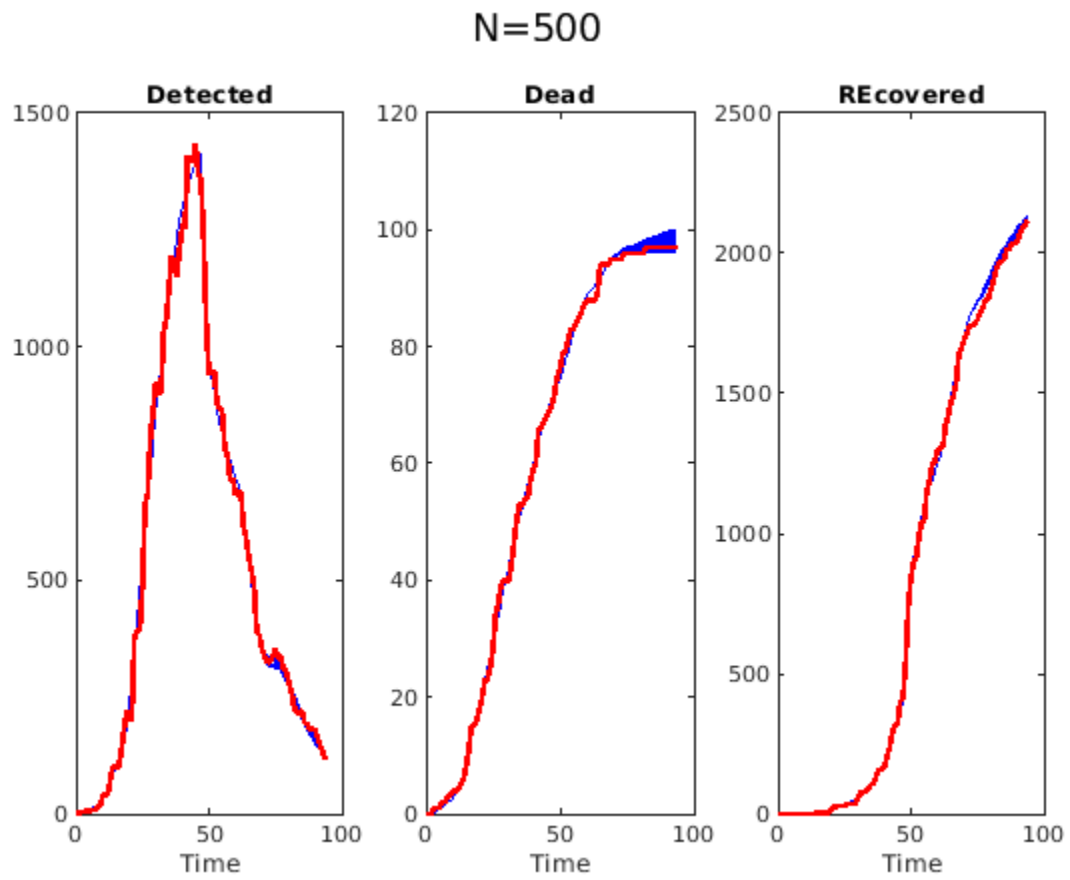
4.3. Identifiability analysis







4.4. Uncertainty analysys



Chapter 5. Extension number5

5.1. Basic information

The extension to be validated consists of the time series from the data95 to the 140. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

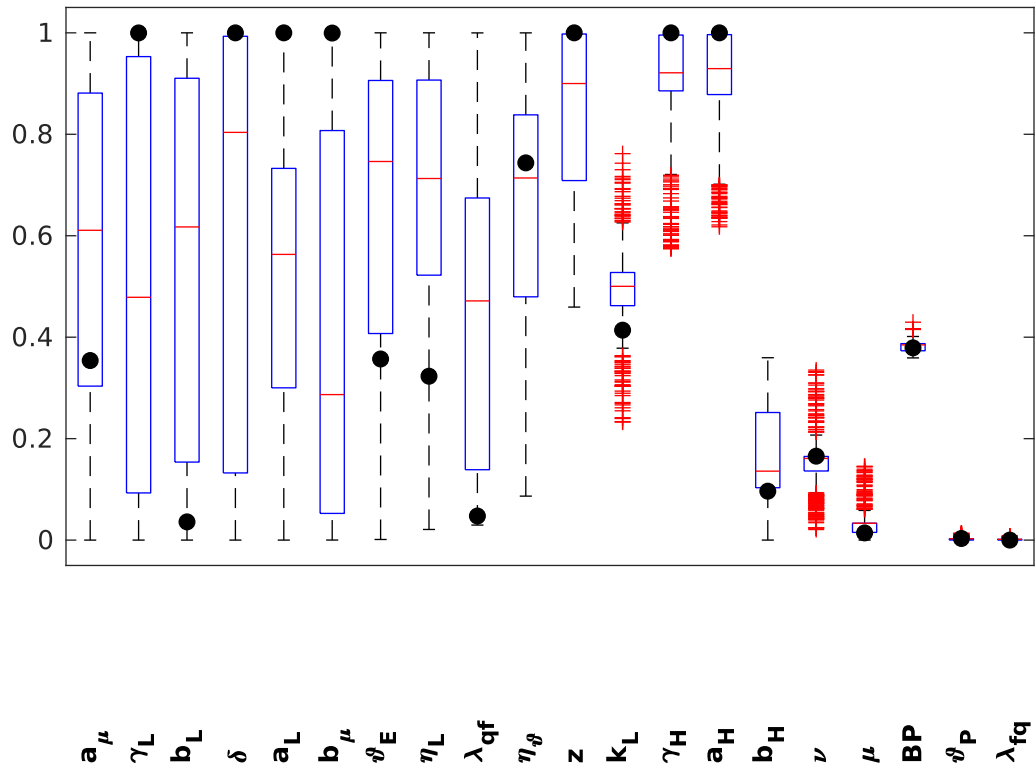
5.2. Estimated parameters with their intervals

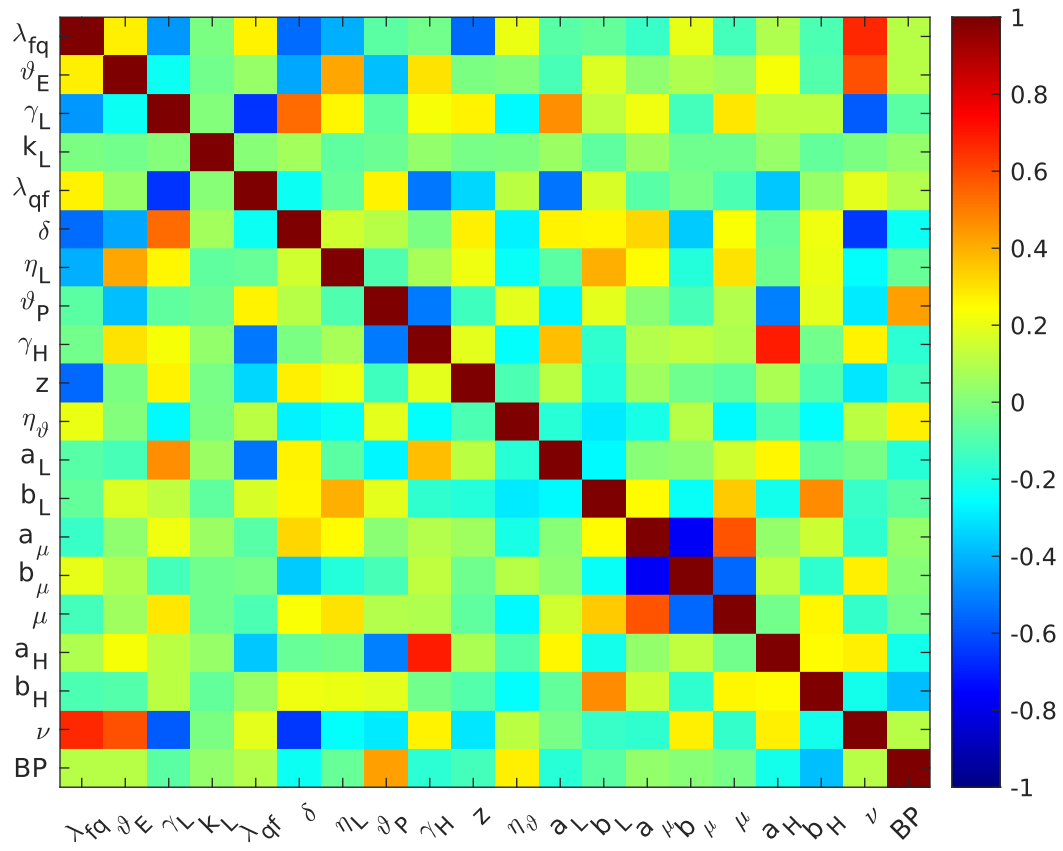
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

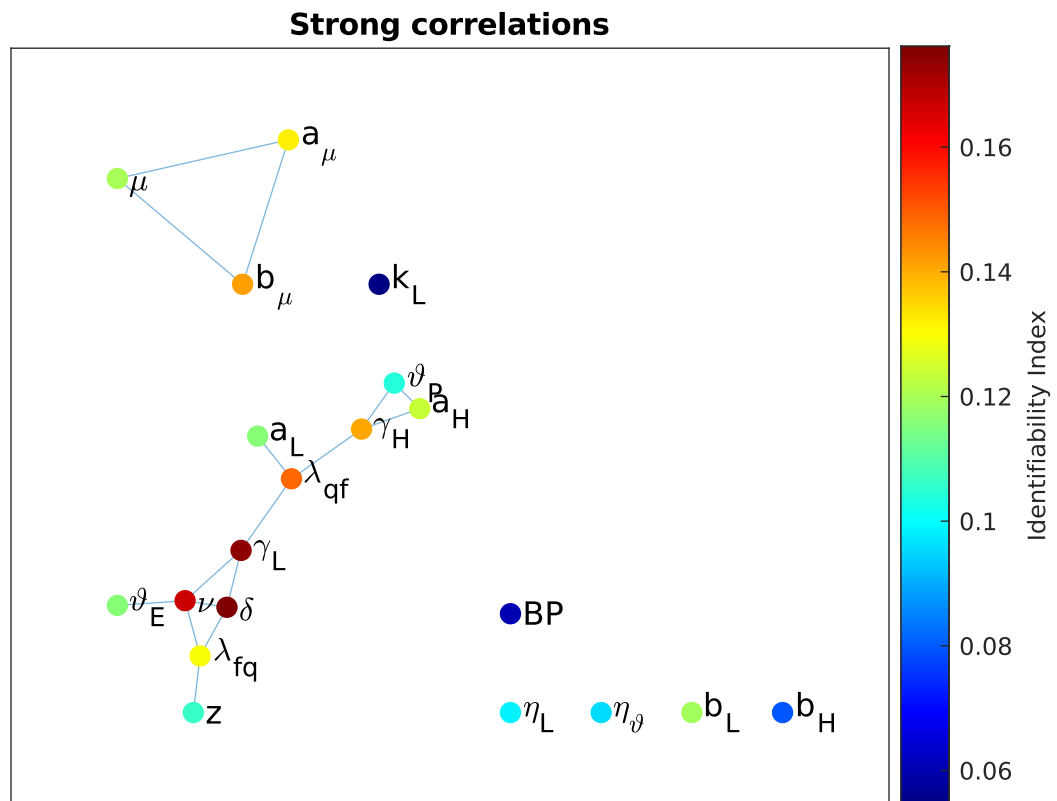
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0'	'0.0015'	'0'	'0.1295'
\vartheta_E	'0.3116'	'0.7579'	'0.7464'	'0.3571'	'0.1161'
\gamma_L	'0.1'	'1'	'0.4786'	'0.9998'	'0.174'
k_L	'1'	'9.64'	'5.5024'	'4.7248'	'0.0546'
\lambda_{qf}	'0.0156'	'0.1068'	'0.4715'	'0.0475'	'0.1486'
\delta	'0.0116'	'0.15'	'0.1206'	'0.15'	'0.1762'
\eta_L	'0.1361'	'0.7269'	'0.7128'	'0.3231'	'0.0986'
\vartheta_P	'0.0003'	'0.0068'	'0.0026'	'0.0032'	'0.1041'
\gamma_H	'0.2023'	'1'	'0.9212'	'1'	'0.141'
z	'16.0731'	'30'	'27.0013'	'29.9996'	'0.1064'
\eta_{\vartheta}	'0.5965'	'0.9827'	'0.7139'	'0.7437'	'0.0957'
a_L	'6.2573'	'15'	'8.8847'	'14.9995'	'0.1163'
b_L	'1.2369'	'6.1778'	'9.6432'	'1.503'	'0.1194'
a_{\mu}	'1.6913'	'15'	'9.5503'	'5.9557'	'0.1322'
b_{\mu}	'1'	'15'	'5.0158'	'14.9937'	'0.1416'
\mu	'0'	'0.0319'	'0.0333'	'0.0142'	'0.1198'
a_H	'8.3519'	'15'	'14.0121'	'14.9997'	'0.1236'
b_H	'1.1039'	'2.9608'	'2.9029'	'2.3503'	'0.0799'
\nu	'74.9437'	'112.6751'	'80.4844'	'82.7254'	'0.1669'
BP	'94.0474'	'98.4486'	'96.322'	'95.9065'	'0.0604'

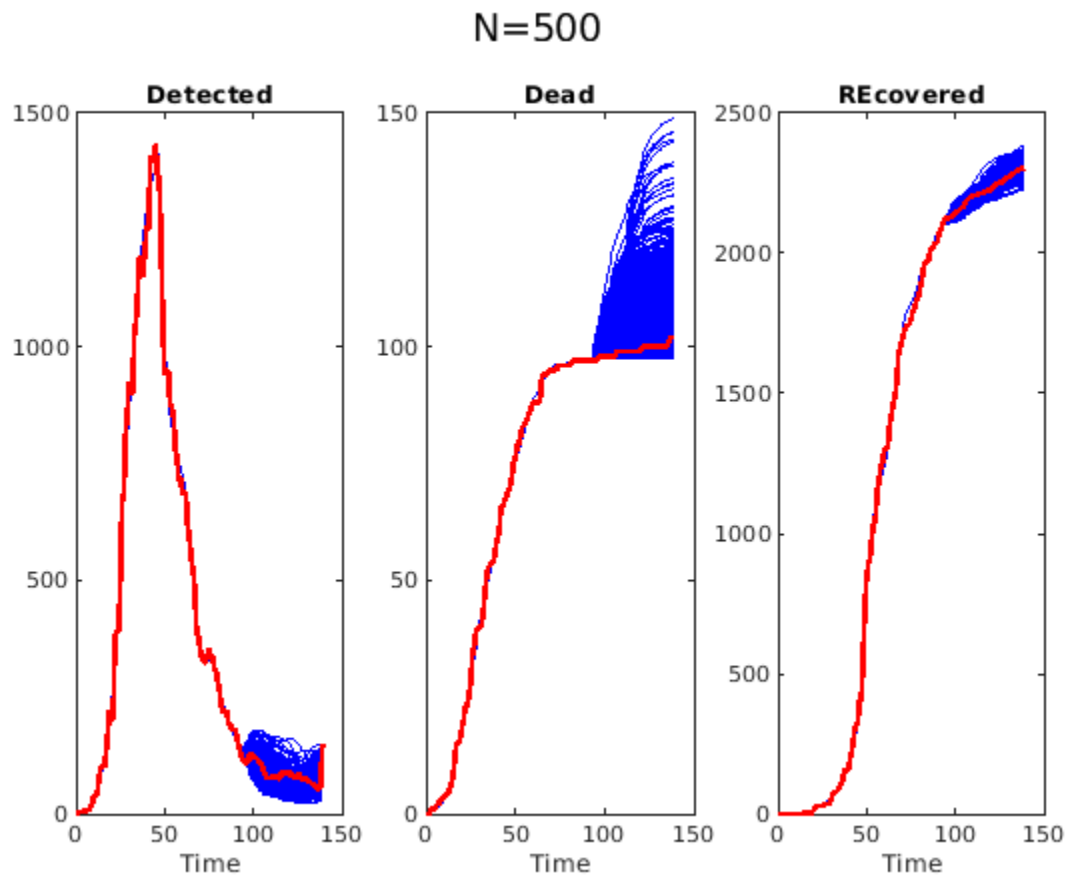
5.3. Identifiability analysis







5.4. Uncertainty analysis



Chapter 6. Extension number6

6.1. Basic information

The extension to be validated consists of the time series from the data140 to the 191. The status of the validation is: COMPLETED.

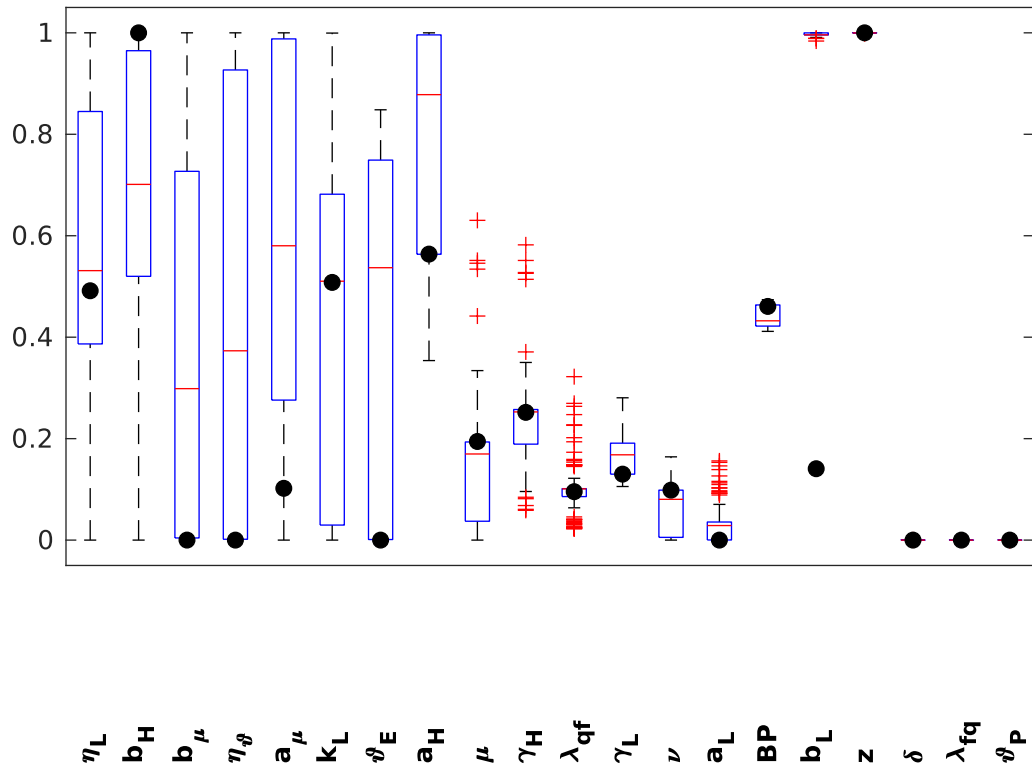
The number of estimations needed to perform the validation was1000.

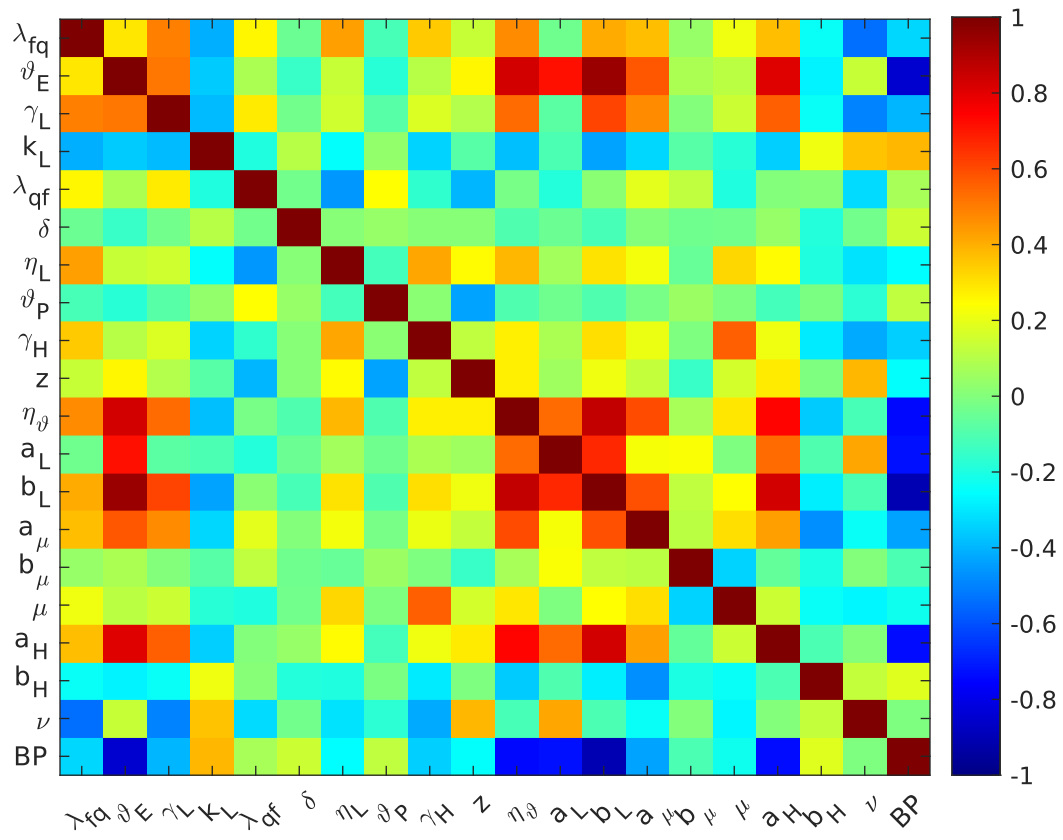
6.2. Estimated parameters with their intervals

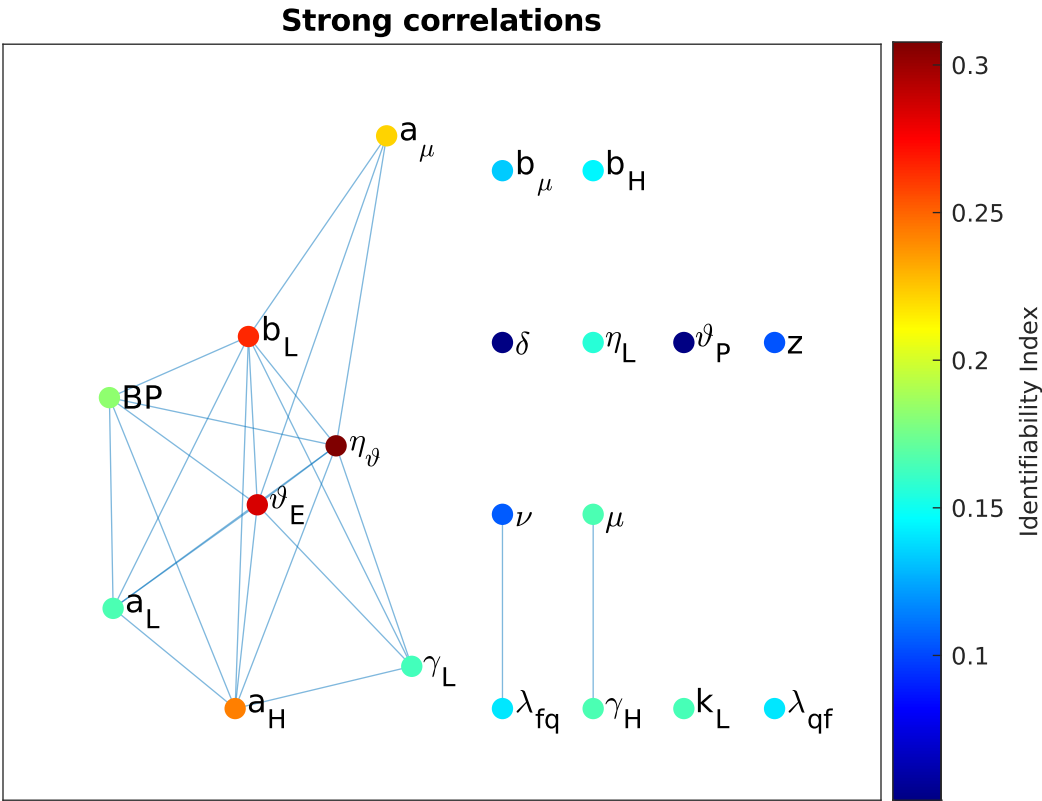
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0679'	'0'	'0'	'0.1409'
\vartheta_E	'0.4563'	'0.6176'	'0.537'	'0'	'0.2853'
\gamma_L	'0.1513'	'0.1855'	'0.1684'	'0.13'	'0.1639'
k_L	'4.8963'	'6.29'	'5.5932'	'5.572'	'0.1647'
\lambda_{qf}	'0.0253'	'0.1766'	'0.101'	'0.0954'	'0.1411'
\delta	'0'	'0.0035'	'0'	'0'	'0.051'
\eta_L	'0.457'	'0.6054'	'0.5312'	'0.4915'	'0.1565'
\vartheta_P	'0'	'0.0021'	'0'	'0'	'0.051'
\gamma_H	'0.1794'	'0.326'	'0.2527'	'0.2518'	'0.1661'
z	'28.0465'	'30'	'29.9926'	'30'	'0.1036'
\eta_{\vartheta}	'0.2741'	'0.4722'	'0.3732'	'0'	'0.3077'
a_L	'1.1518'	'1.651'	'1.4014'	'1'	'0.1661'
b_L	'13.5556'	'15'	'14.9403'	'2.9698'	'0.2648'
a_{\mu}	'7.9312'	'10.315'	'9.1231'	'2.4292'	'0.2218'
b_{\mu}	'3.984'	'6.3759'	'5.18'	'1.0007'	'0.134'
\mu	'0.0916'	'0.2491'	'0.1704'	'0.1944'	'0.1662'
a_H	'12.4163'	'14.1191'	'13.2677'	'8.8931'	'0.2433'
b_H	'9.7976'	'11.8366'	'10.8171'	'14.9998'	'0.1444'
\nu	'33.8708'	'46.5105'	'40.1907'	'49.2477'	'0.1057'
BP	'136.0079'	'136.9921'	'136.5'	'139.2237'	'0.1824'

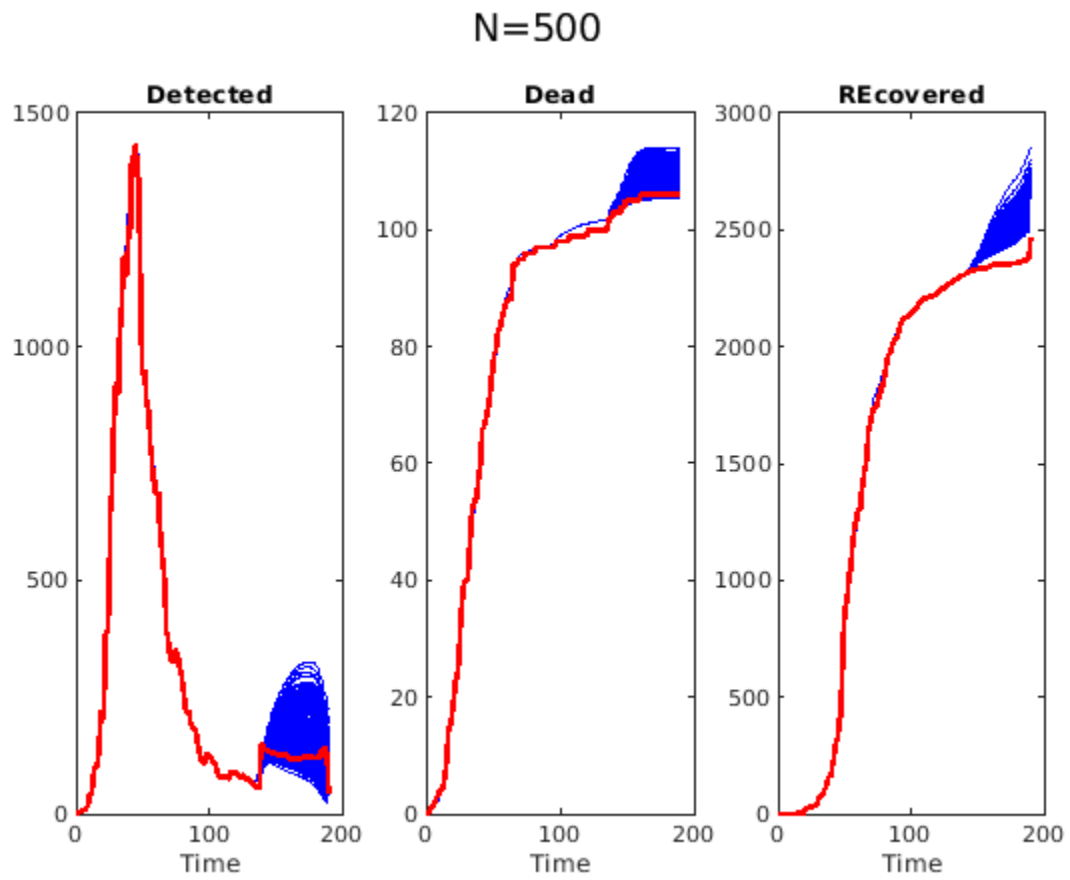
6.3. Identifiability analysis







6.4. Uncertainty analysis



Chapter 7. Extension number7

7.1. Basic information

The extension to be validated consists of the time series from the data191 to the 223. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

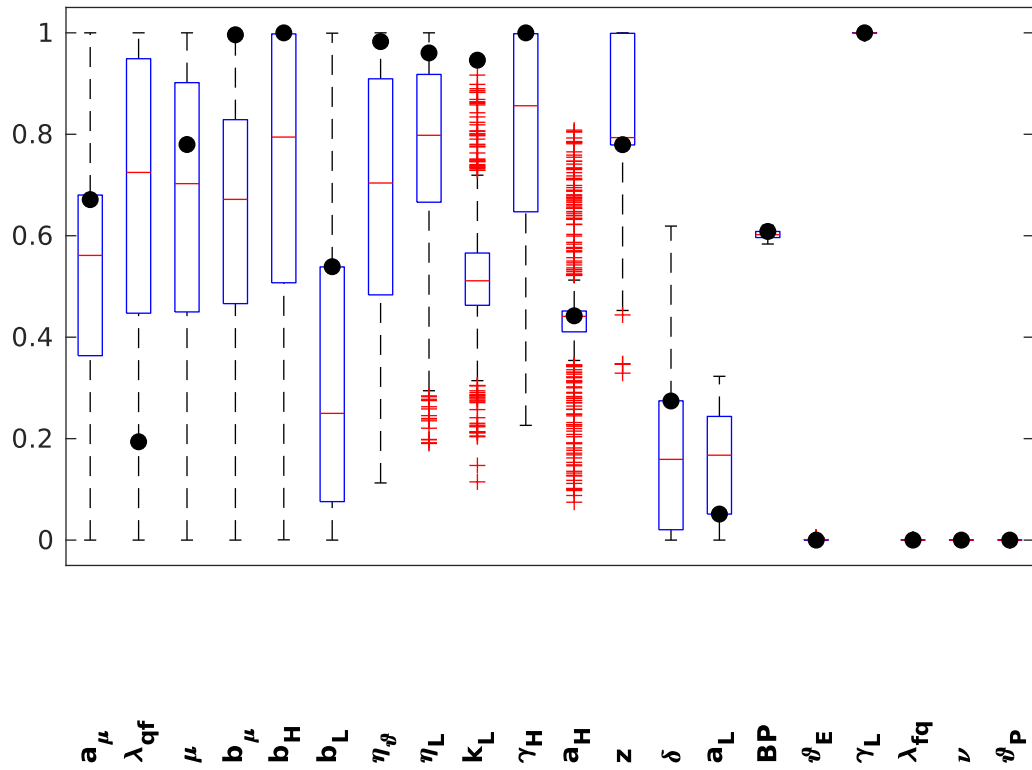
7.2. Estimated parameters with their intervals

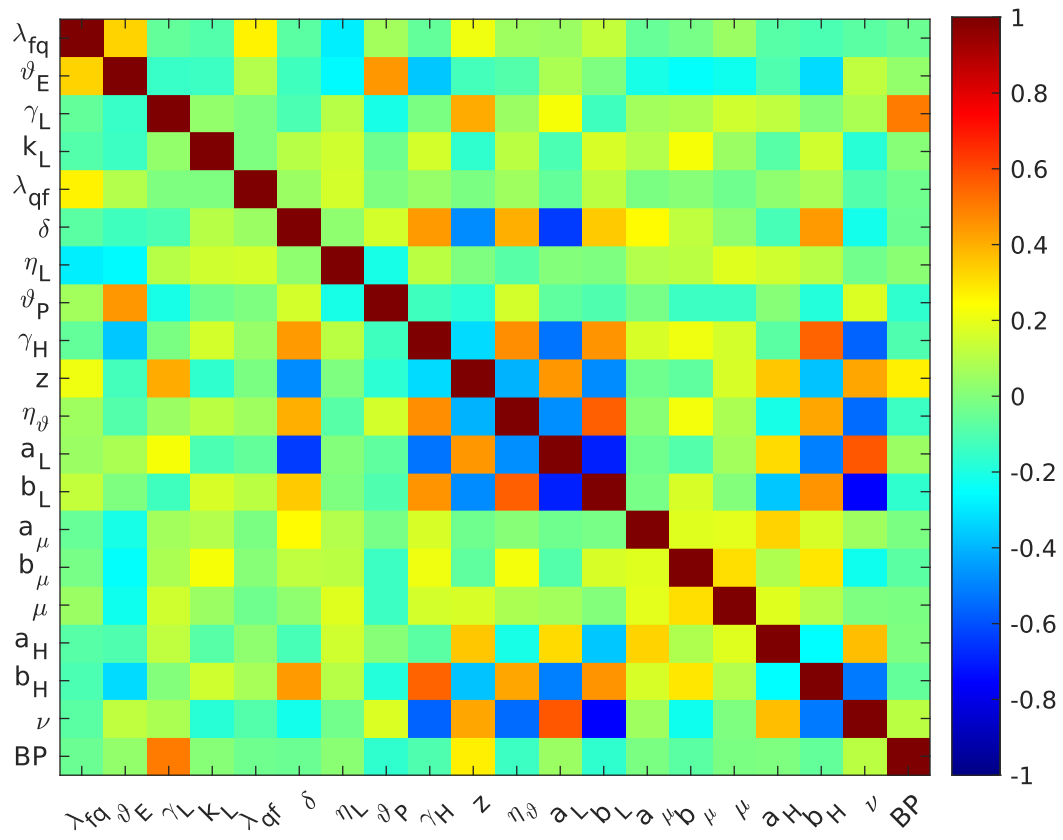
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

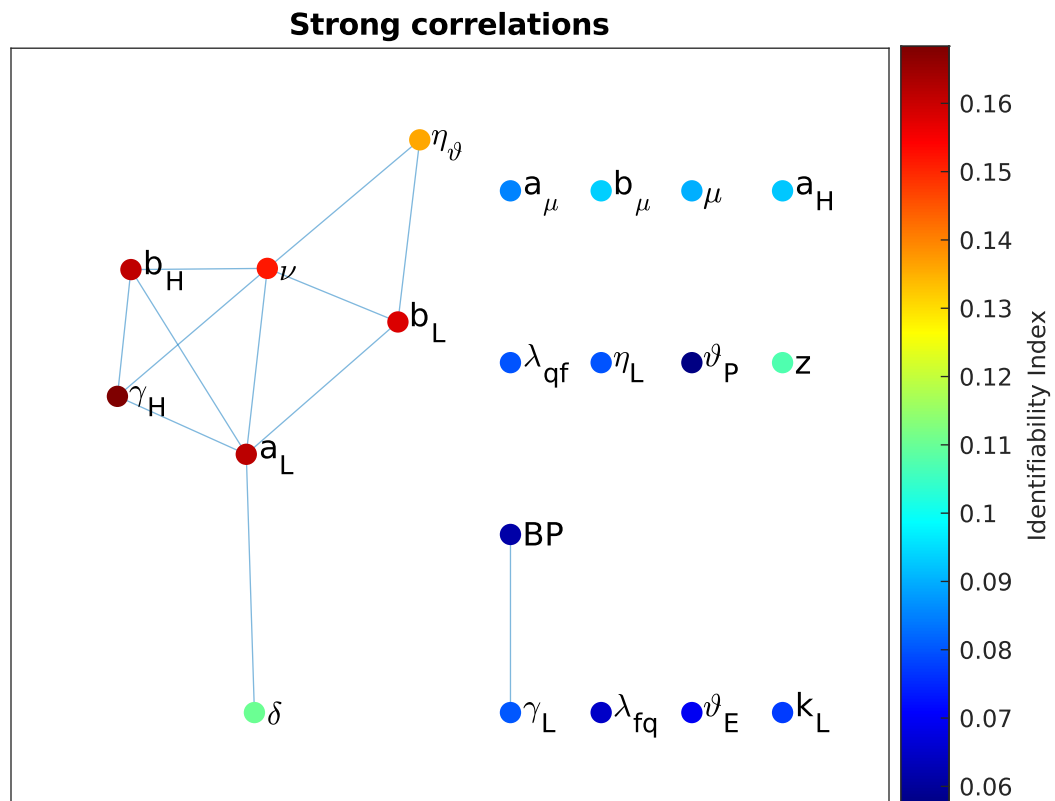
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0'	'0.0001'	'0'	'0.0651'
ϑ_E	'0'	'0'	'0.0009'	'0'	'0.0699'
γ_L	'0.9228'	'1'	'0.9996'	'1'	'0.0804'
k_L	'5.3374'	'9.7612'	'5.6007'	'9.5149'	'0.0775'
λ_{qf}	'0.1374'	'0.3011'	'0.7248'	'0.1938'	'0.0799'
δ	'0.032'	'0.0437'	'0.0245'	'0.0411'	'0.1103'
η_L	'0.54'	'0.977'	'0.7977'	'0.9604'	'0.0802'
ϑ_P	'0'	'0'	'0'	'0'	'0.0574'
γ_H	'0.7895'	'1'	'0.8552'	'0.9999'	'0.1684'
z	'21.1243'	'25.3948'	'23.8037'	'23.3859'	'0.1076'
η_{ϑ}	'0.8022'	'0.9896'	'0.704'	'0.9827'	'0.1361'
a_L	'1.4696'	'5.2011'	'3.3431'	'1.7187'	'0.1615'
b_L	'3.3469'	'8.8492'	'4.4975'	'8.5459'	'0.1583'
a_{μ}	'7.7846'	'12.0316'	'8.857'	'10.3967'	'0.0852'
b_{μ}	'10.4402'	'15'	'10.4032'	'14.9463'	'0.0935'
μ	'0.3524'	'0.7826'	'0.7027'	'0.7799'	'0.09'
a_H	'6.9201'	'10.3171'	'7.1754'	'7.1902'	'0.0928'
b_H	'12.1873'	'15'	'12.123'	'14.9988'	'0.1613'
ν	'0'	'0'	'0.0065'	'0'	'0.1519'
BP	'188.35'	'223'	'189.9798'	'190.4999'	'0.0615'

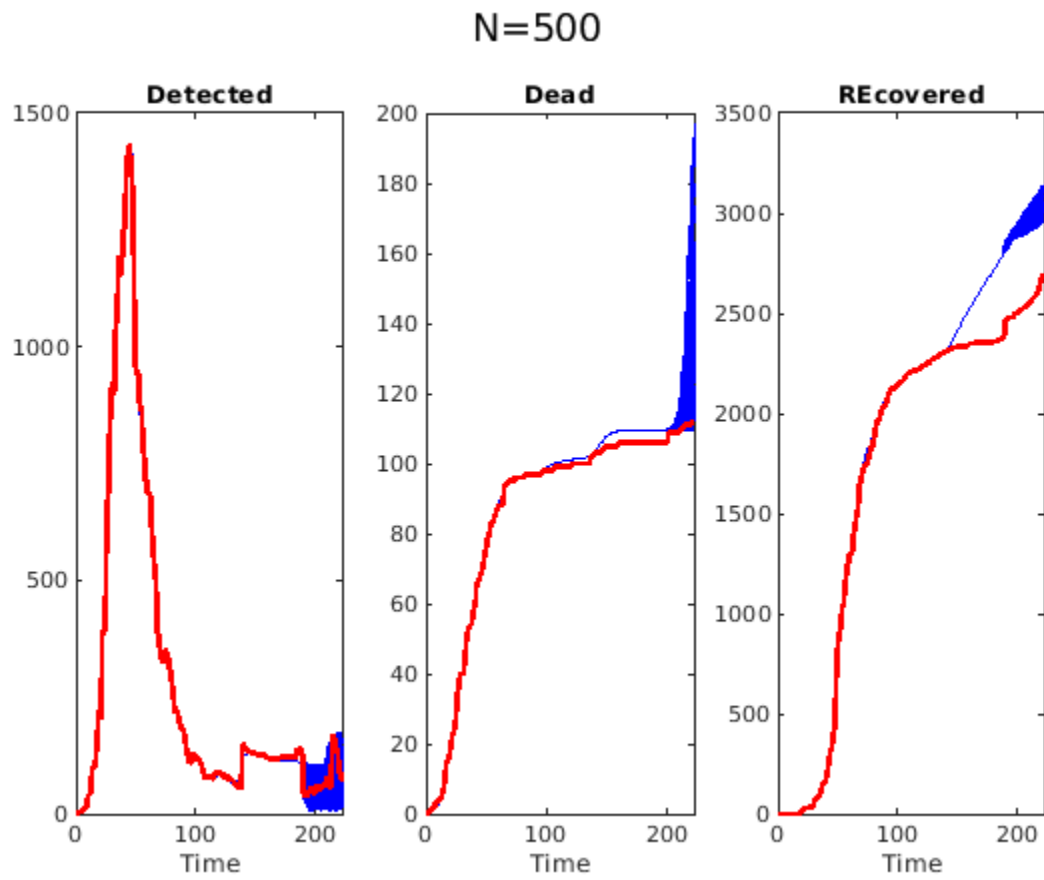
7.3. Identifiability analysis







7.4. Uncertainty analysis



Chapter 8. Extension number8

8.1. Basic information

The extension to be validated consists of the time series from the data223 to the 266. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

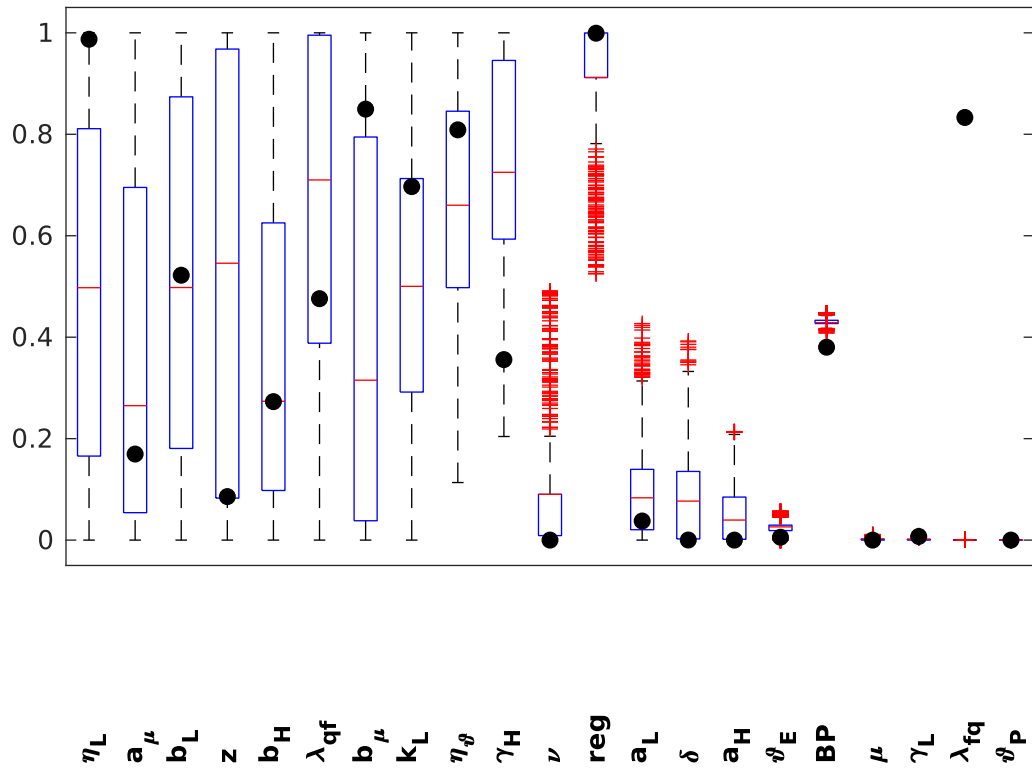
8.2. Estimated parameters with their intervals

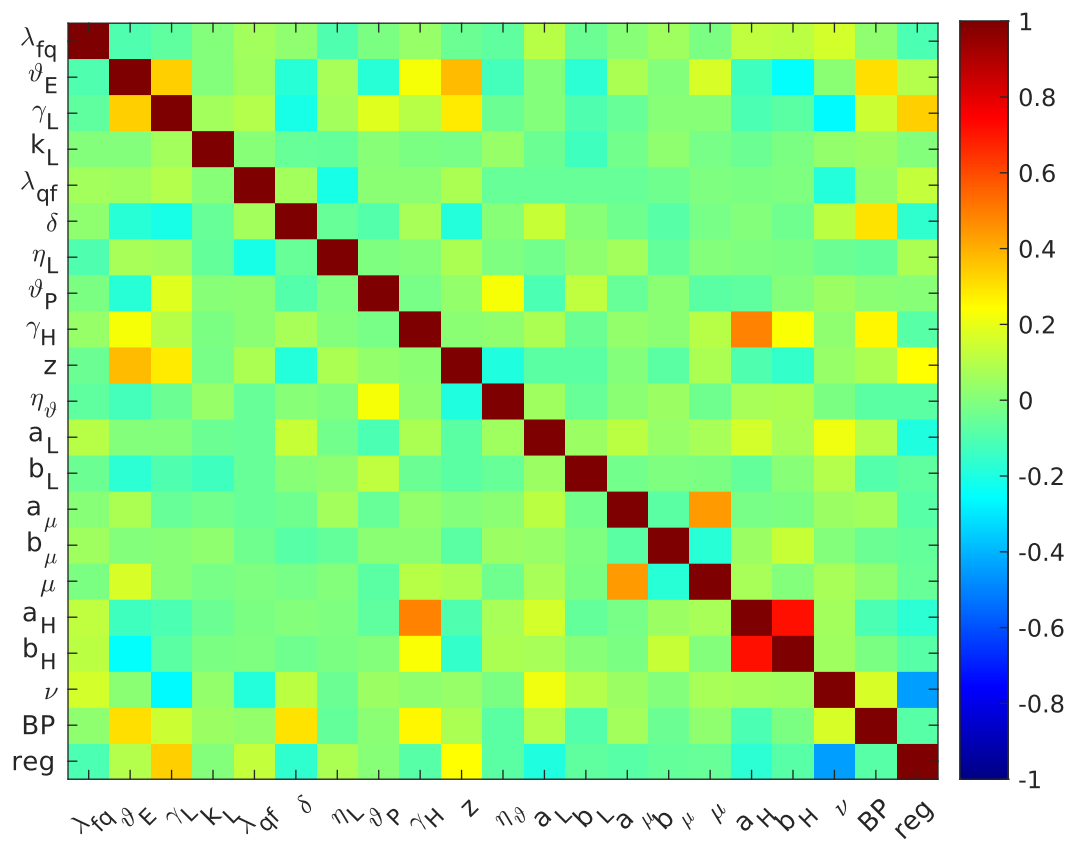
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

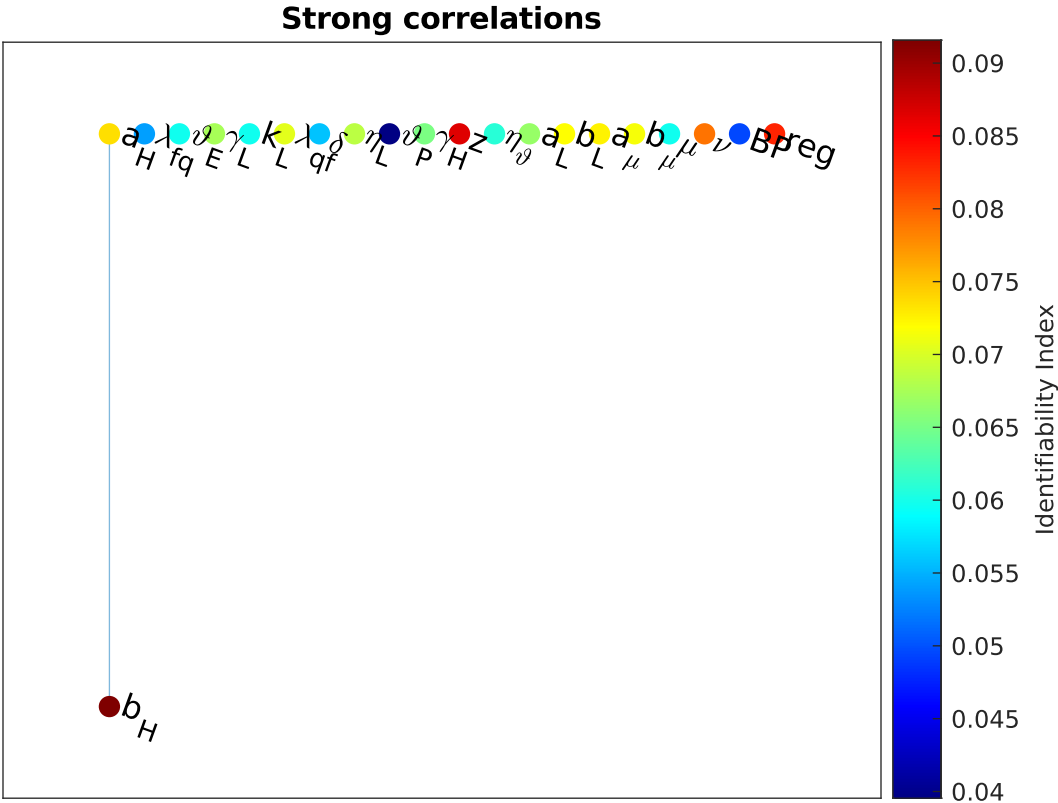
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4911'	'1'	'0.0002'	'0.8331'	'0.054'
ϑ_E	'0.0042'	'0.0057'	'0.0261'	'0.0057'	'0.0598'
γ_L	'0.0006'	'0.0161'	'0.0016'	'0.0072'	'0.0675'
k_L	'1'	'10'	'5.5021'	'7.2715'	'0.0598'
λ_{qf}	'0.4747'	'0.7627'	'0.71'	'0.4759'	'0.0705'
δ	'0'	'0.0001'	'0.0115'	'0'	'0.0559'
η_L	'0.5085'	'1'	'0.4976'	'0.9874'	'0.0686'
ϑ_P	'0'	'0'	'0'	'0'	'0.0395'
γ_H	'0.2574'	'0.367'	'0.7251'	'0.3558'	'0.0653'
z	'2.3724'	'4.5811'	'16.374'	'2.5722'	'0.0866'
η_{ϑ}	'0.7981'	'0.979'	'0.6601'	'0.8088'	'0.0609'
a_L	'1'	'15'	'2.1671'	'1.5269'	'0.0666'
b_L	'1'	'15'	'7.9704'	'8.3101'	'0.0721'
a_{μ}	'1'	'15'	'4.7103'	'3.3748'	'0.0726'
b_{μ}	'1.7'	'15'	'5.4132'	'12.8939'	'0.0716'
μ	'0'	'0'	'0.0022'	'0'	'0.0597'
a_H	'1'	'1.9116'	'1.5534'	'1.0001'	'0.0736'
b_H	'2.5498'	'6.4386'	'4.832'	'4.8213'	'0.0916'
ν	'0'	'0.0011'	'45.1136'	'0.0005'	'0.0792'
BP	'216.6149'	'219.8429'	'223.1443'	'219.5186'	'0.0495'
reg	'0.189'	'0.25'	'0.228'	'0.2498'	'0.0832'

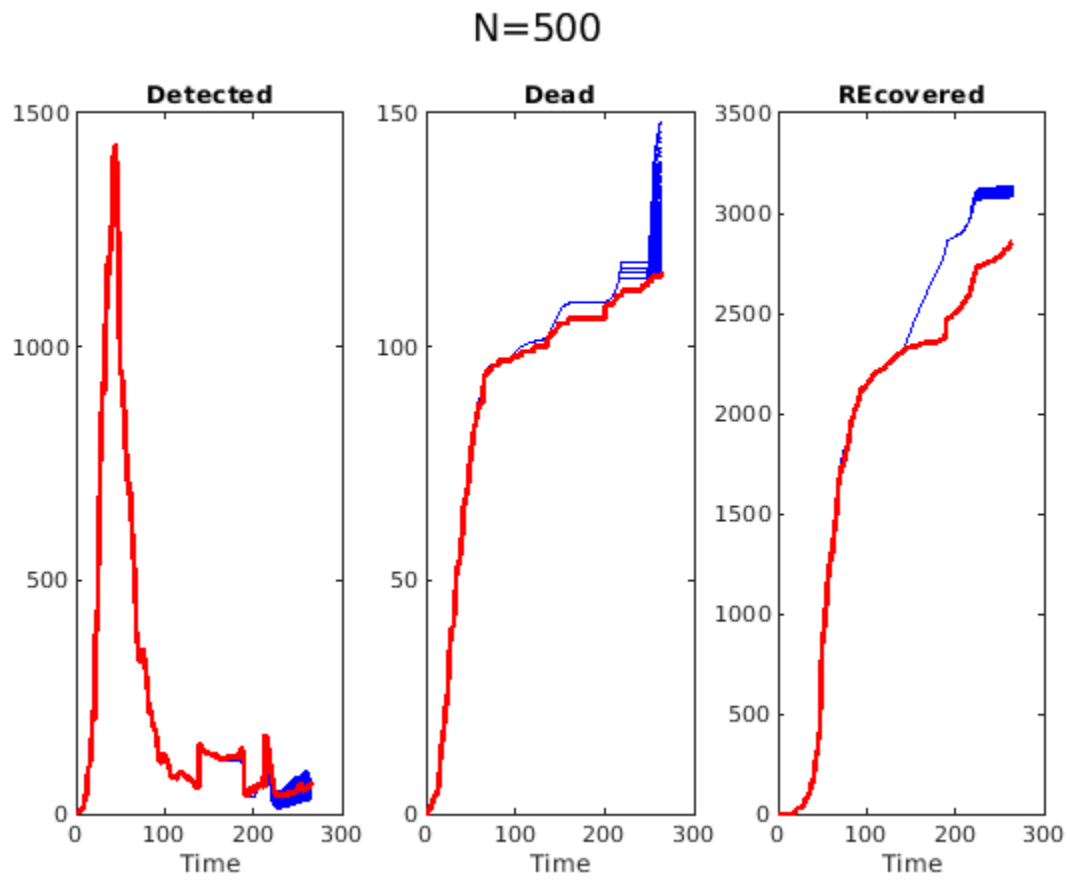
8.3. Identifiability analysis







8.4. Uncertainty analysis



Chapter 9. Extension number9

9.1. Basic information

The extension to be validated consists of the time series from the data266 to the 294. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

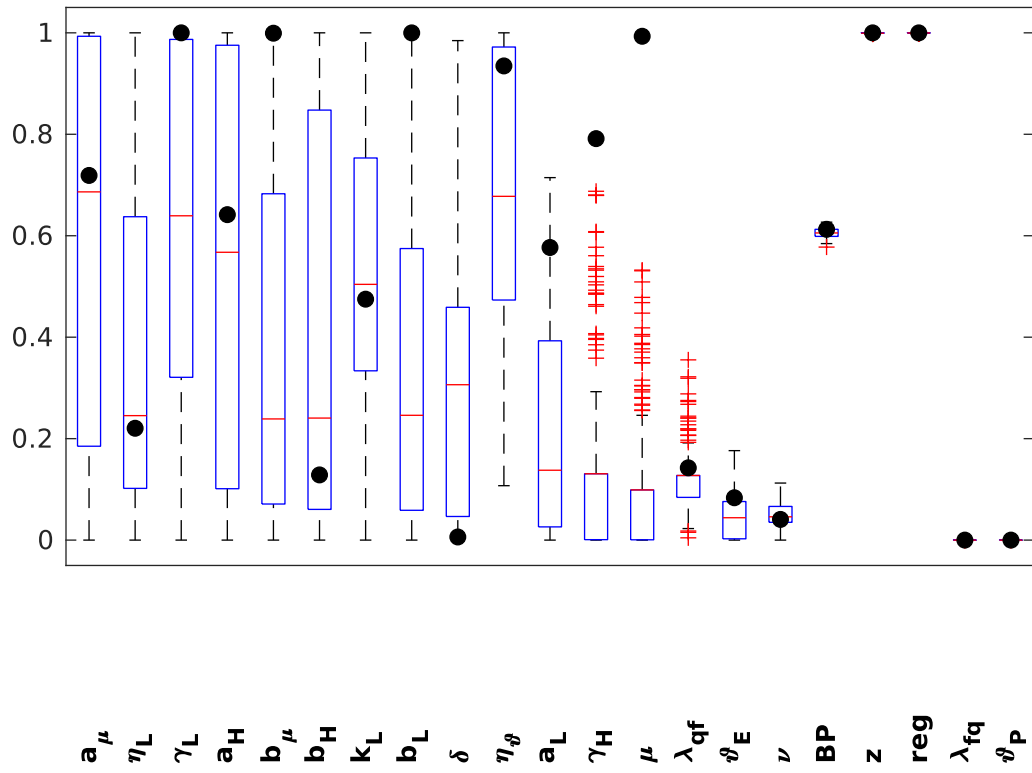
9.2. Estimated parameters with their intervals

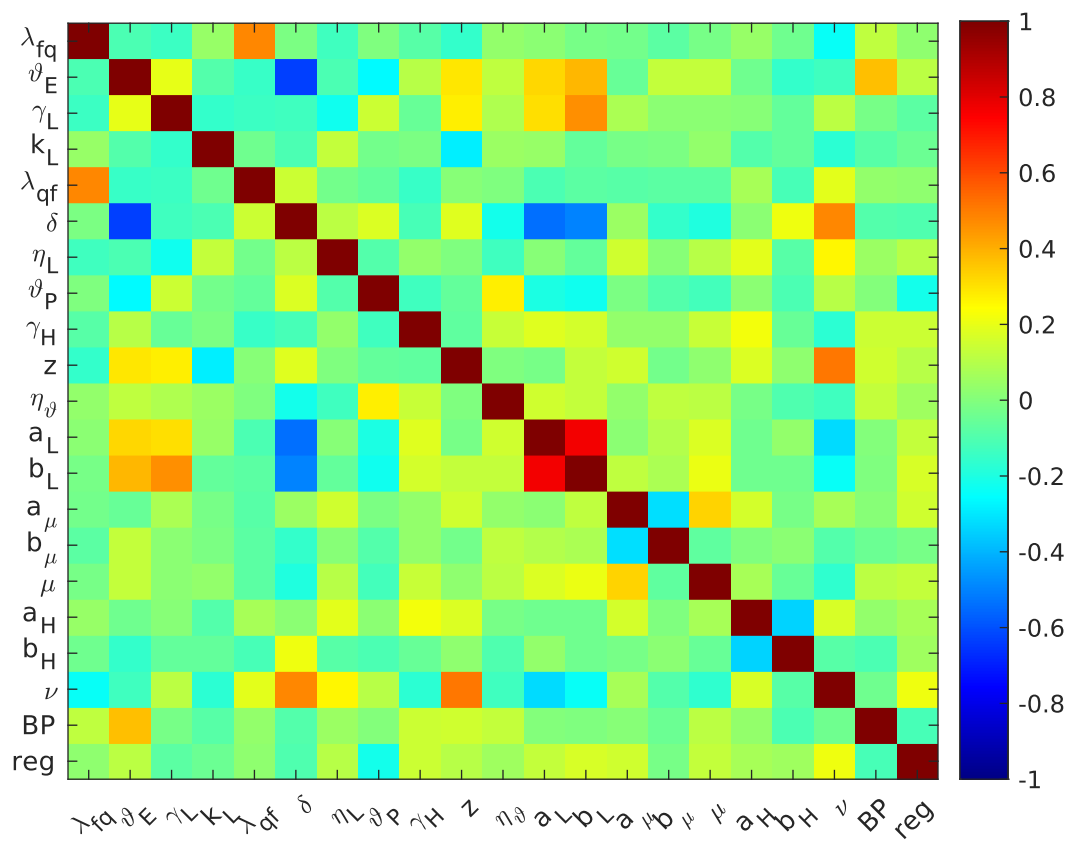
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

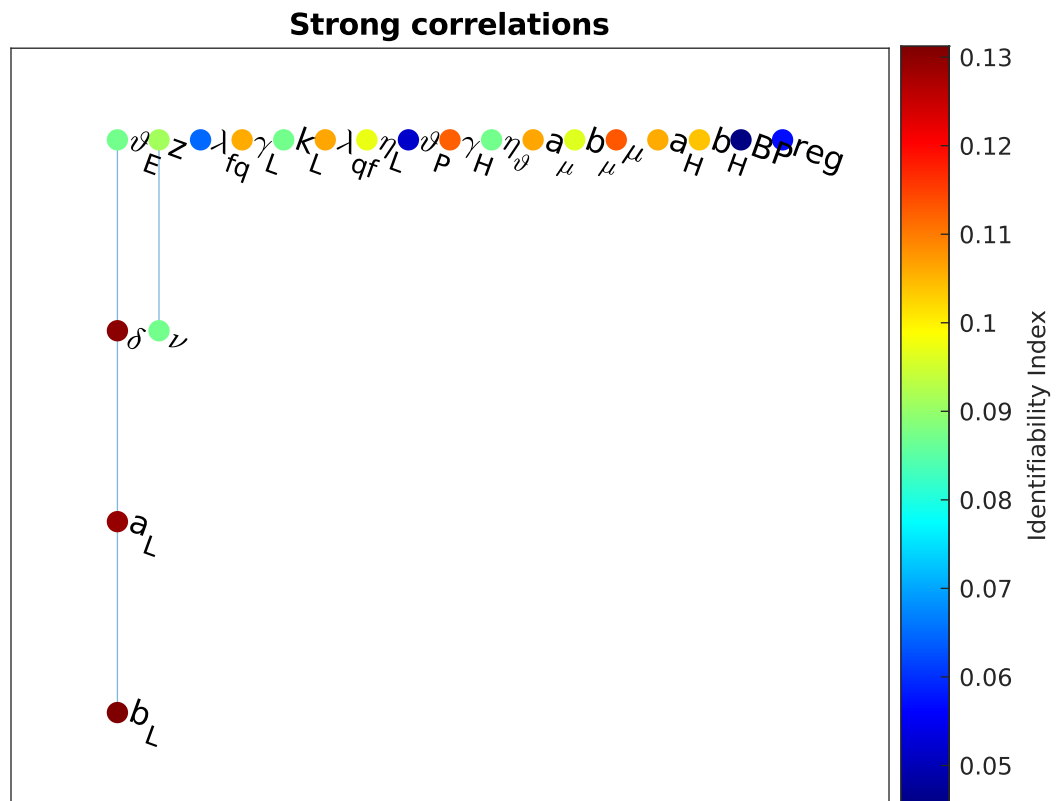
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0'	'0'	'0'	'0.0649'
ϑ_E	'0.0738'	'0.1101'	'0.0441'	'0.0835'	'0.0873'
γ_L	'0.1'	'1'	'0.6393'	'1'	'0.1059'
k_L	'1.2138'	'9.55'	'5.5373'	'5.2744'	'0.0872'
λ_{qf}	'0.0757'	'1'	'0.1274'	'0.1425'	'0.1062'
δ	'0'	'0.0021'	'0.0459'	'0.0009'	'0.13'
η_L	'0.211'	'1'	'0.2454'	'0.2205'	'0.0974'
ϑ_P	'0'	'0'	'0'	'0'	'0.0519'
γ_H	'0'	'1'	'0.1307'	'0.7914'	'0.1124'
z	'9.8329'	'30'	'29.9808'	'29.998'	'0.0911'
η_{ϑ}	'0.3246'	'1'	'0.6777'	'0.9347'	'0.0873'
a_L	'6.4096'	'15'	'2.9282'	'9.0759'	'0.1289'
b_L	'6.9628'	'15'	'4.4442'	'14.9985'	'0.1312'
a_{μ}	'1.35'	'15'	'10.6105'	'11.0643'	'0.1065'
b_{μ}	'2.4'	'15'	'4.3441'	'14.9894'	'0.0962'
μ	'0.1225'	'1'	'0.0989'	'0.9932'	'0.1129'
a_H	'1'	'15'	'8.9436'	'9.9819'	'0.106'
b_H	'1'	'15'	'4.3679'	'2.799'	'0.1041'
ν	'16.1028'	'21.9635'	'22.958'	'20.3921'	'0.0873'
BP	'266.4702'	'271.326'	'265.9903'	'266.4999'	'0.0456'
reg	'0.198'	'0.25'	'0.2499'	'0.25'	'0.057'

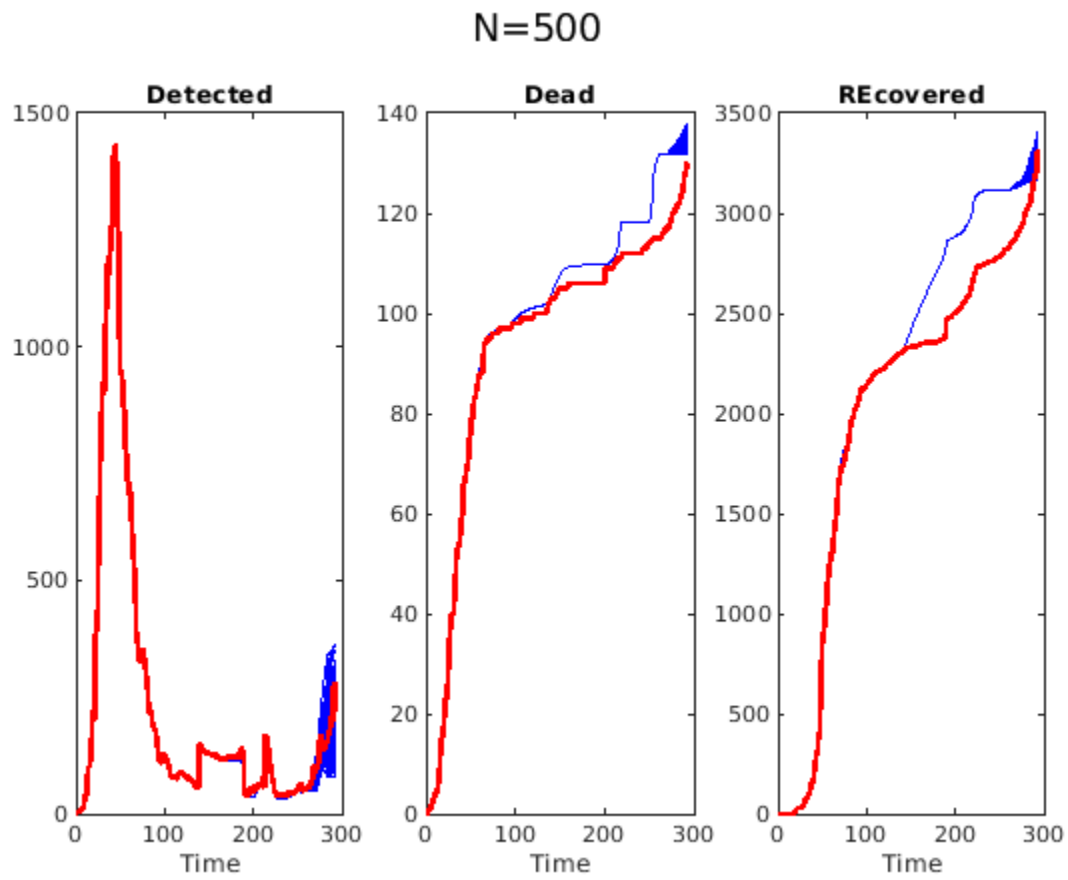
9.3. Identifiability analysis







9.4. Uncertainty analysis



Chapter 10. Extension number10

10.1. Basic information

The extension to be validated consists of the time series from the data294 to the 306. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

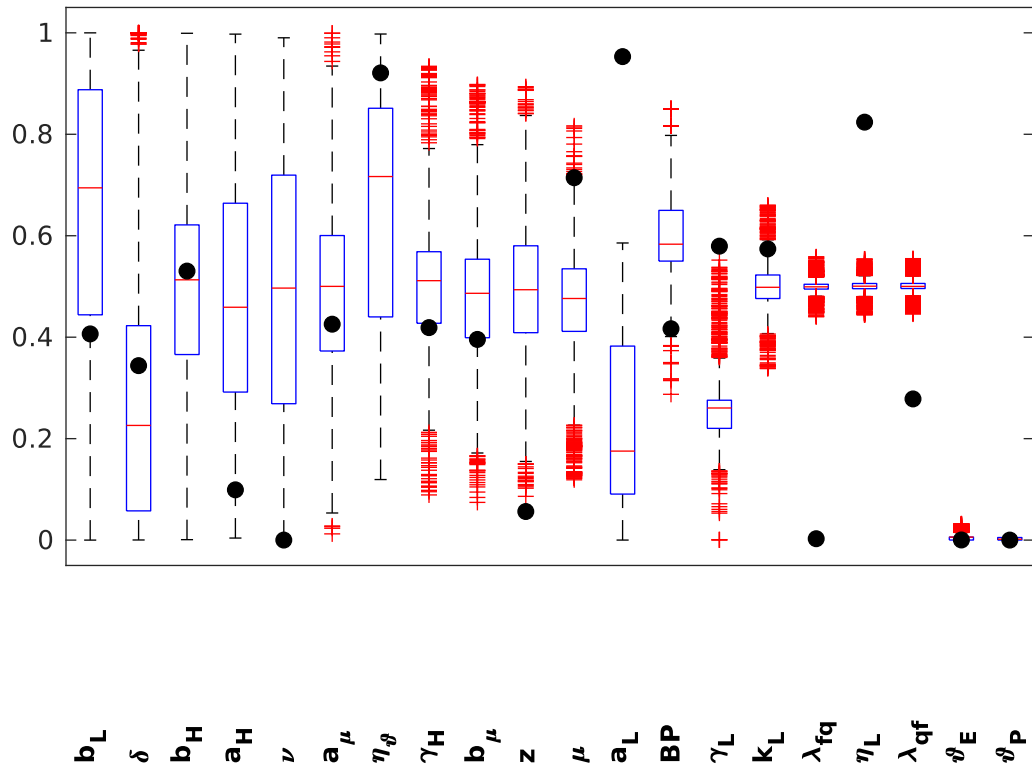
10.2. Estimated parameters with their intervals

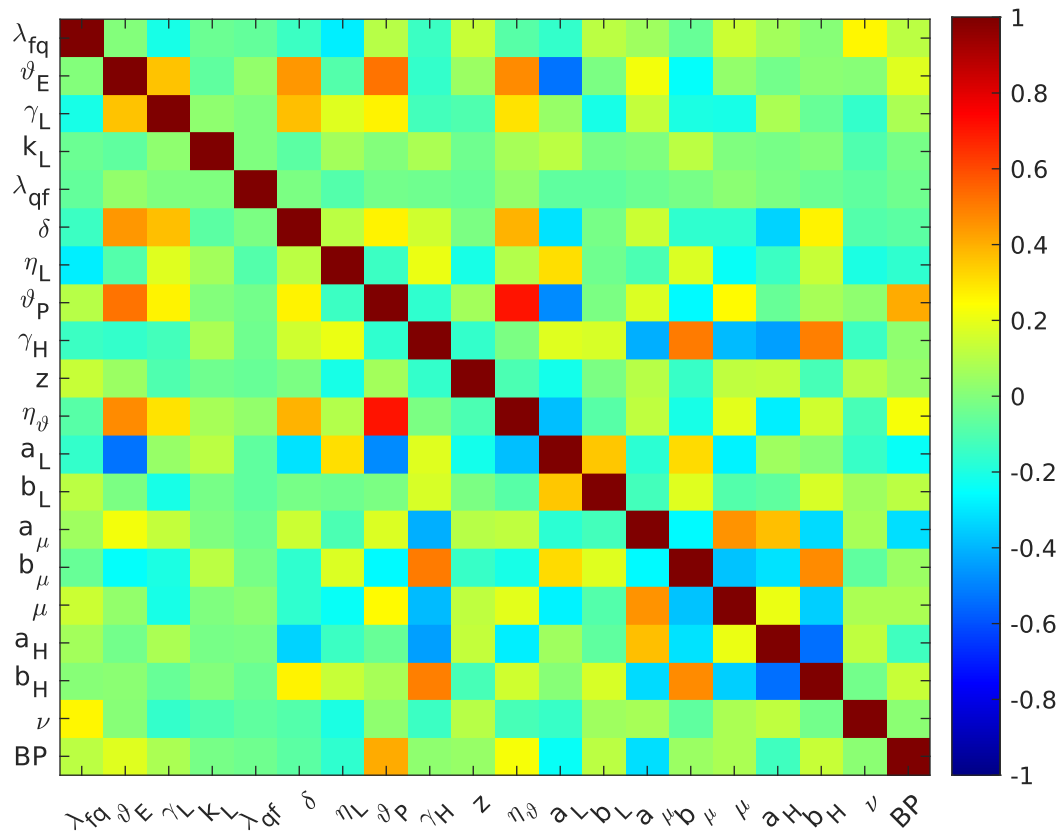
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

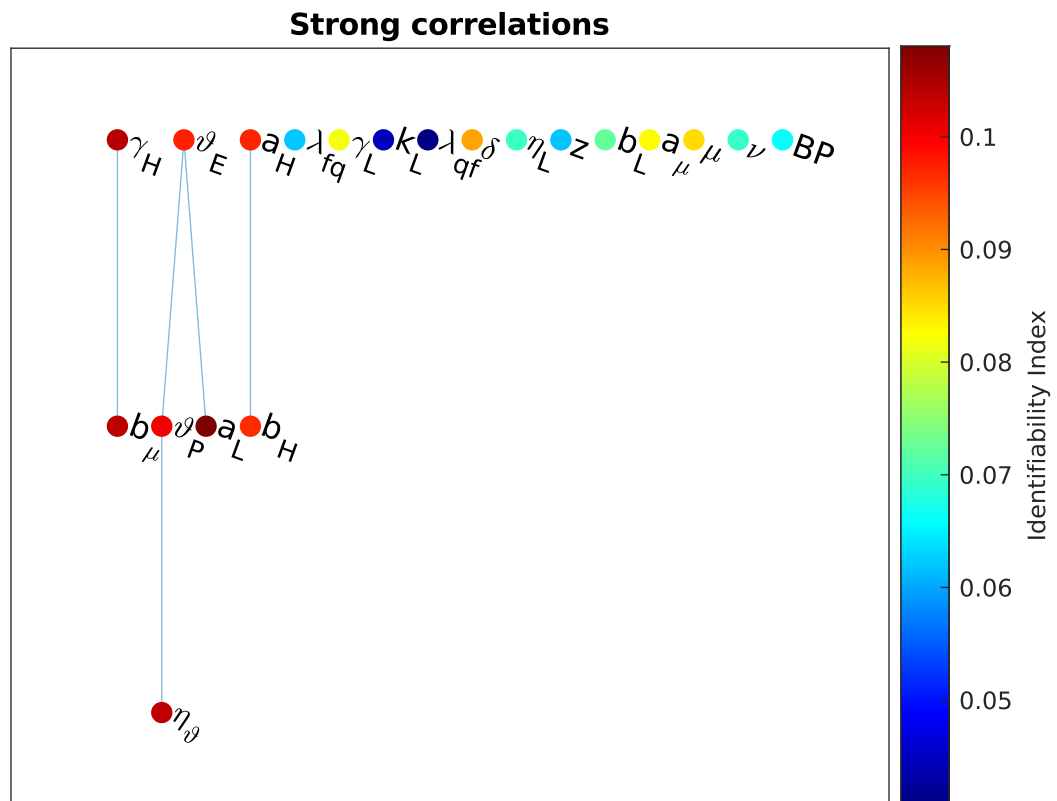
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0058'	'0.4993'	'0.0027'	'0.0622'
ϑ_E	'0'	'0.0006'	'0.0059'	'0.0002'	'0.0974'
γ_L	'0.0554'	'0.6'	'0.2604'	'0.5795'	'0.0818'
k_L	'1'	'9.64'	'5.4853'	'6.1663'	'0.0447'
λ_{qf}	'0'	'0.6262'	'0.5002'	'0.2783'	'0.0408'
δ	'0.026'	'0.0542'	'0.0339'	'0.0516'	'0.0888'
η_L	'0.2695'	'1'	'0.5005'	'0.8239'	'0.0698'
ϑ_P	'0'	'0.0001'	'0.0017'	'0'	'0.1003'
γ_H	'0.397'	'0.9754'	'0.5114'	'0.4189'	'0.1042'
z	'1.2575'	'30'	'14.8072'	'1.6903'	'0.062'
η_{ϑ}	'0.7302'	'0.956'	'0.7167'	'0.921'	'0.1038'
a_L	'9.7136'	'15'	'3.4563'	'14.3436'	'0.108'
b_L	'3.0697'	'6.7949'	'10.7219'	'6.6907'	'0.0723'
a_{μ}	'5.2881'	'15'	'8.0024'	'6.9588'	'0.083'
b_{μ}	'1'	'13.6'	'7.8112'	'6.5387'	'0.1041'
μ	'0.017'	'0.7767'	'0.4763'	'0.7144'	'0.0849'
a_H	'1.2367'	'2.4942'	'7.4264'	'2.3874'	'0.0971'
b_H	'5.0215'	'14.5011'	'8.1834'	'8.4245'	'0.0965'
ν	'0.002'	'0.0791'	'248.3951'	'0.0352'	'0.0696'
BP	'278.4604'	'282.9283'	'283.5'	'278.5'	'0.0662'

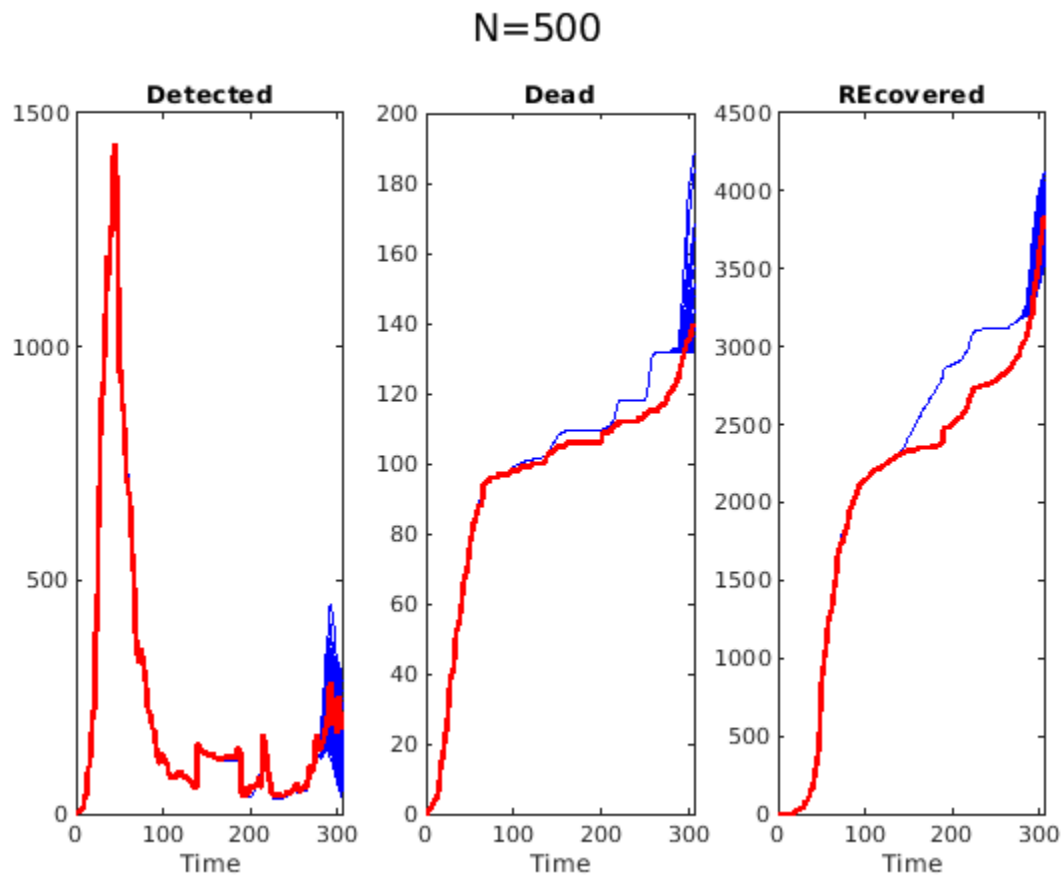
10.3. Identifiability analysis







10.4. Uncertainty analysis



Chapter 11. Extension number11

11.1. Basic information

The extension to be validated consists of the time series from the data306 to the 321. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

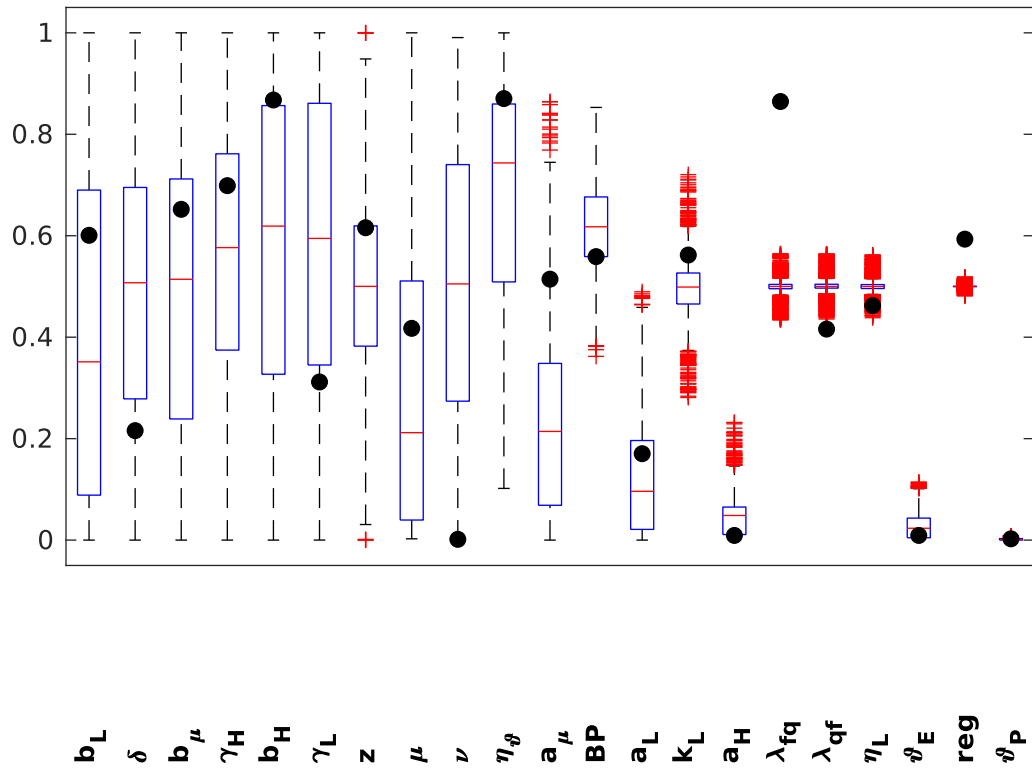
11.2. Estimated parameters with their intervals

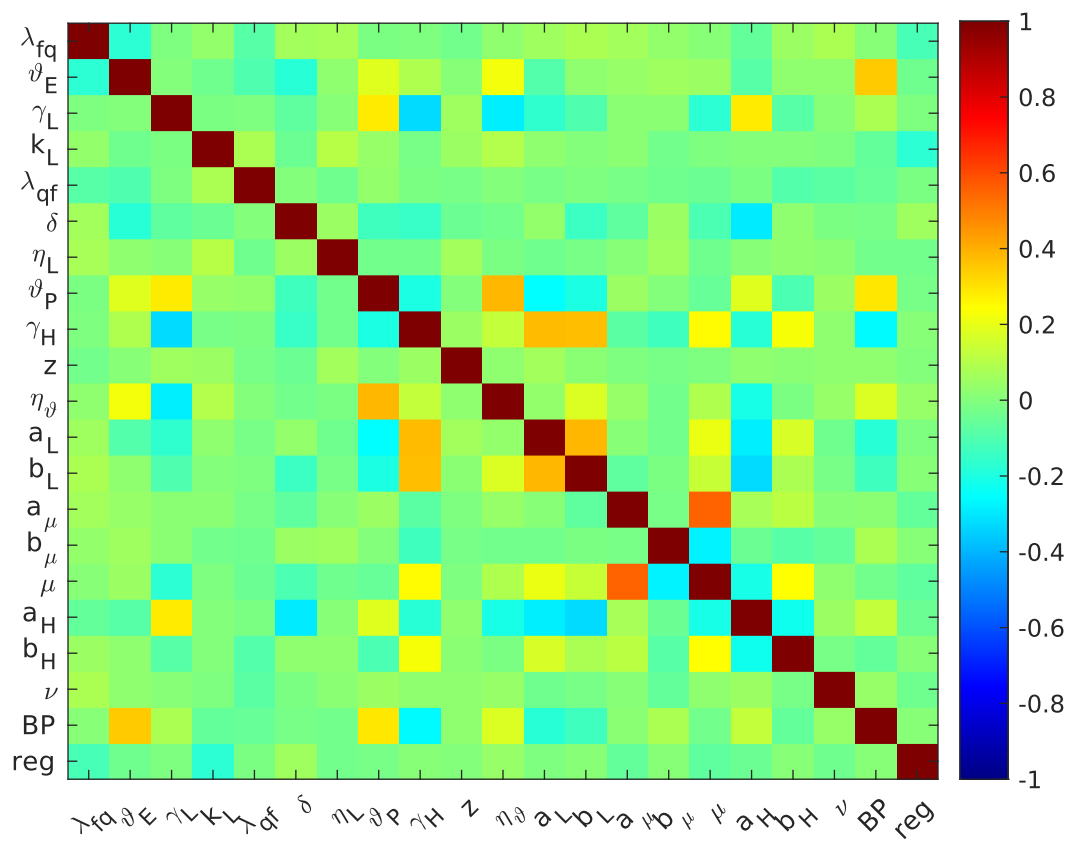
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

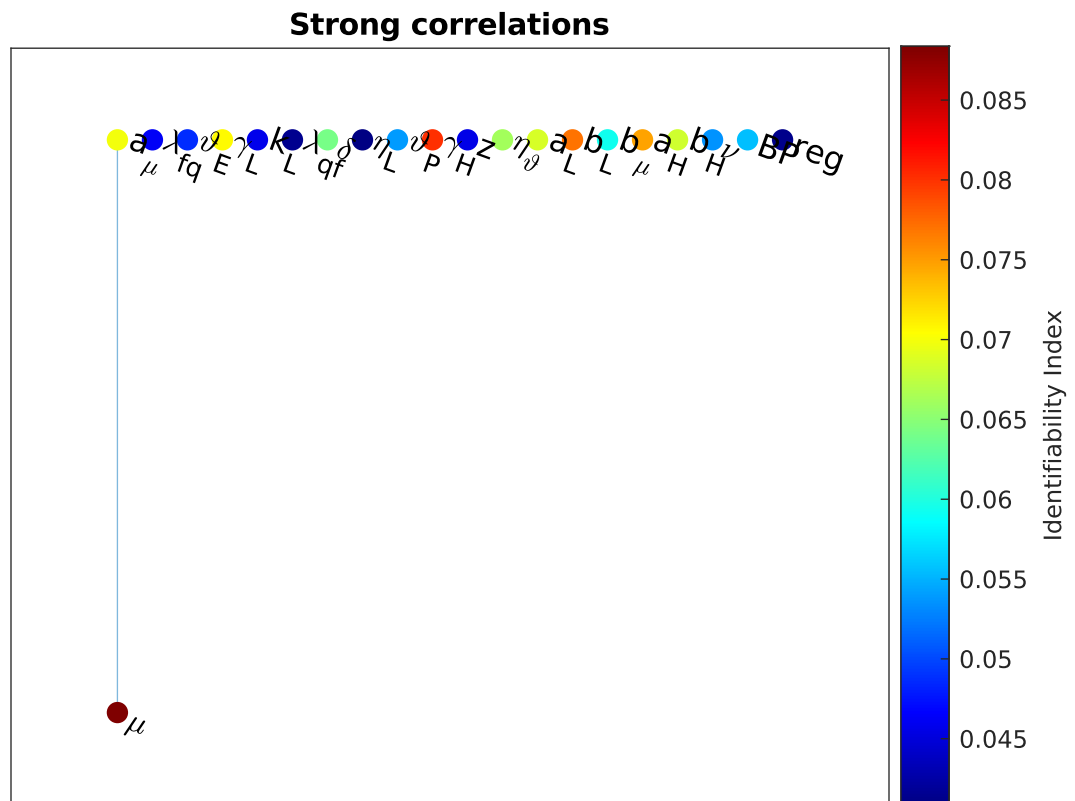
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0482'	'0.9513'	'0.5'	'0.8646'	'0.0464'
ϑ_E	'0.0013'	'0.0177'	'0.0234'	'0.0092'	'0.0487'
γ_L	'0.2367'	'0.3906'	'0.5948'	'0.3117'	'0.0706'
k_L	'1.3706'	'8.3199'	'5.4897'	'6.058'	'0.0458'
λ_{qf}	'0.0396'	'0.7188'	'0.5001'	'0.4159'	'0.0416'
δ	'0.009'	'0.0483'	'0.0761'	'0.0324'	'0.0642'
η_L	'0.1094'	'0.8623'	'0.5'	'0.4623'	'0.0409'
ϑ_P	'0.0019'	'0.003'	'0.0015'	'0.0025'	'0.054'
γ_H	'0.2808'	'0.8861'	'0.5766'	'0.6987'	'0.0801'
z	'4.4065'	'25.2564'	'15.0053'	'18.4735'	'0.0457'
η_{ϑ}	'0.8486'	'0.9219'	'0.7435'	'0.8704'	'0.0663'
a_L	'3.1215'	'7.4941'	'2.3475'	'3.3846'	'0.0687'
b_L	'7.9535'	'14.5966'	'5.9197'	'9.4115'	'0.0769'
a_{μ}	'8.0837'	'15'	'4.001'	'8.202'	'0.0699'
b_{μ}	'2.808'	'12.578'	'8.1986'	'10.1291'	'0.0594'
μ	'0.0211'	'0.8453'	'0.2118'	'0.4174'	'0.0884'
a_H	'1.0975'	'4.1931'	'1.6828'	'1.1288'	'0.0748'
b_H	'3.8674'	'15'	'9.6658'	'13.146'	'0.0683'
ν	'0.2903'	'1.3966'	'252.5188'	'0.7737'	'0.0537'
BP	'303.2905'	'306.0004'	'304.5'	'303.5'	'0.0556'
reg	'0.0457'	'0.1491'	'0.125'	'0.1483'	'0.0413'

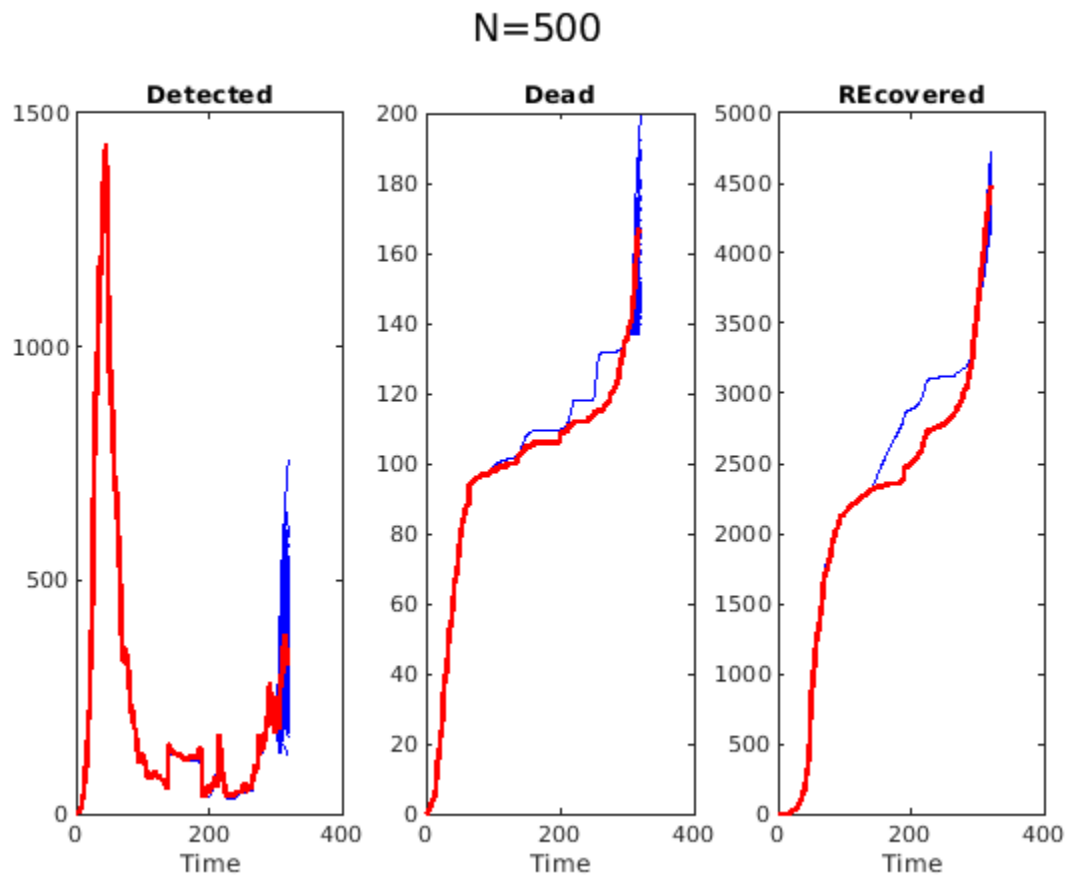
11.3. Identifiability analysis







11.4. Uncertainty analysis



Chapter 12. Extension number12

12.1. Basic information

The extension to be validated consists of the time series from the data321 to the 353. The status of the validation is: COMPLETED.

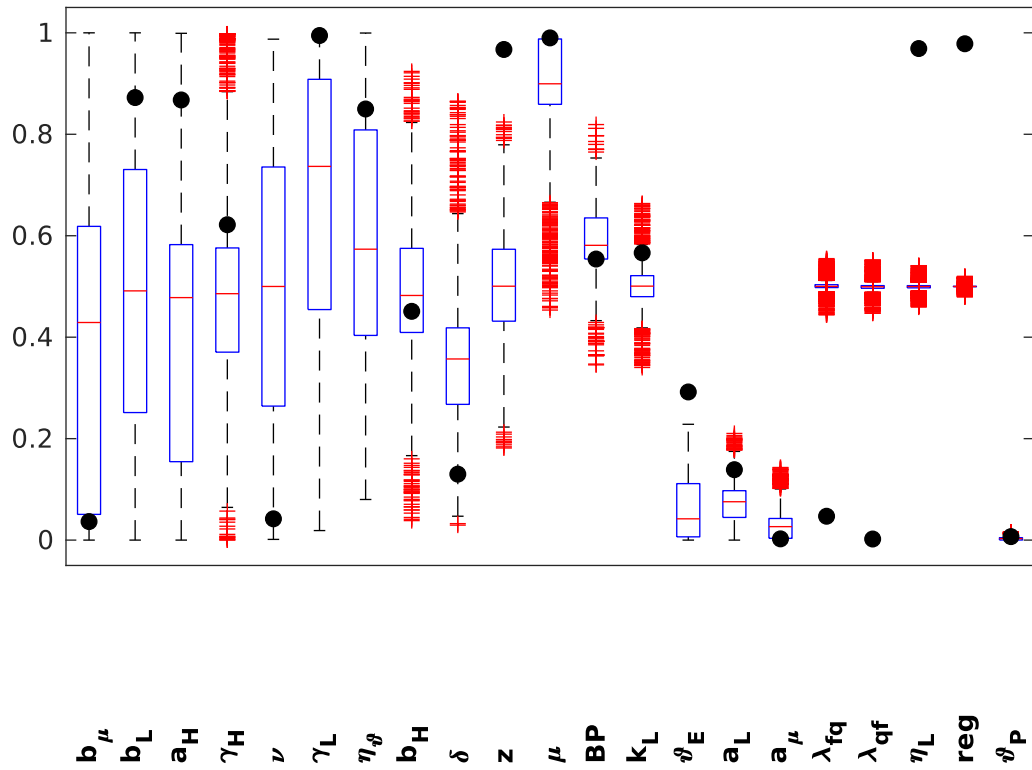
The number of estimations needed to perform the validation was1000.

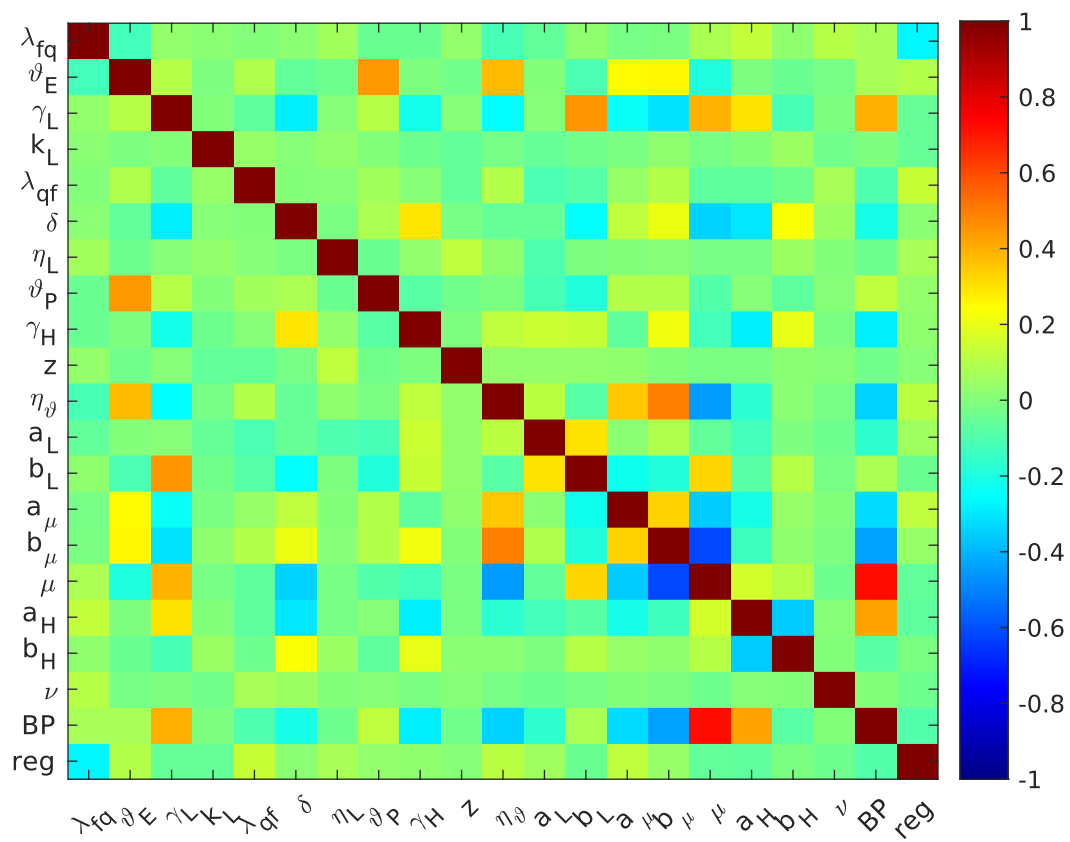
12.2. Estimated parameters with their intervals

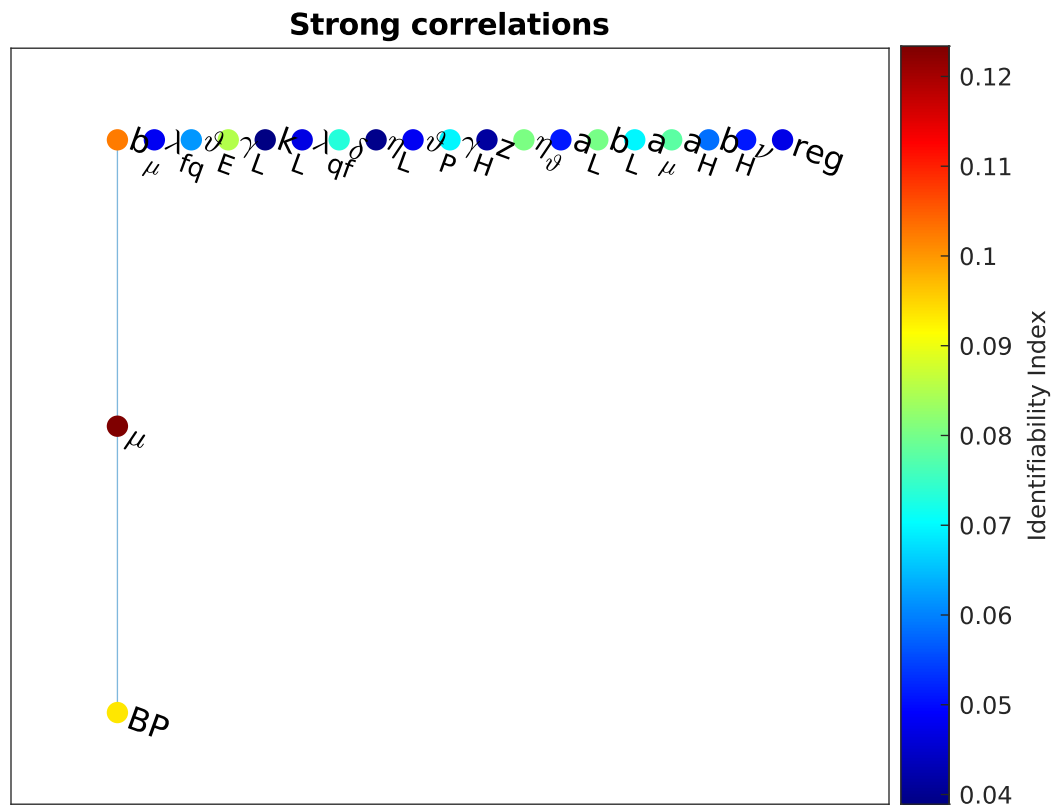
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4913'	'0.5089'	'0.5001'	'0.047'	'0.0483'
\vartheta_E	'0.0319'	'0.0523'	'0.0421'	'0.292'	'0.0617'
\gamma_L	'0.7156'	'0.7578'	'0.7367'	'0.9947'	'0.0853'
k_L	'5.4247'	'5.5866'	'5.5056'	'6.0966'	'0.0389'
\lambda_{qf}	'0.4911'	'0.5077'	'0.4994'	'0.0021'	'0.0469'
\delta	'0.0507'	'0.0564'	'0.0536'	'0.0195'	'0.0735'
\eta_L	'0.4924'	'0.5074'	'0.4999'	'0.969'	'0.0397'
\vartheta_P	'0'	'0.0082'	'0.003'	'0.0069'	'0.0483'
\gamma_H	'0.4674'	'0.5043'	'0.4858'	'0.6217'	'0.0698'
z	'14.7018'	'15.3286'	'15.0152'	'29.0153'	'0.0414'
\eta_{\vartheta}	'0.5557'	'0.5913'	'0.5735'	'0.8498'	'0.0806'
a_L	'1.9468'	'2.1706'	'2.0587'	'2.9435'	'0.0513'
b_L	'7.5449'	'8.2114'	'7.8782'	'13.2134'	'0.0803'
a_{\mu}	'1.2083'	'1.535'	'1.3716'	'1.0343'	'0.0696'
b_{\mu}	'6.6715'	'7.3393'	'7.0054'	'1.5112'	'0.1023'
\mu	'0.8738'	'0.9251'	'0.8995'	'0.99'	'0.1234'
a_H	'7.4047'	'7.9803'	'7.6925'	'13.1473'	'0.0781'
b_H	'7.5293'	'7.9736'	'7.7515'	'7.3136'	'0.0586'
\nu	'239.1537'	'260.8369'	'249.9953'	'20.9832'	'0.0513'
BP	'327.1125'	'327.8875'	'327.5'	'326.5'	'0.0934'
reg	'0.1233'	'0.1267'	'0.125'	'0.2446'	'0.0474'

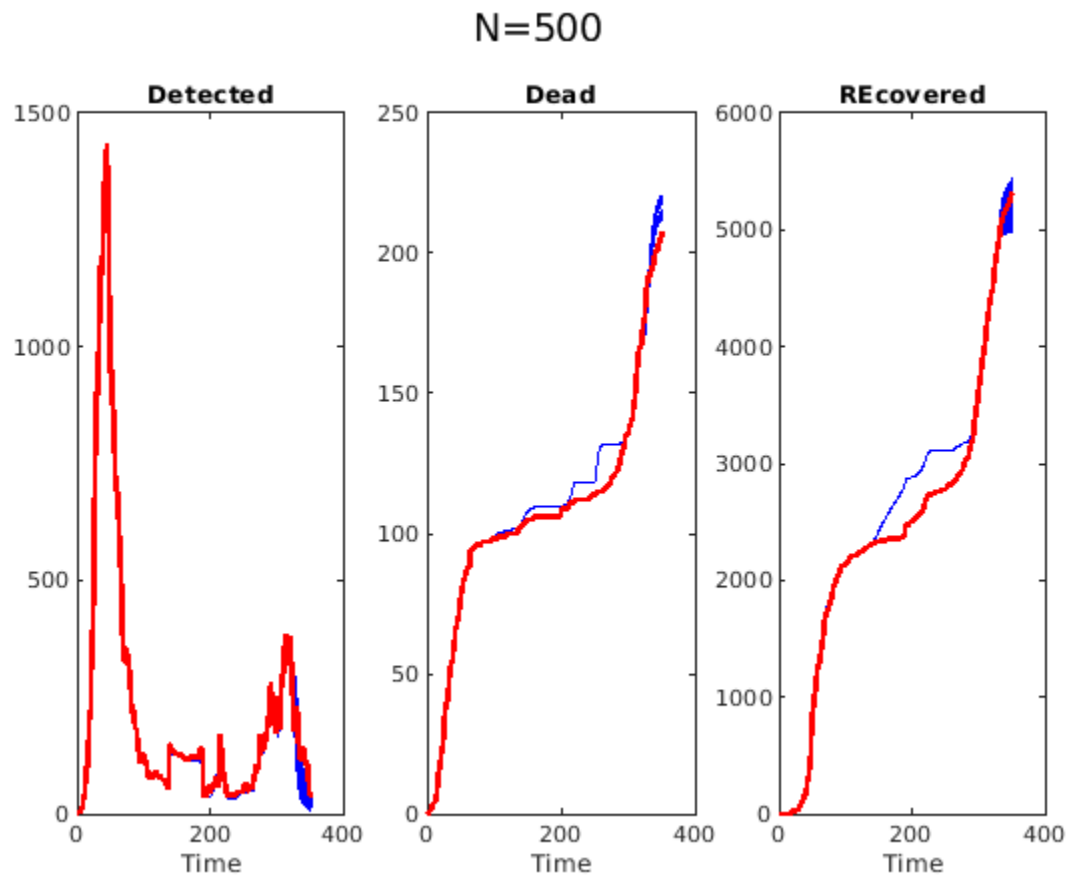
12.3. Identifiability analysis







12.4. Uncertainty analysis



Chapter 13. Extension number13

13.1. Basic information

The extension to be validated consists of the time series from the data353 to the 425. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

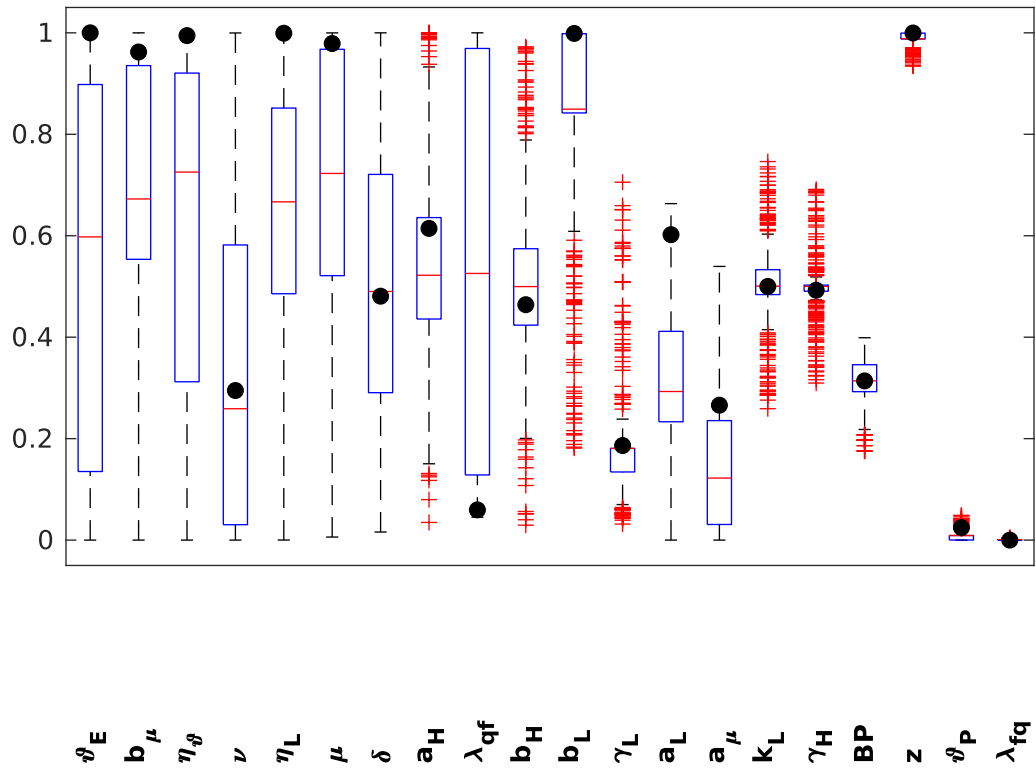
13.2. Estimated parameters with their intervals

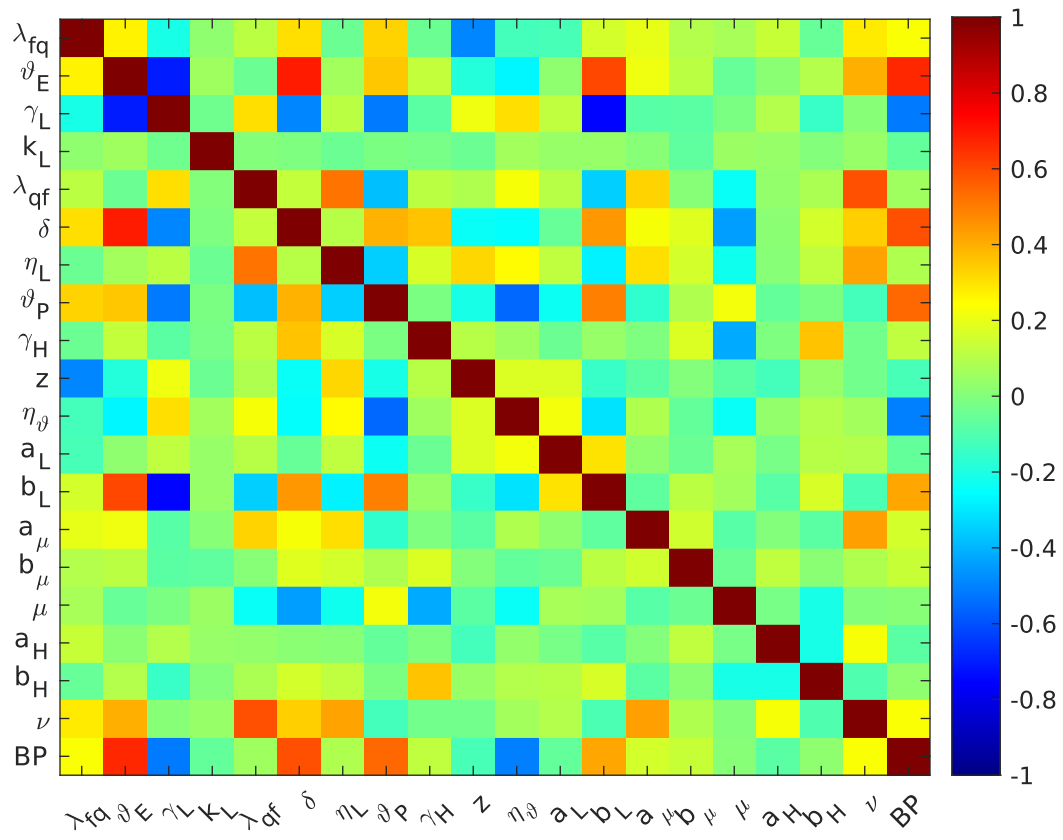
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

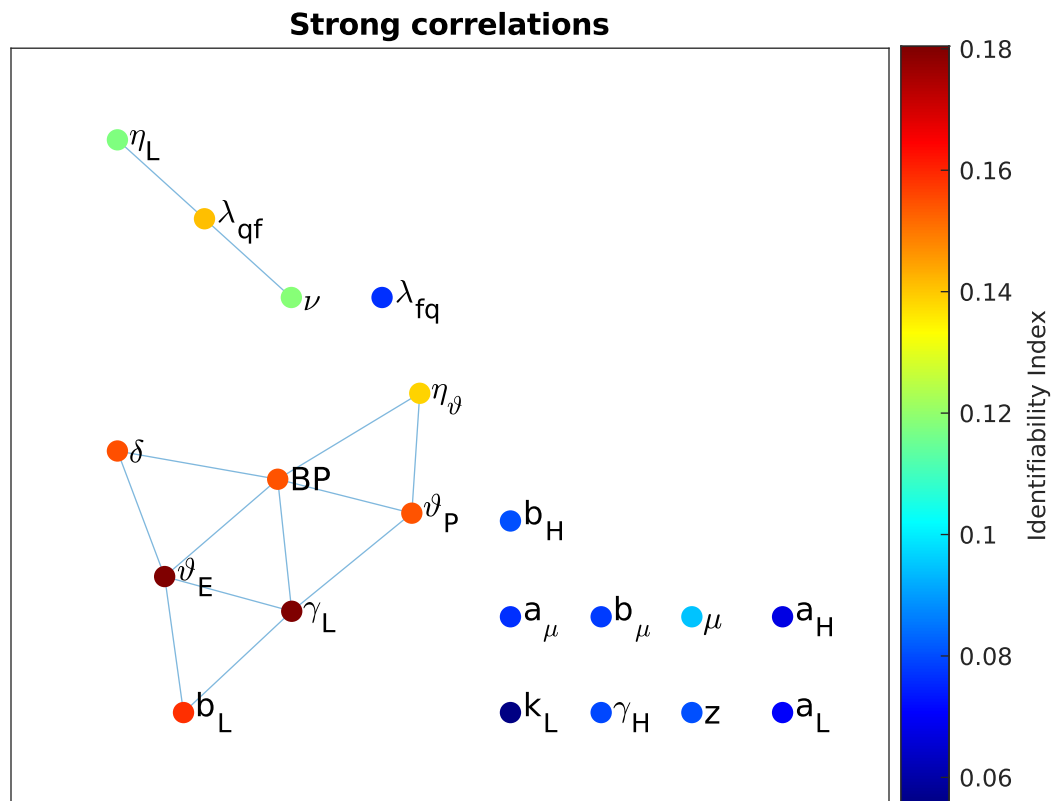
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0'	'0.0009'	'0'	'0.0768'
ϑ_E	'0.9633'	'1'	'0.5977'	'1'	'0.1804'
γ_L	'0.1123'	'0.1872'	'0.1808'	'0.1865'	'0.1803'
k_L	'1'	'10'	'5.5055'	'5.5006'	'0.0556'
λ_{qf}	'0.0524'	'0.1393'	'0.5257'	'0.0596'	'0.1412'
δ	'0'	'0.15'	'0.0735'	'0.0721'	'0.155'
η_L	'0.3857'	'1'	'0.6668'	'0.9992'	'0.1178'
ϑ_P	'0.0019'	'0.0273'	'0.009'	'0.0246'	'0.1545'
γ_H	'0'	'1'	'0.5001'	'0.4926'	'0.0798'
z	'11.3169'	'30'	'29.634'	'29.9895'	'0.0807'
η_{ϑ}	'0.7413'	'1'	'0.7255'	'0.9945'	'0.1387'
a_L	'4.2246'	'10.0231'	'5.1011'	'9.4298'	'0.0707'
b_L	'7.5727'	'15'	'12.8928'	'14.983'	'0.1588'
a_{μ}	'1.35'	'15'	'2.7137'	'4.7236'	'0.077'
b_{μ}	'1.28'	'15'	'10.4153'	'14.4712'	'0.0782'
μ	'0'	'1'	'0.7228'	'0.9789'	'0.0948'
a_H	'1'	'15'	'8.3076'	'9.6024'	'0.0673'
b_H	'1'	'15'	'7.9969'	'7.4967'	'0.0809'
ν	'135.9055'	'234.5279'	'129.4709'	'147.4517'	'0.119'
BP	'347.79'	'352.2972'	'350.5'	'350.5'	'0.1542'

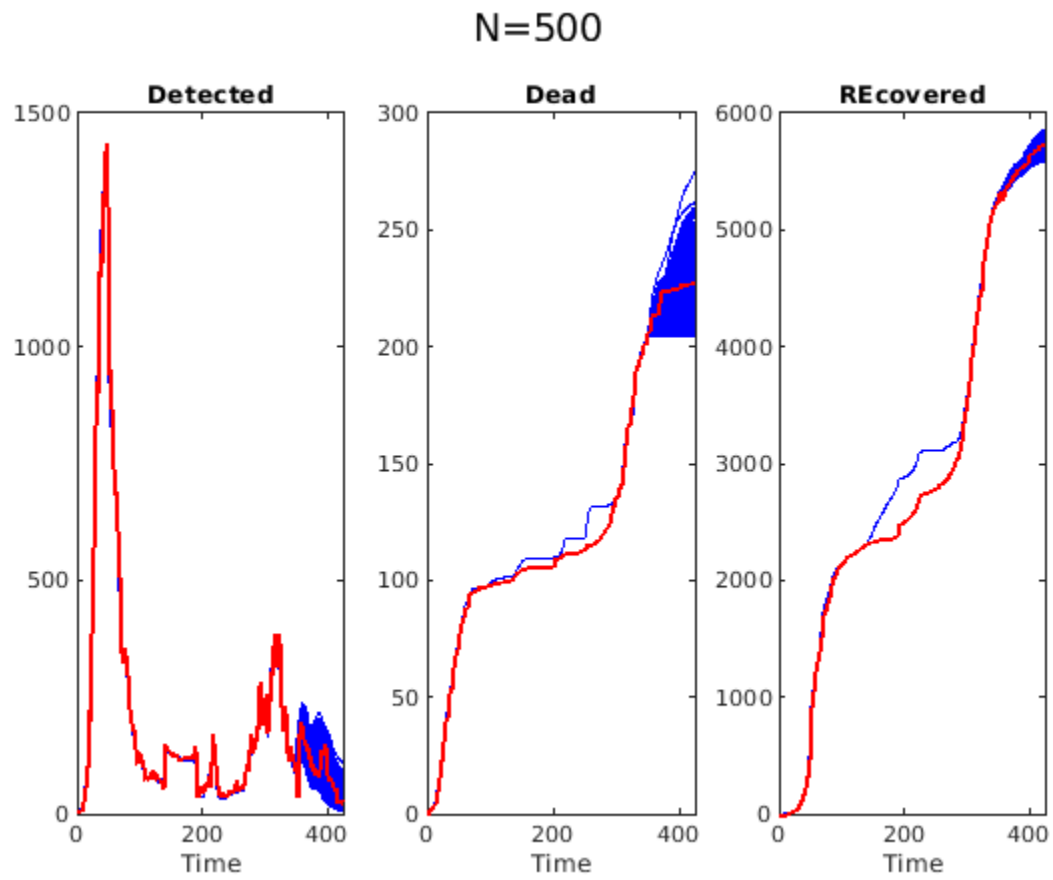
13.3. Identifiability analysis







13.4. Uncertainty analysys



Chapter 14. Extension number14

14.1. Basic information

The extension to be validated consists of the time series from the data425 to the 493. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

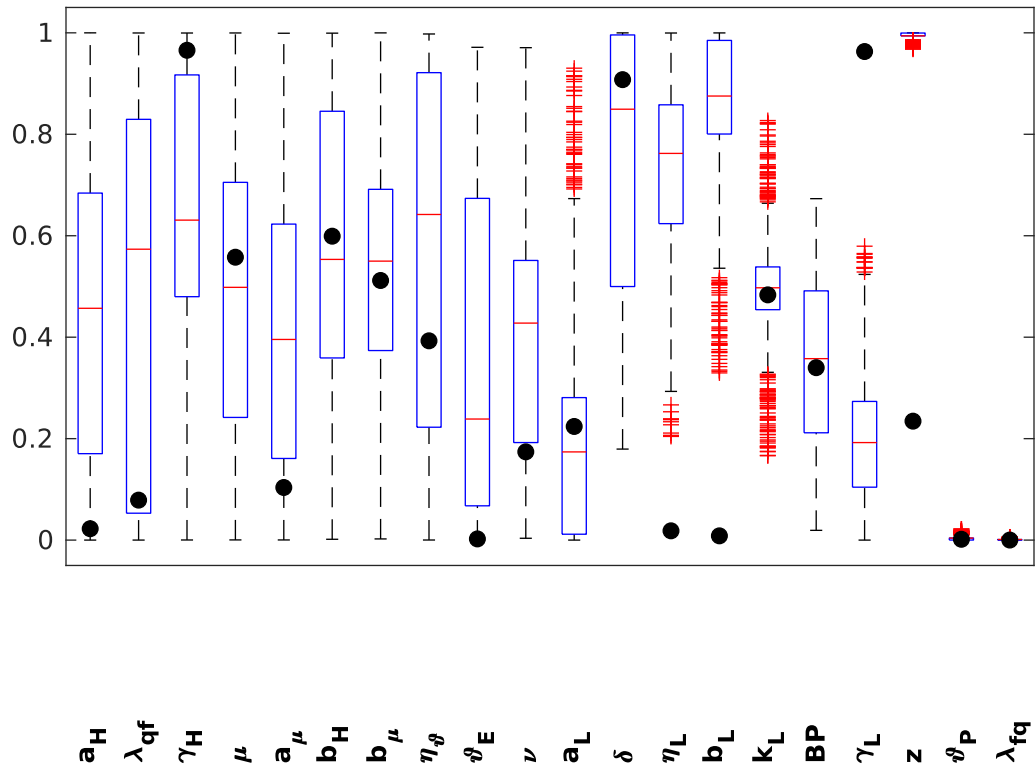
14.2. Estimated parameters with their intervals

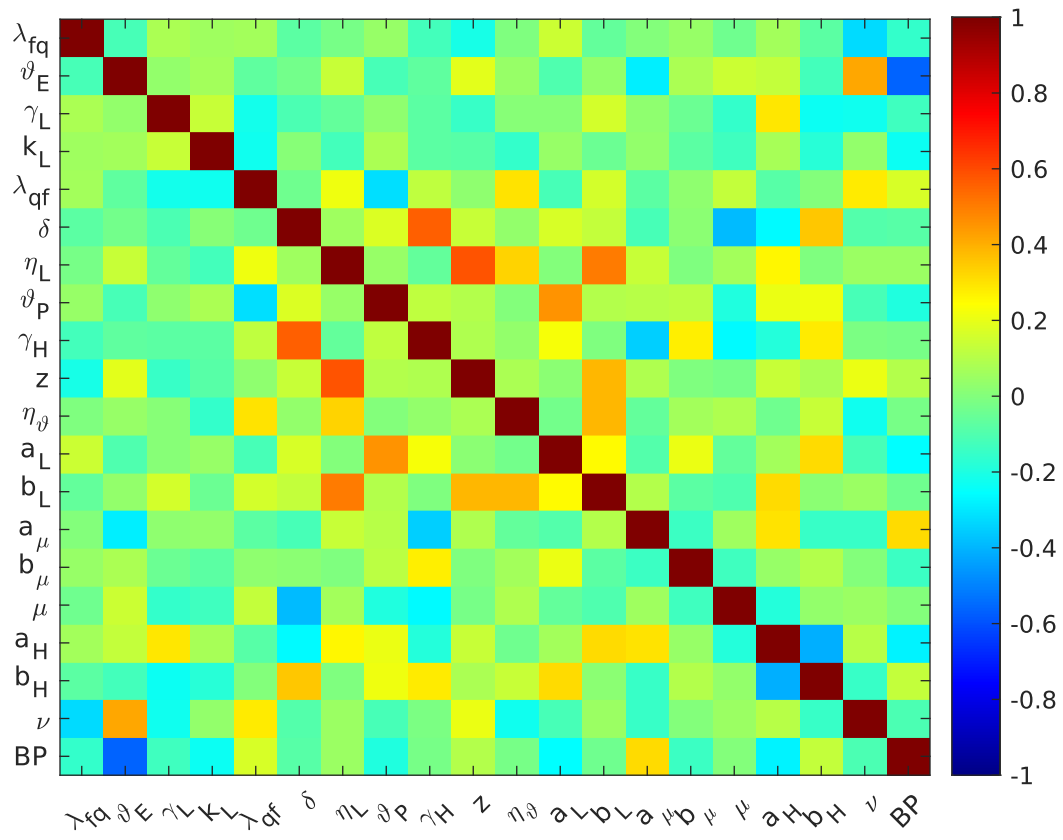
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

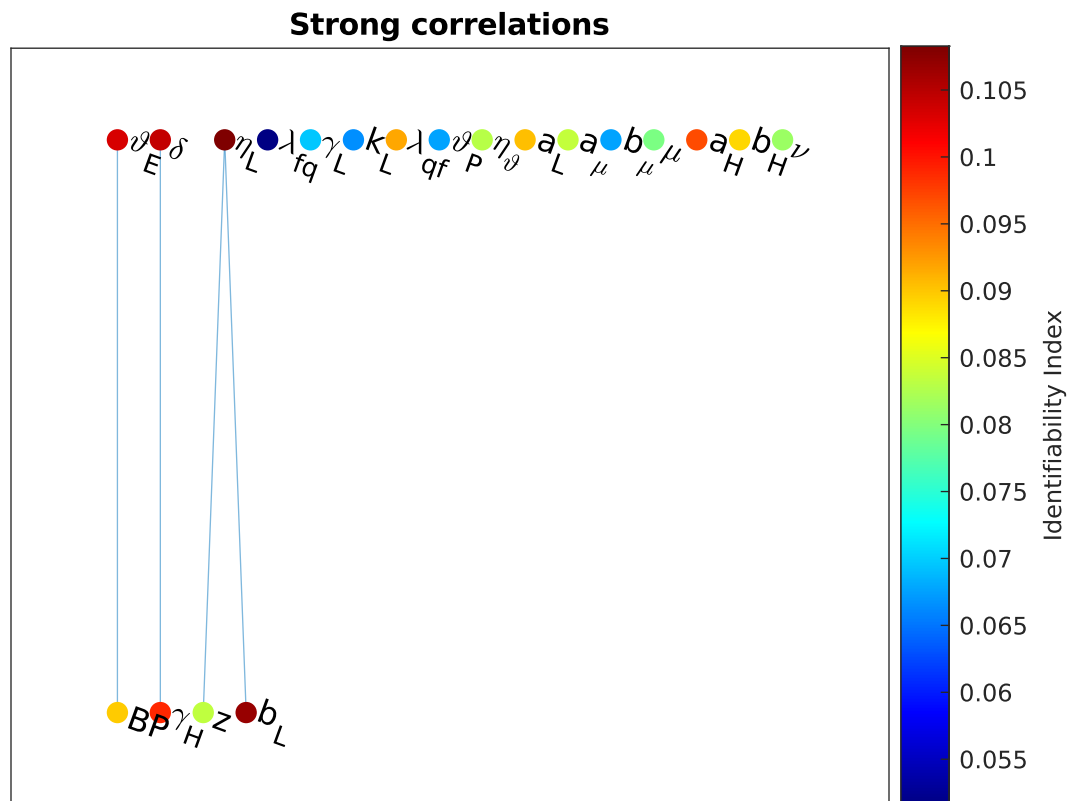
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0035'	'0.0012'	'0.0001'	'0.0516'
ϑ_E	'0'	'0.0052'	'0.2387'	'0.0023'	'0.1033'
γ_L	'0.309'	'1'	'0.1925'	'0.9631'	'0.0697'
k_L	'1'	'10'	'5.4765'	'5.3509'	'0.0666'
λ_{qf}	'0.0409'	'0.1705'	'0.5734'	'0.0788'	'0.0919'
δ	'0.0038'	'0.15'	'0.1274'	'0.1362'	'0.1044'
η_L	'0.0021'	'0.0373'	'0.7623'	'0.0183'	'0.1083'
ϑ_P	'0.0015'	'0.0105'	'0.0041'	'0.0016'	'0.0678'
γ_H	'0'	'1'	'0.6308'	'0.9656'	'0.0989'
z	'6.3209'	'7.5195'	'29.82'	'7.034'	'0.0833'
η_{ϑ}	'0.3281'	'0.4737'	'0.6419'	'0.3929'	'0.083'
a_L	'3.1165'	'5.0256'	'3.4433'	'4.1363'	'0.0904'
b_L	'1.0674'	'1.848'	'13.2524'	'1.1175'	'0.1068'
a_{μ}	'1.7'	'14.335'	'6.5376'	'2.452'	'0.0837'
b_{μ}	'1.35'	'15'	'8.6992'	'8.165'	'0.0677'
μ	'0'	'1'	'0.4983'	'0.5577'	'0.0796'
a_H	'1.28'	'15'	'7.3976'	'1.3143'	'0.097'
b_H	'1'	'15'	'8.7468'	'9.3874'	'0.0891'
ν	'86.3764'	'106.5652'	'213.8884'	'87.0043'	'0.0815'
BP	'392.9226'	'402.7584'	'399.5'	'397.1869'	'0.0897'

14.3. Identifiability analysis







14.4. Uncertainty analysis

