

Validation process forBARRANQUILLA

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 56. The status of the validation is: COMPLETED.

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

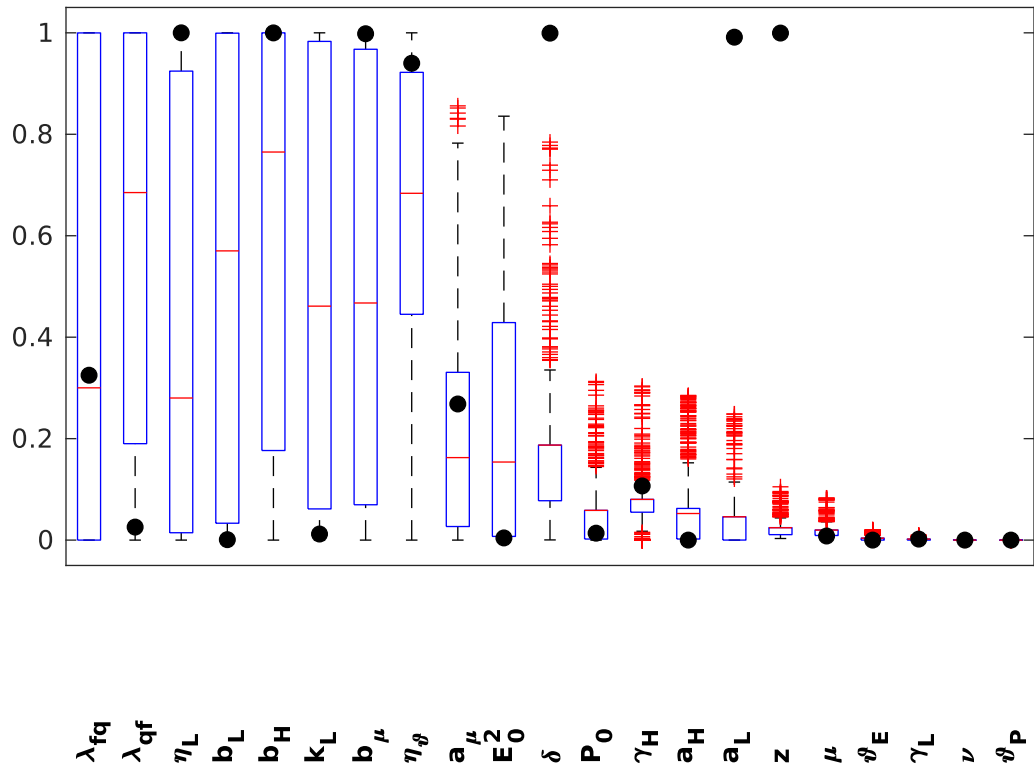
1.2. Estimated parameters with their intervals

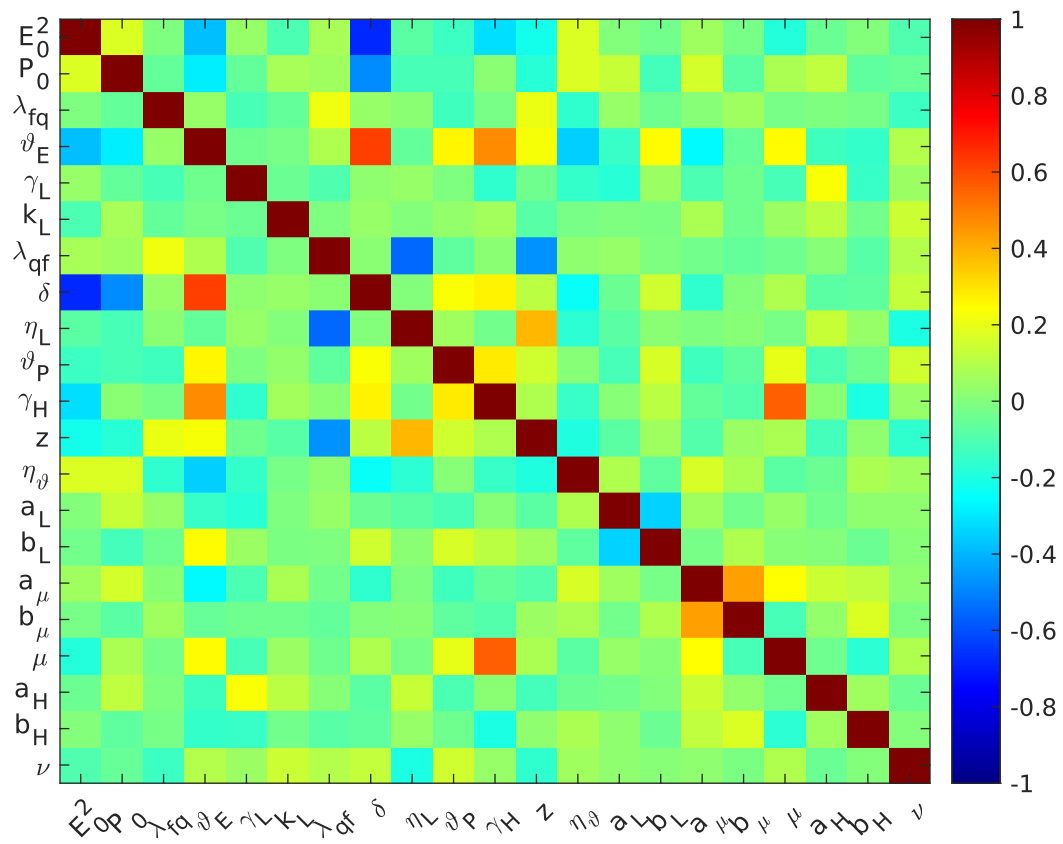
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

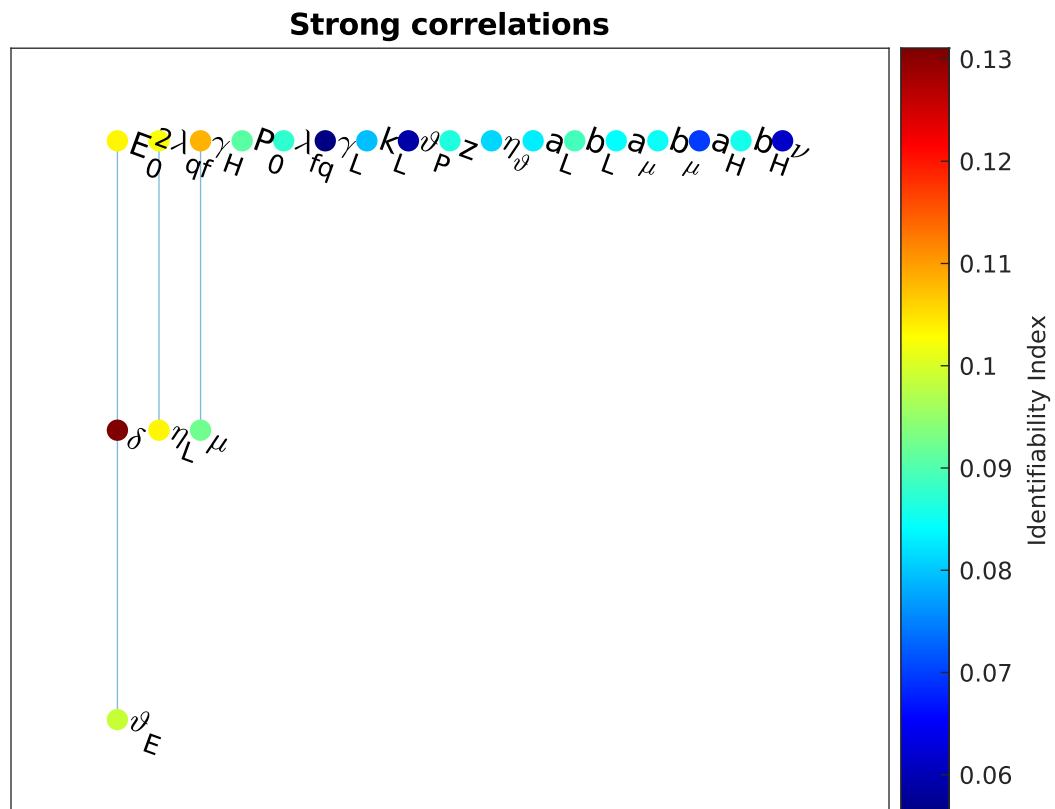
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
E^2_0	'5.876'	'17.855'	'308.3664'	'8.5347'	'0.1034'
P_0	'5.3663'	'7.0107'	'23.4498'	'5.4574'	'0.091'
λ_{fq}	'0.3126'	'0.3285'	'0.3002'	'0.325'	'0.0876'
ϑ_E	'0'	'0'	'0.0039'	'0'	'0.0989'
γ_L	'0'	'0.0039'	'0.0021'	'0.002'	'0.0563'
k_L	'1'	'8.695'	'5.1508'	'1.1077'	'0.0796'
λ_{qf}	'0.0249'	'0.0271'	'0.6851'	'0.0257'	'0.1027'
δ	'0.1128'	'0.15'	'0.0281'	'0.1499'	'0.1311'
η_L	'0.9508'	'1'	'0.2801'	'1'	'0.1034'
ϑ_P	'0'	'0'	'0'	'0'	'0.0593'
γ_H	'0.0866'	'0.1079'	'0.0803'	'0.1068'	'0.1084'
z	'27.7854'	'30'	'0.7377'	'29.9857'	'0.0865'
η_{ϑ}	'0.3328'	'1'	'0.6837'	'0.94'	'0.0814'
a_L	'1'	'15'	'1.6442'	'14.8796'	'0.083'
b_L	'1'	'11.773'	'8.982'	'1.012'	'0.0891'
a_{μ}	'2.3657'	'8.6267'	'3.2773'	'4.7564'	'0.0843'
b_{μ}	'6.1548'	'15'	'7.544'	'14.9749'	'0.0848'
μ	'0.0058'	'0.0124'	'0.02'	'0.0081'	'0.0925'
a_H	'1'	'1.1446'	'1.735'	'1.0003'	'0.0699'
b_H	'11.1472'	'15'	'11.7102'	'14.9978'	'0.0857'
ν	'0'	'0.0001'	'0.0298'	'0.0001'	'0.0614'

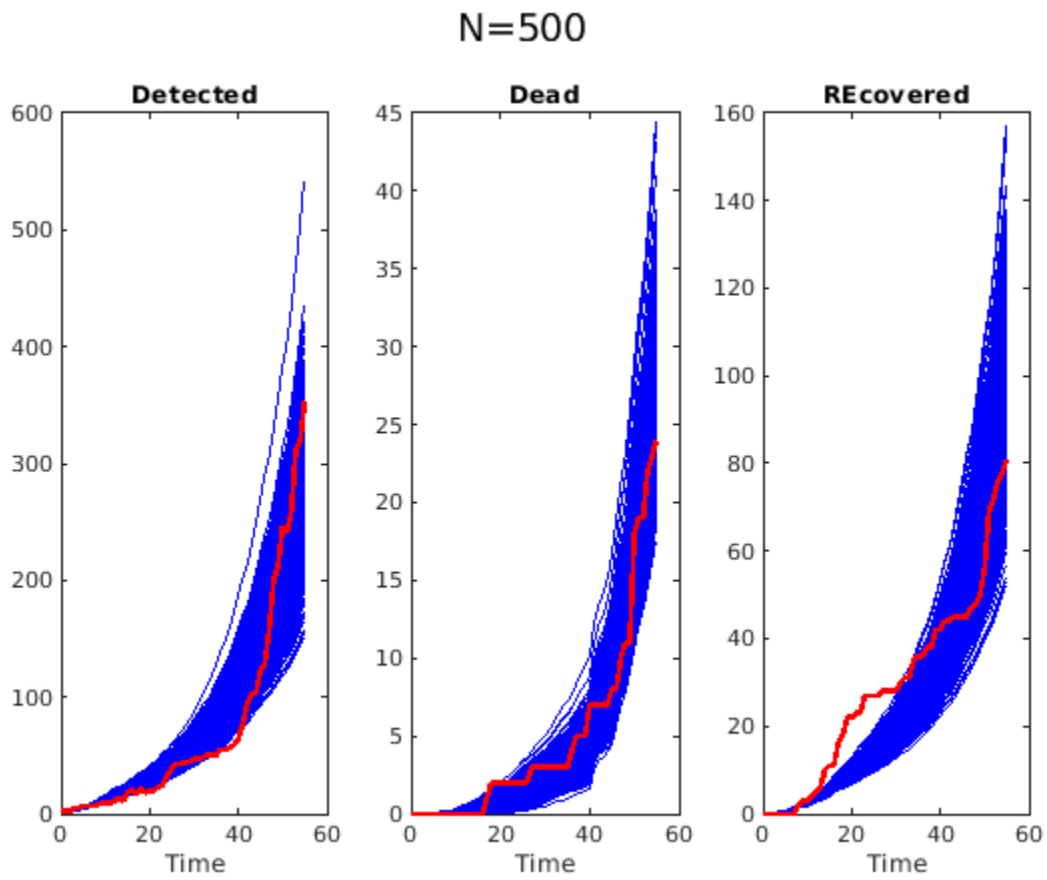
1.3. Identifiability analysis







1.4. Uncertainty analysis



Chapter 2. Extension number2

2.1. Basic information

The extension to be validated consists of the time series from the data56 to the 86. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was2000.

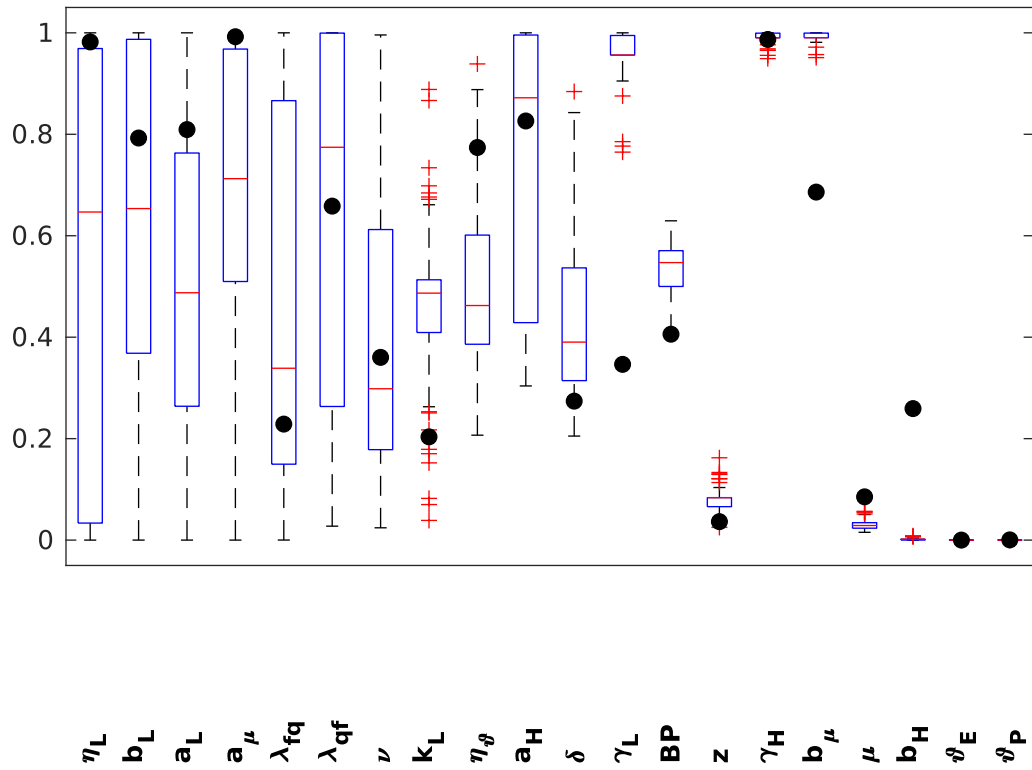
2.2. Estimated parameters with their intervals

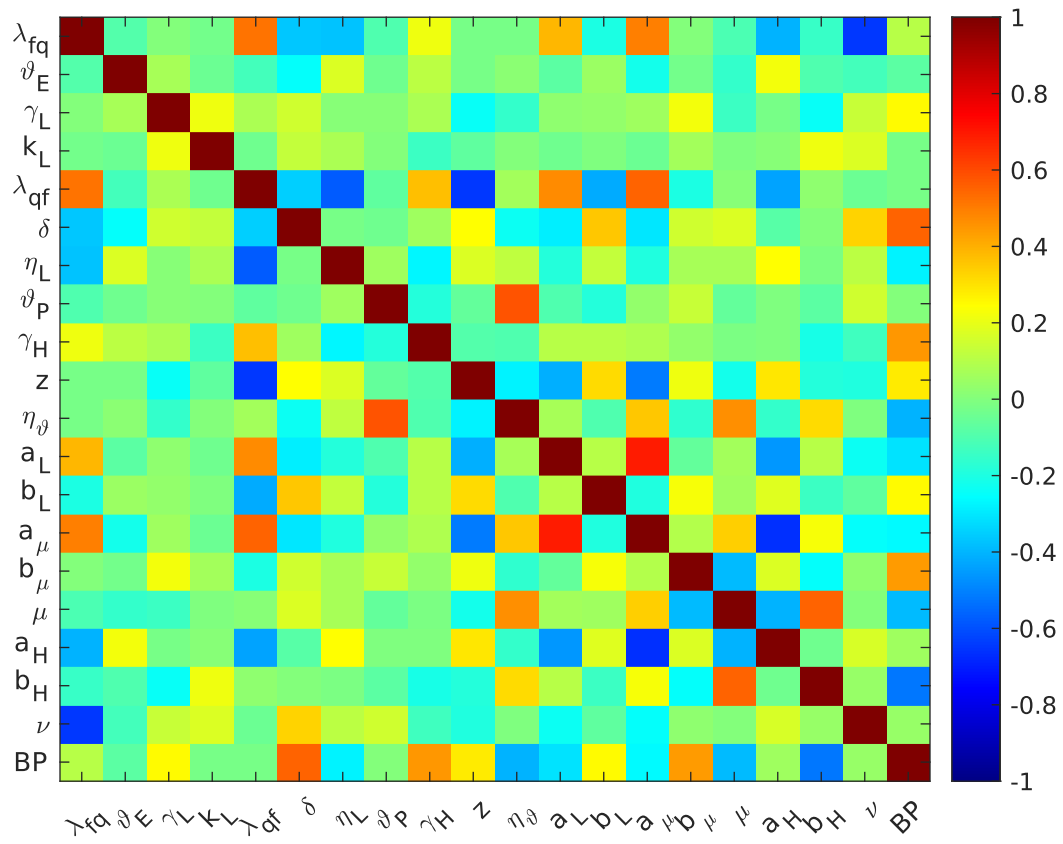
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

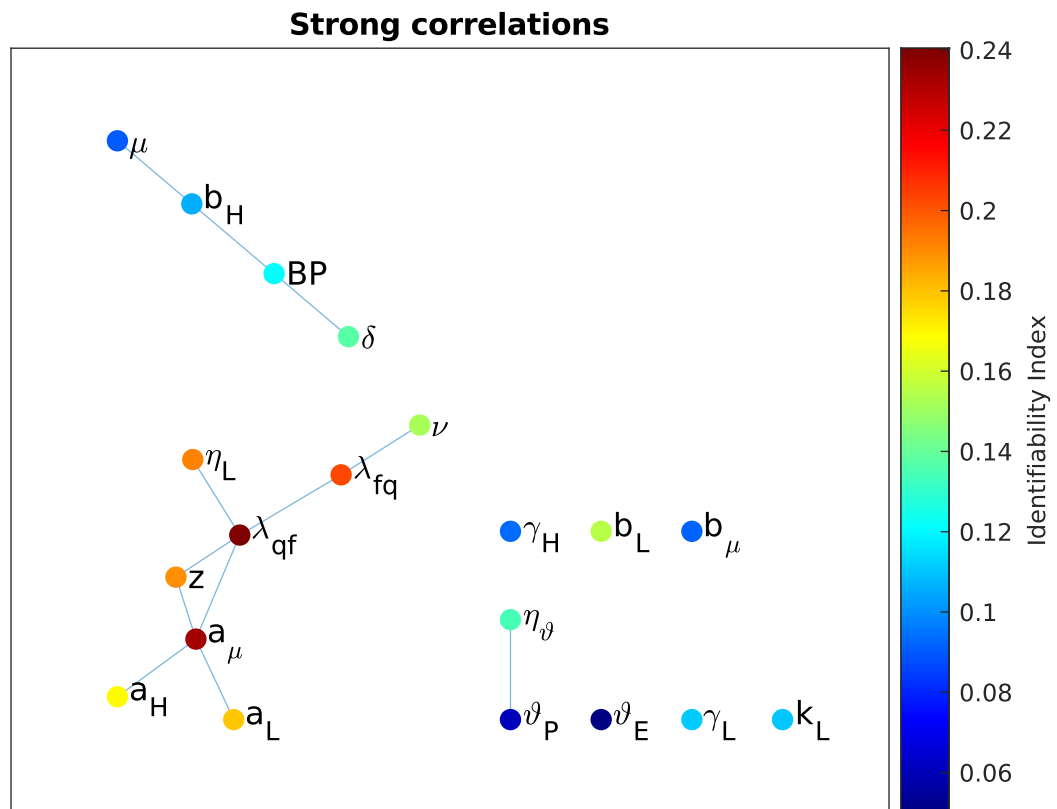
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.2047'	'0.2535'	'0.3388'	'0.2287'	'0.2031'
ϑ_E	'0'	'0.0001'	'0'	'0'	'0.0501'
γ_L	'0.3295'	'0.8434'	'0.9561'	'0.3465'	'0.1114'
k_L	'1.342'	'9.55'	'5.3816'	'2.8318'	'0.1106'
λ_{qf}	'0.6493'	'0.7667'	'0.7744'	'0.6584'	'0.2405'
δ	'0.0321'	'0.0457'	'0.0585'	'0.0411'	'0.1375'
η_L	'0.6878'	'0.9872'	'0.6468'	'0.9821'	'0.1919'
ϑ_P	'0.0004'	'0.0007'	'0'	'0.0004'	'0.0609'
γ_H	'0.503'	'1'	'0.9902'	'0.9869'	'0.0938'
z	'1.0074'	'1.2253'	'2.5107'	'1.0906'	'0.1897'
η_{ϑ}	'0.7299'	'0.7789'	'0.4624'	'0.7739'	'0.1348'
a_L	'9.7178'	'14.5086'	'7.8266'	'12.3303'	'0.1791'
b_L	'6.1247'	'12.21'	'10.1498'	'12.0971'	'0.1552'
a_{μ}	'13.4264'	'14.9371'	'10.975'	'14.8919'	'0.2334'
b_{μ}	'9.6568'	'11.3515'	'14.8659'	'10.6046'	'0.092'
μ	'0.06'	'0.0869'	'0.0288'	'0.0853'	'0.0903'
a_H	'11.3665'	'13.8669'	'13.2072'	'12.567'	'0.1698'
b_H	'3.1416'	'4.7814'	'1.0258'	'4.6294'	'0.106'
ν	'171.8771'	'272.6289'	'149.1819'	'180.1112'	'0.1521'
BP	'35.3871'	'41.9275'	'47.5'	'35.5'	'0.1221'

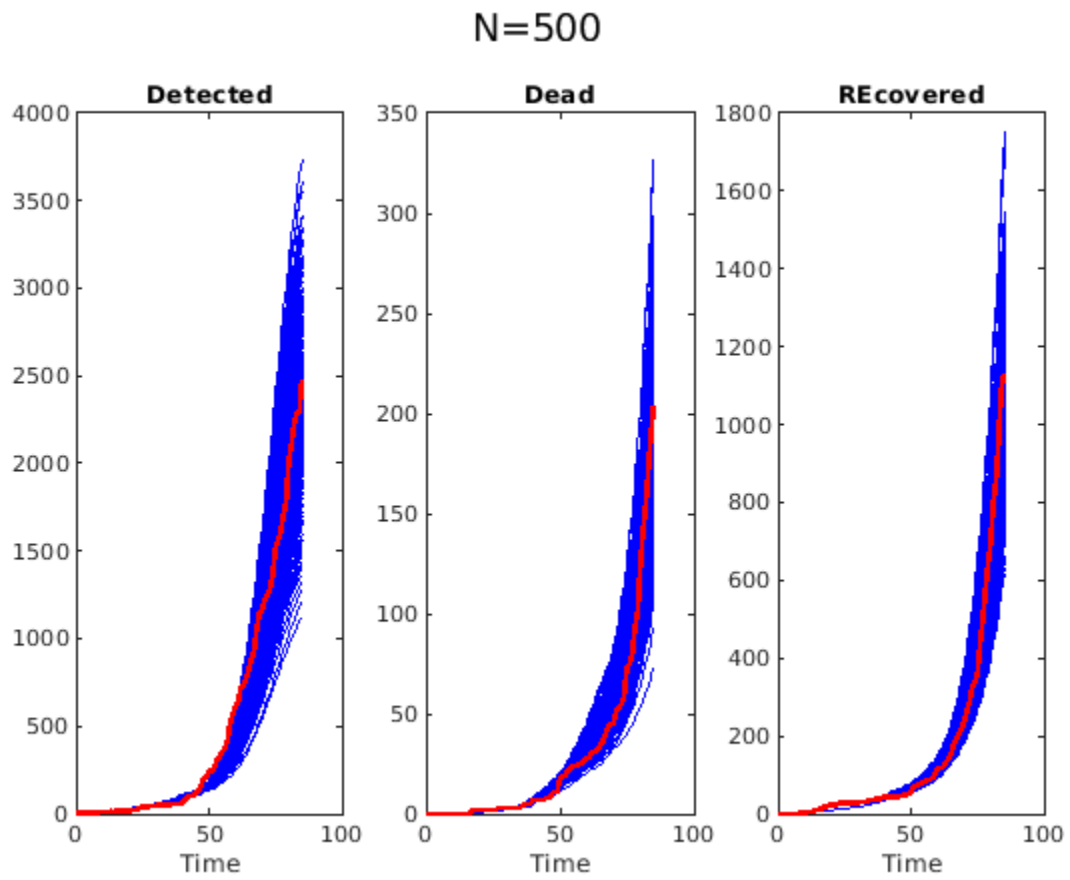
2.3. Identifiability analysis







2.4. Uncertainty analysis



Chapter 3. Extension number3

3.1. Basic information

The extension to be validated consists of the time series from the data86 to the 123. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was3000.

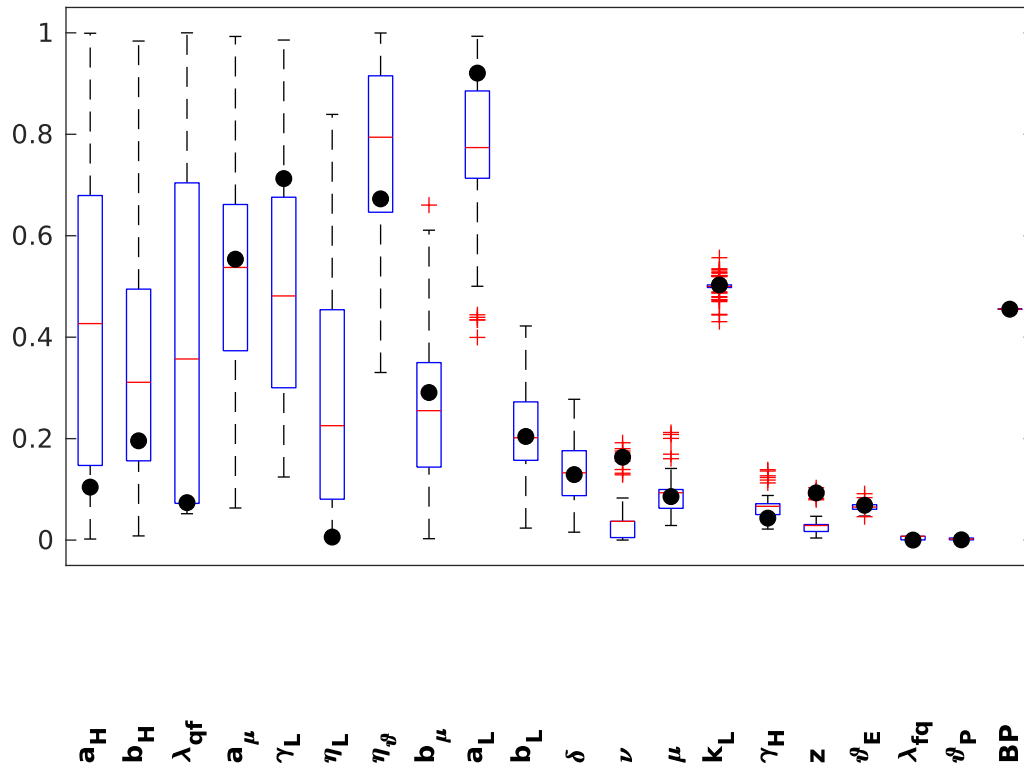
3.2. Estimated parameters with their intervals

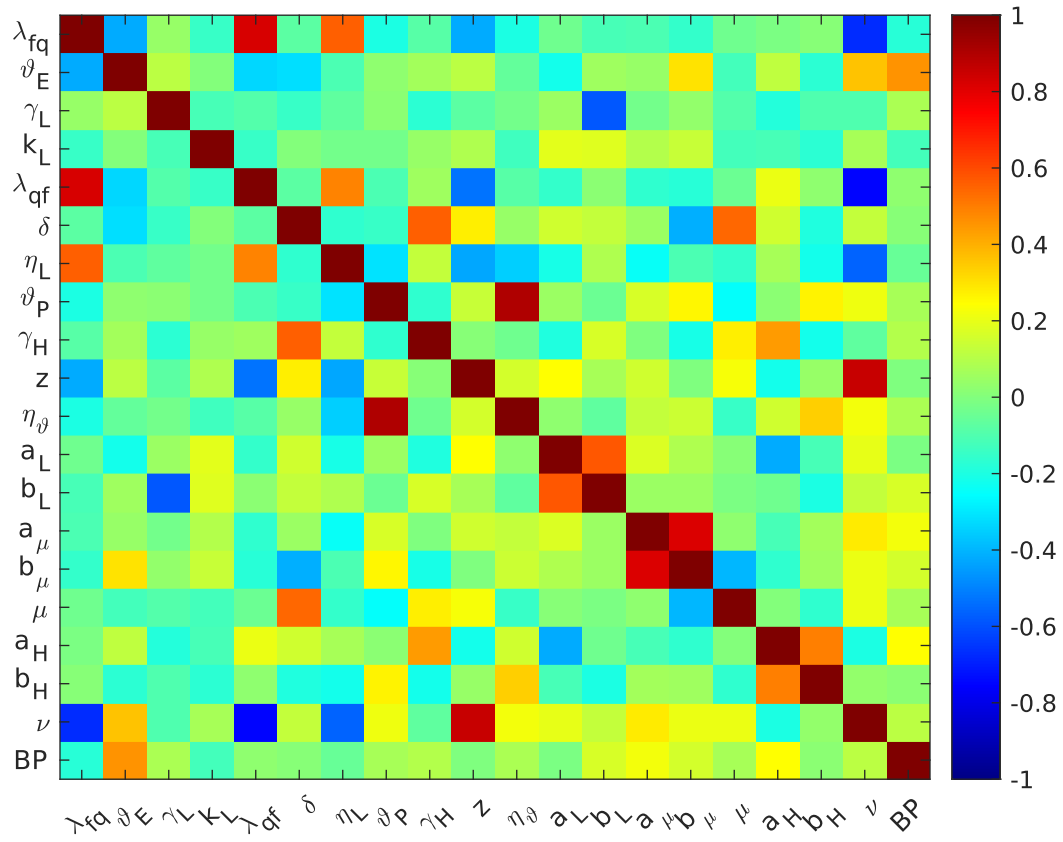
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

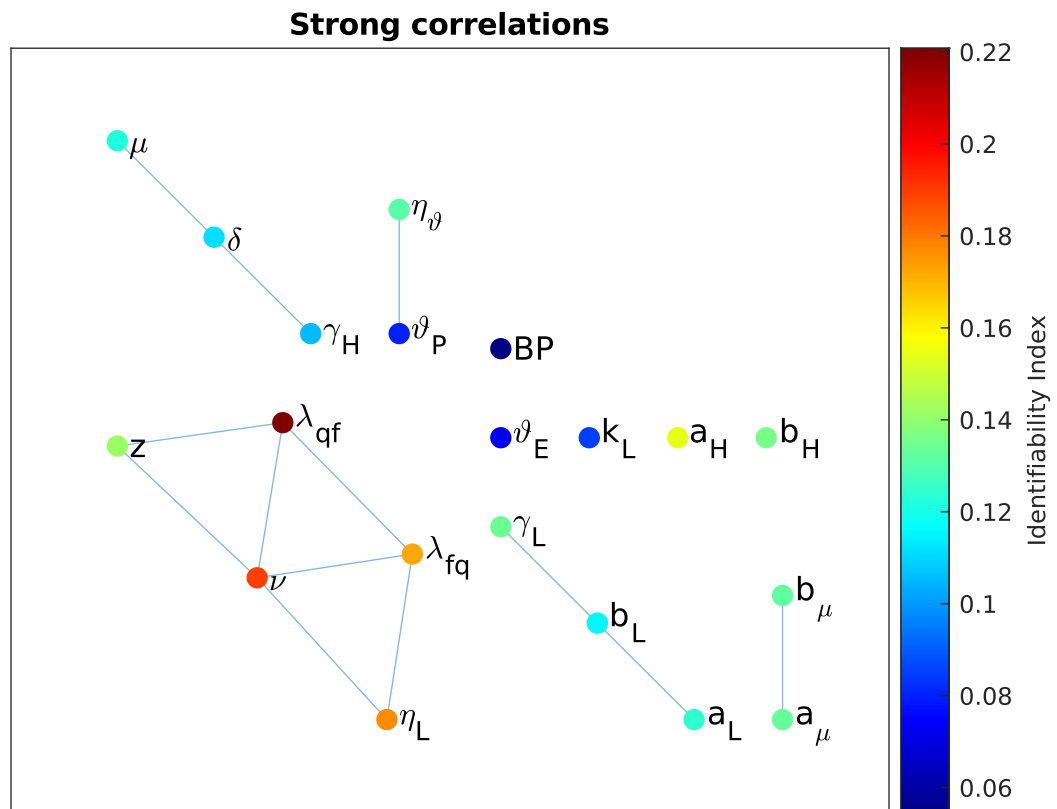
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0005'	'0.0075'	'0'	'0.1723'
\vartheta_E	'0.0678'	'0.1311'	'0.0652'	'0.0687'	'0.0726'
\gamma_L	'0.154'	'1'	'0.4813'	'0.7127'	'0.1344'
k_L	'1.45'	'10'	'5.5004'	'5.5264'	'0.0854'
\lambda_{qf}	'0.0718'	'0.1462'	'0.357'	'0.0738'	'0.2208'
\delta	'0'	'0.0373'	'0.0199'	'0.0194'	'0.1118'
\eta_L	'0'	'0.0135'	'0.2255'	'0.006'	'0.1768'
\vartheta_P	'0.0004'	'0.0012'	'0.002'	'0.0006'	'0.0802'
\gamma_H	'0.0159'	'0.0776'	'0.0666'	'0.0433'	'0.1053'
z	'2.4728'	'3.4001'	'0.8647'	'2.793'	'0.1422'
\eta_{\vartheta}	'0.6561'	'0.7619'	'0.7942'	'0.6727'	'0.131'
a_L	'9.0216'	'14.6953'	'11.8331'	'13.8885'	'0.1247'
b_L	'3.4831'	'12.4476'	'3.8245'	'3.8602'	'0.1151'
a_{\mu}	'8.2834'	'15'	'8.5249'	'8.7526'	'0.1333'
b_{\mu}	'3.8432'	'13.4492'	'4.572'	'5.0728'	'0.1323'
\mu	'0.047'	'0.0884'	'0.0933'	'0.0857'	'0.1216'
a_H	'1.266'	'14.3'	'6.9756'	'2.462'	'0.154'
b_H	'2.6014'	'15'	'5.3551'	'3.7405'	'0.1363'
\nu	'81.2689'	'124.7517'	'18.4949'	'81.7106'	'0.1895'
BP	'86.4685'	'91.049'	'86.5'	'86.4999'	'0.0547'

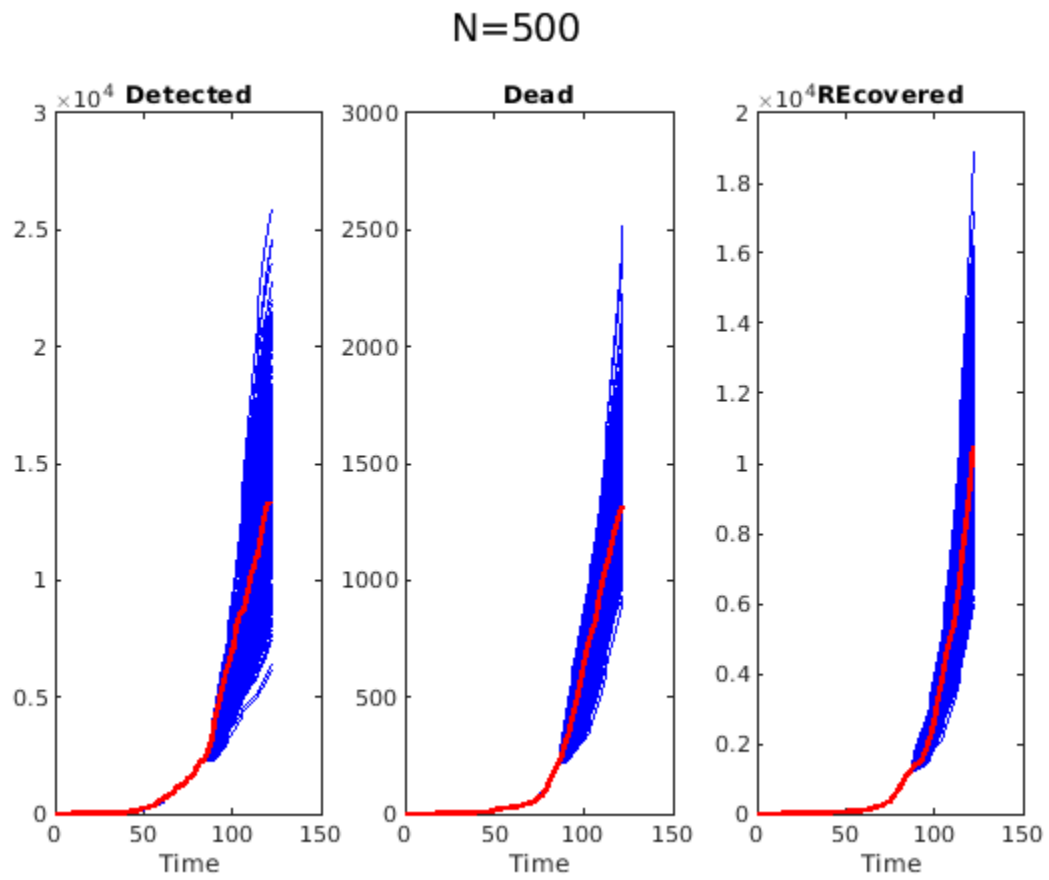
3.3. Identifiability analysis







3.4. Uncertainty analysys



Chapter 4. Extension number4

4.1. Basic information

The extension to be validated consists of the time series from the data123 to the 143. The status of the validation is: COMPLETED.

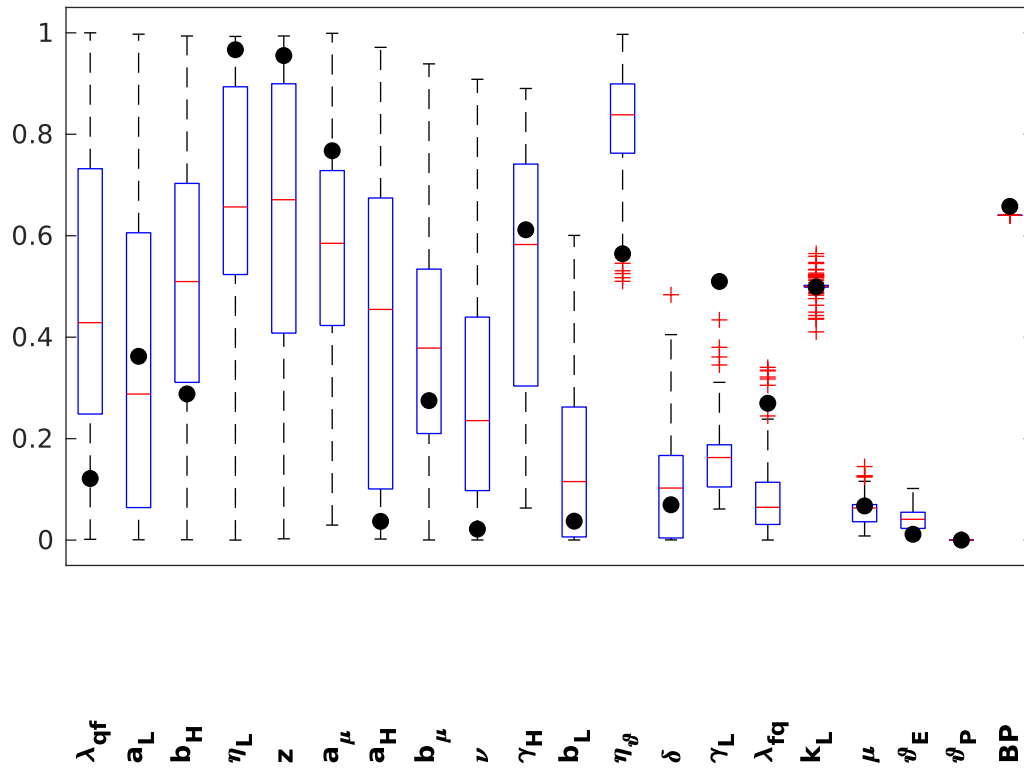
The number of estimations needed to perform the validation was3000.

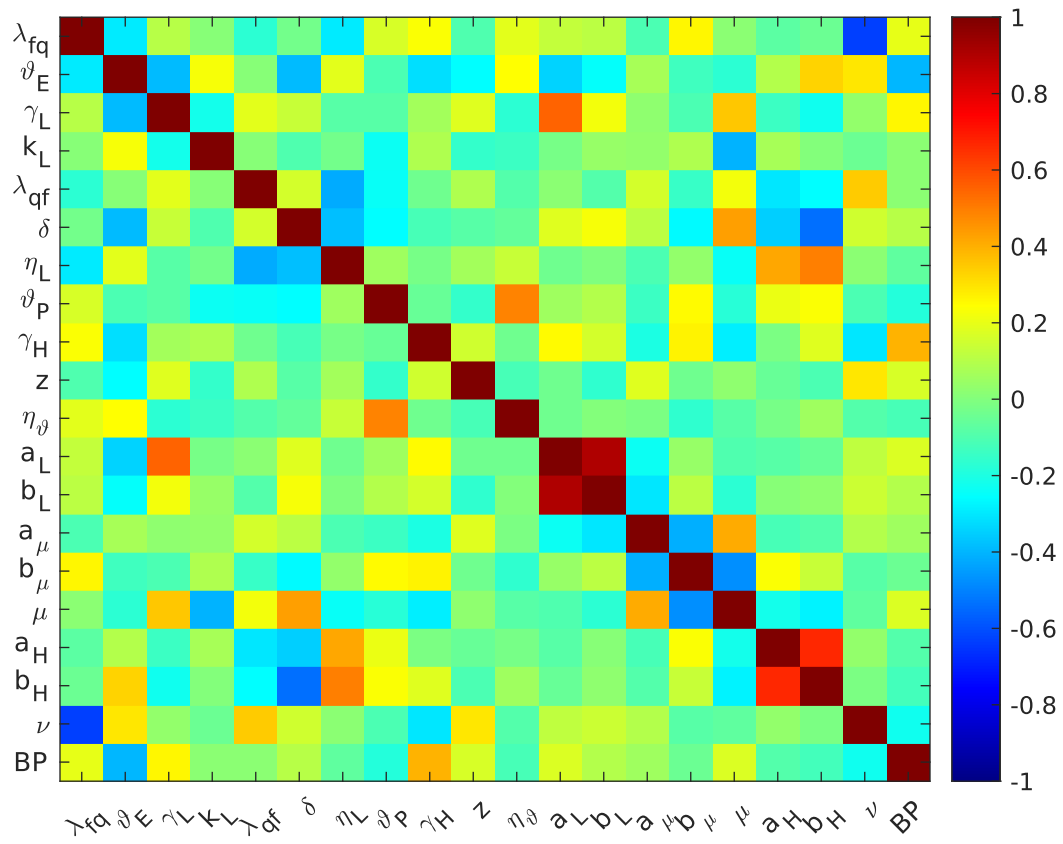
4.2. Estimated parameters with their intervals

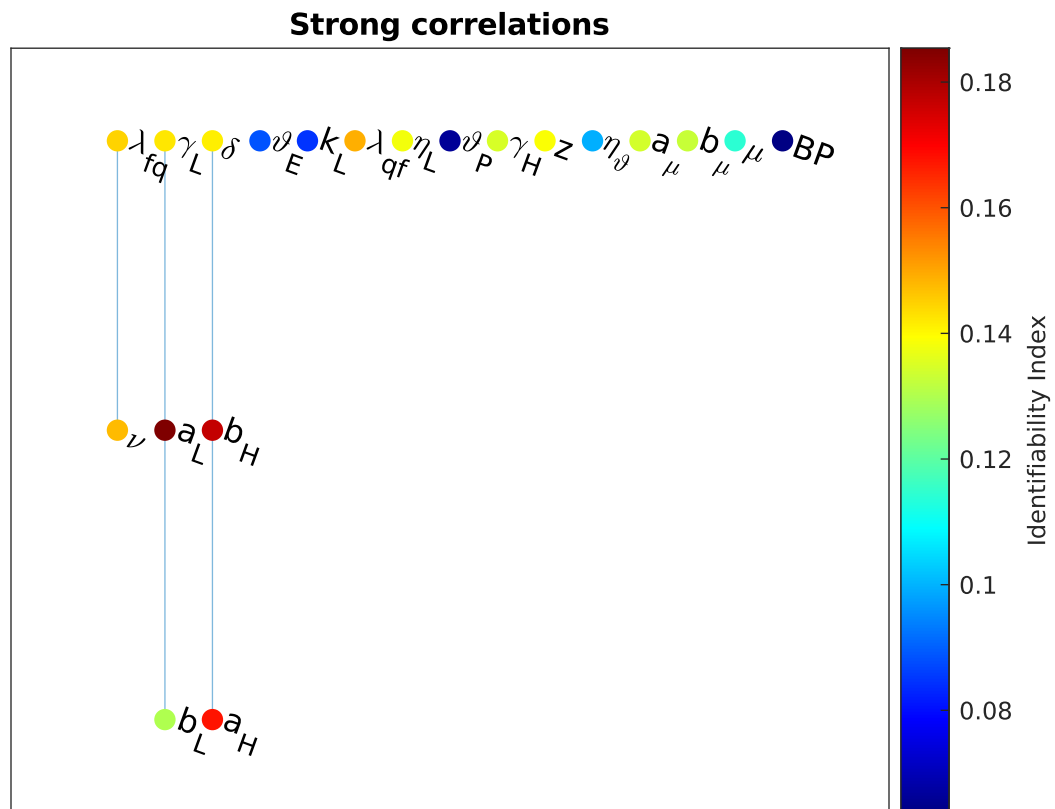
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.1354'	'0.0646'	'0.2698'	'0.1447'
ϑ_E	'0.0336'	'0.0484'	'0.041'	'0.0115'	'0.0886'
γ_L	'0.1018'	'0.2236'	'0.1627'	'0.5099'	'0.1426'
k_L	'5.1781'	'5.8226'	'5.5003'	'5.4922'	'0.0848'
λ_{qf}	'0.3418'	'0.5156'	'0.4287'	'0.1214'	'0.1491'
δ	'0.0074'	'0.0234'	'0.0154'	'0.0105'	'0.1416'
η_L	'0.5822'	'0.7312'	'0.6567'	'0.9667'	'0.1382'
ϑ_P	'0'	'0.0004'	'0.0002'	'0'	'0.0663'
γ_H	'0.5126'	'0.6527'	'0.5827'	'0.6118'	'0.1348'
z	'17.606'	'22.6532'	'20.1296'	'28.6555'	'0.1392'
η_{ϑ}	'0.7918'	'0.8852'	'0.8385'	'0.5645'	'0.0998'
a_L	'3.7255'	'6.3359'	'5.0307'	'6.072'	'0.1854'
b_L	'1.8741'	'3.3566'	'2.6154'	'1.5227'	'0.1299'
a_{μ}	'8.1586'	'10.223'	'9.1908'	'11.7456'	'0.1344'
b_{μ}	'5.3644'	'7.2341'	'6.2993'	'4.8493'	'0.1327'
μ	'0.0278'	'0.0988'	'0.0633'	'0.0673'	'0.1144'
a_H	'6.1025'	'8.6306'	'7.3665'	'1.5171'	'0.1676'
b_H	'7.0326'	'9.2381'	'8.1354'	'5.0349'	'0.1769'
ν	'81.991'	'153.5446'	'117.7678'	'10.875'	'0.1477'
BP	'122.3616'	'122.6384'	'122.5'	'123.5'	'0.0638'

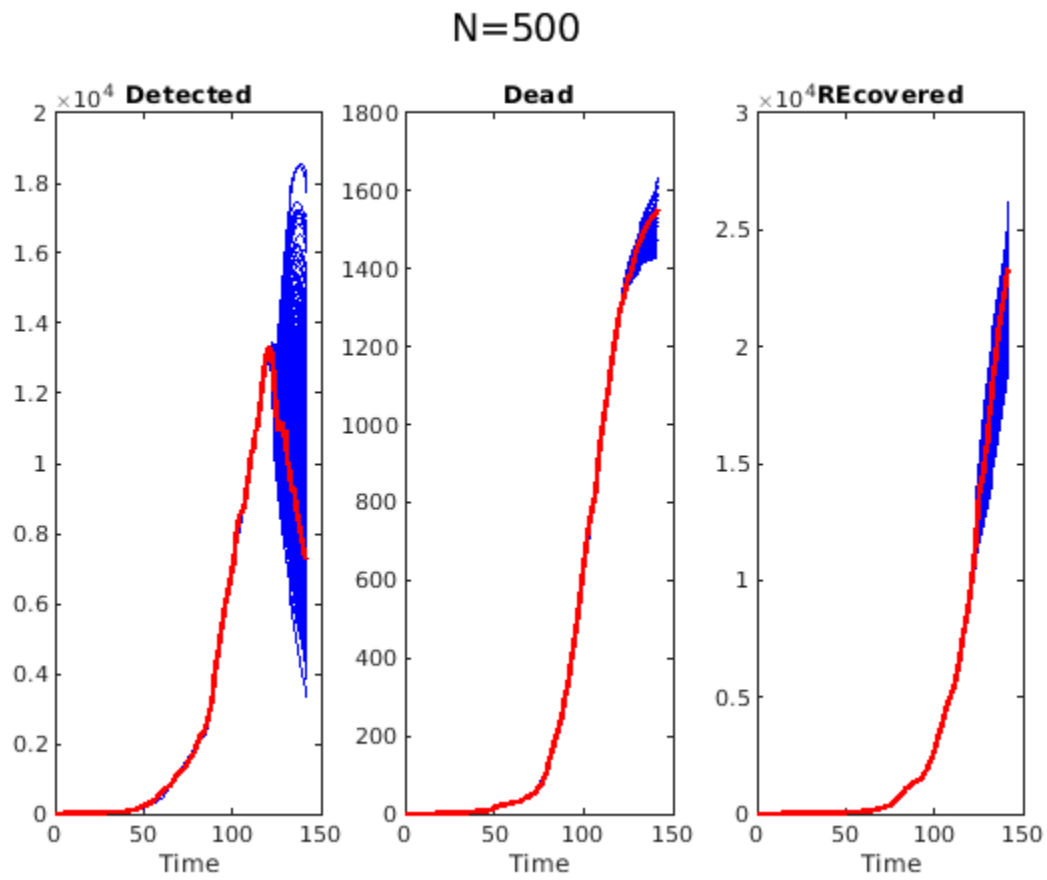
4.3. Identifiability analysis







4.4. Uncertainty analysys



Chapter 5. Extension number5

5.1. Basic information

The extension to be validated consists of the time series from the data143 to the 173. The status of the validation is: COMPLETED.

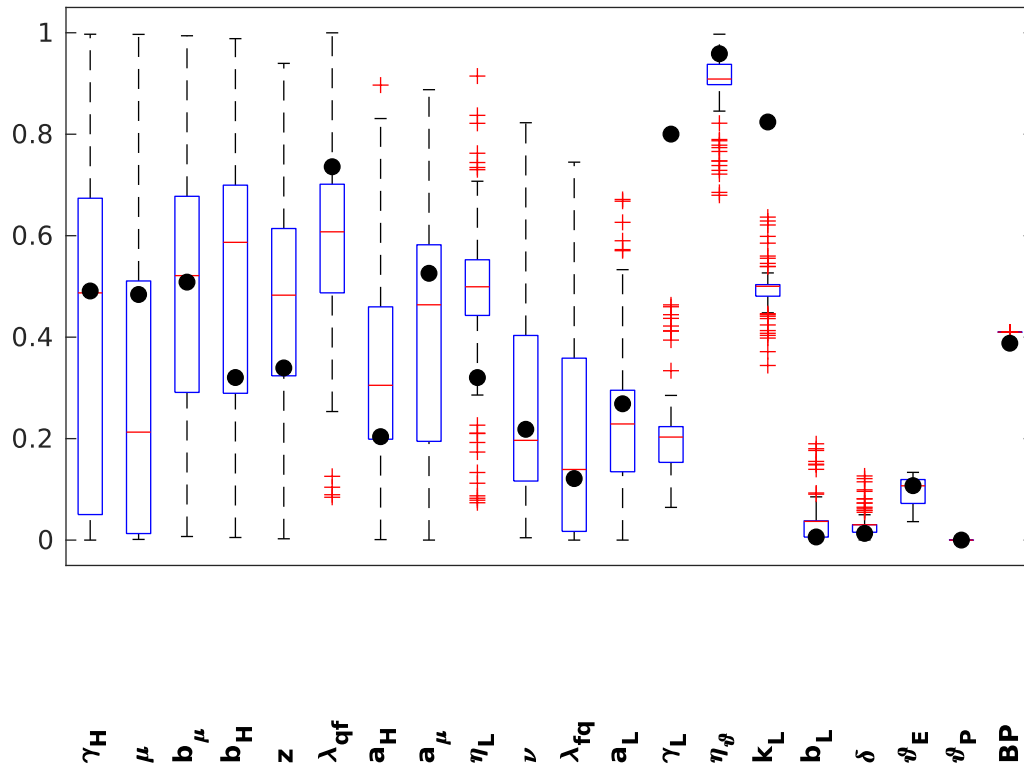
The number of estimations needed to perform the validation was1000.

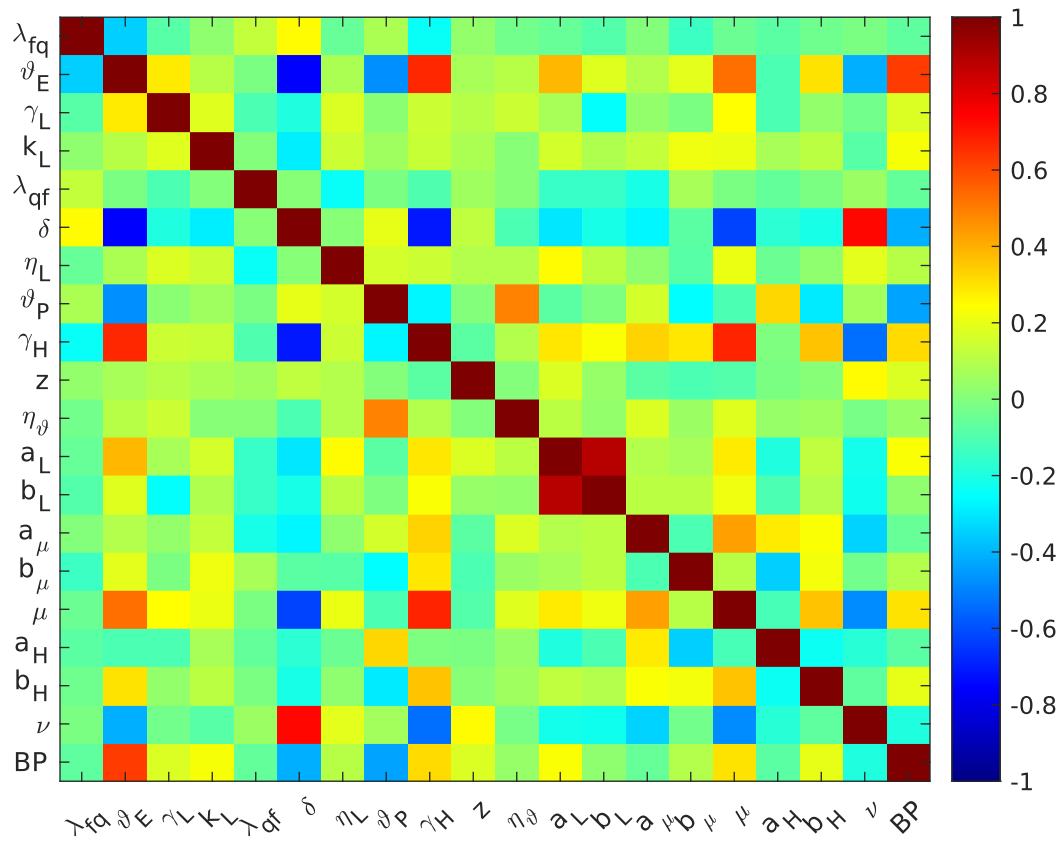
5.2. Estimated parameters with their intervals

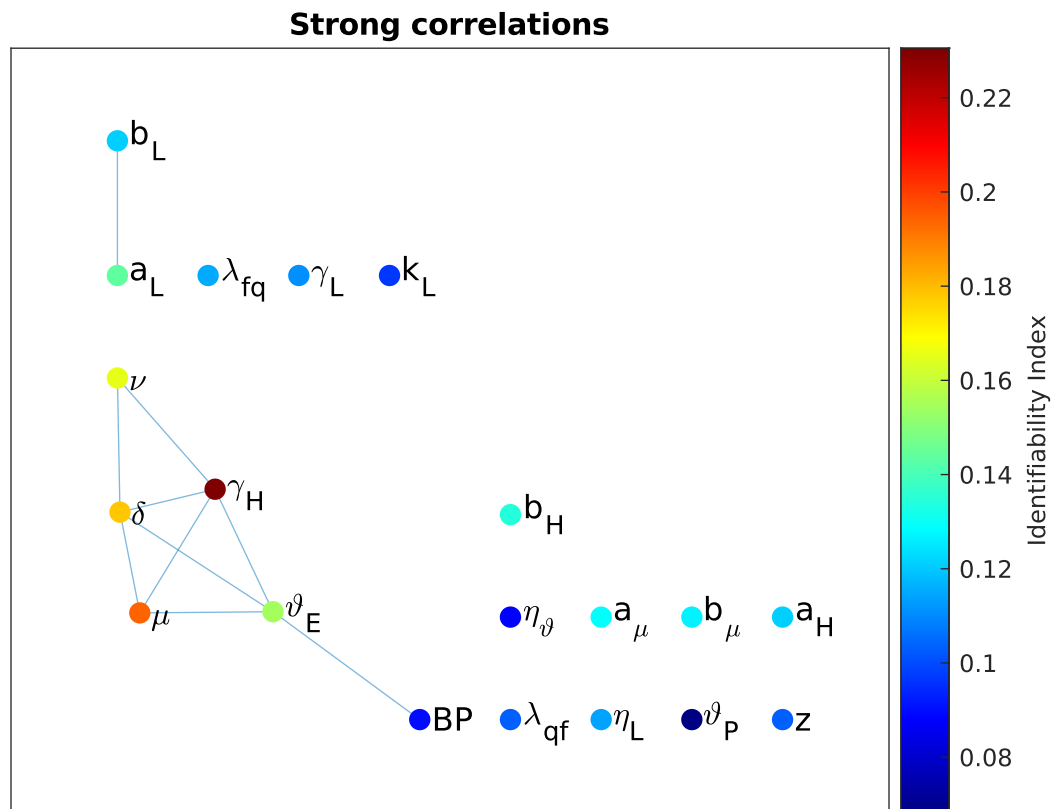
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0796'	'0.2154'	'0.1475'	'0.1213'	'0.1153'
ϑ_E	'0.0988'	'0.1145'	'0.1067'	'0.1073'	'0.1546'
γ_L	'0.1471'	'0.2593'	'0.2032'	'0.8002'	'0.1111'
k_L	'5.1186'	'5.8859'	'5.5022'	'8.417'	'0.097'
λ_{qf}	'0.5454'	'0.6665'	'0.606'	'0.7359'	'0.1037'
δ	'0'	'0.0099'	'0.0046'	'0.002'	'0.1784'
η_L	'0.4382'	'0.5604'	'0.4993'	'0.3203'	'0.1142'
ϑ_P	'0'	'0'	'0'	'0'	'0.0683'
γ_H	'0.402'	'0.5725'	'0.4873'	'0.491'	'0.2305'
z	'12.722'	'16.2439'	'14.483'	'10.1798'	'0.1035'
η_{ϑ}	'0.8679'	'0.9488'	'0.9083'	'0.9587'	'0.0884'
a_L	'3.4452'	'4.9856'	'4.2154'	'4.7617'	'0.1442'
b_L	'1'	'2.2343'	'1.5174'	'1.0865'	'0.121'
a_{μ}	'6.5865'	'8.4'	'7.4933'	'8.3621'	'0.1293'
b_{μ}	'7.3246'	'9.2714'	'8.298'	'8.1189'	'0.127'
μ	'0.1464'	'0.2792'	'0.2128'	'0.4841'	'0.194'
a_H	'4.3624'	'6.181'	'5.2717'	'3.8541'	'0.1215'
b_H	'8.2077'	'10.2256'	'9.2167'	'5.4861'	'0.1345'
ν	'66.2894'	'131.0277'	'98.6585'	'109.1885'	'0.1658'
BP	'143.2426'	'143.7573'	'143.5'	'142.4032'	'0.0904'

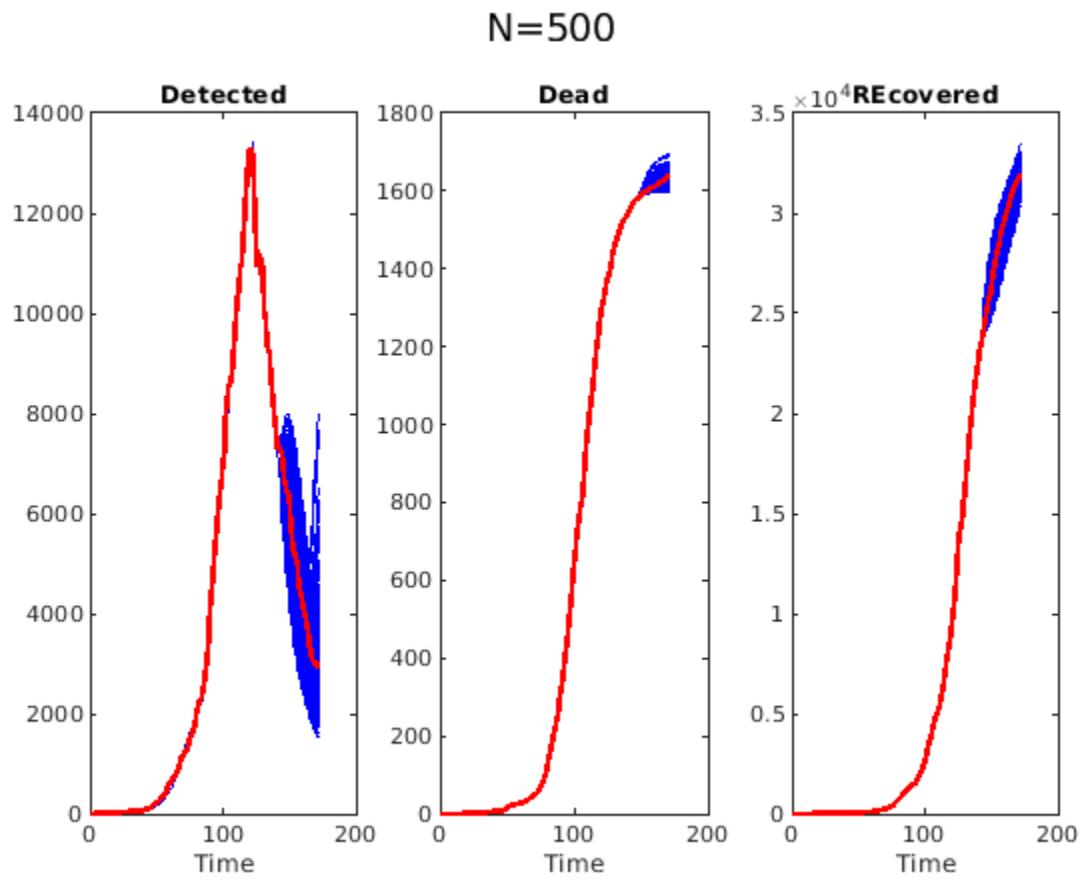
5.3. Identifiability analysis







5.4. Uncertainty analysis



Chapter 6. Extension number6

6.1. Basic information

The extension to be validated consists of the time series from the data173 to the 245. The status of the validation is: COMPLETED.

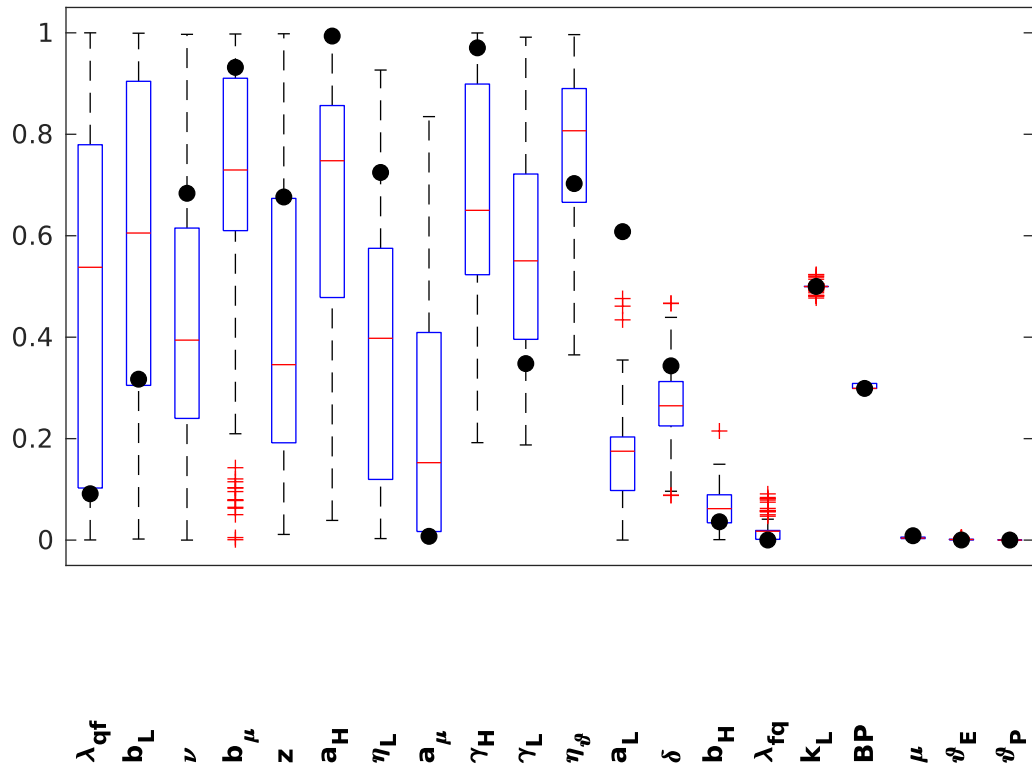
The number of estimations needed to perform the validation was1000.

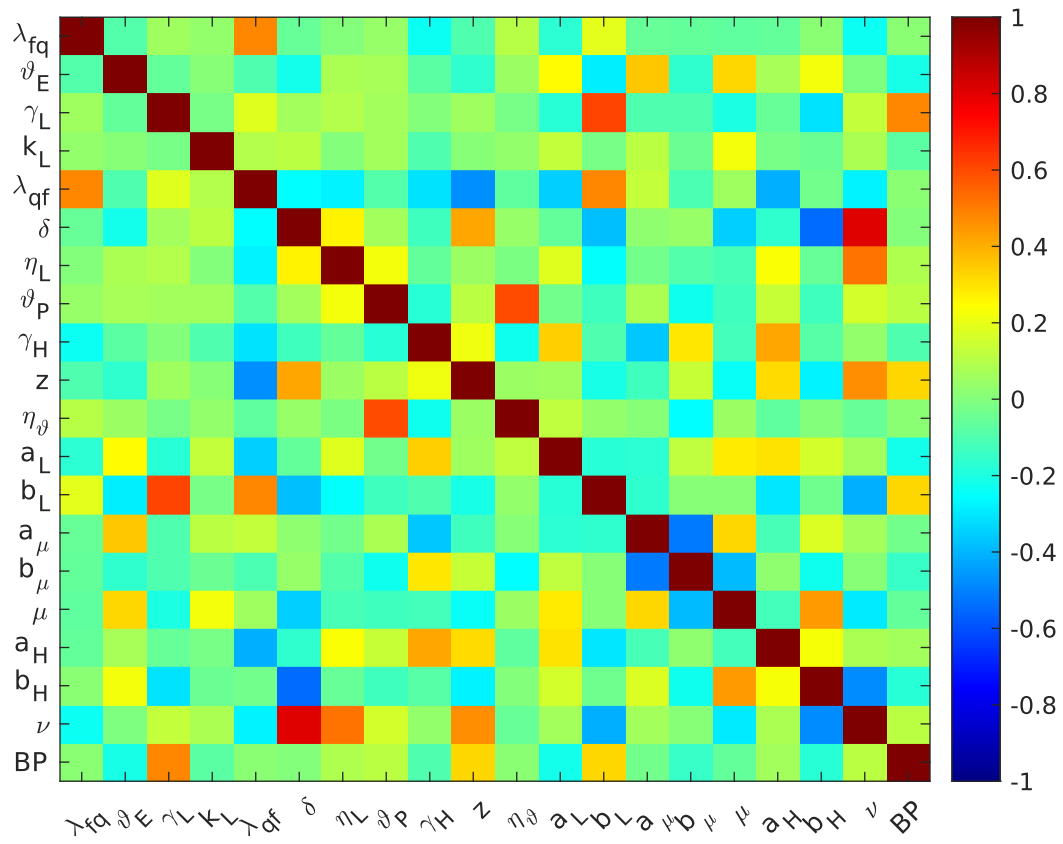
6.2. Estimated parameters with their intervals

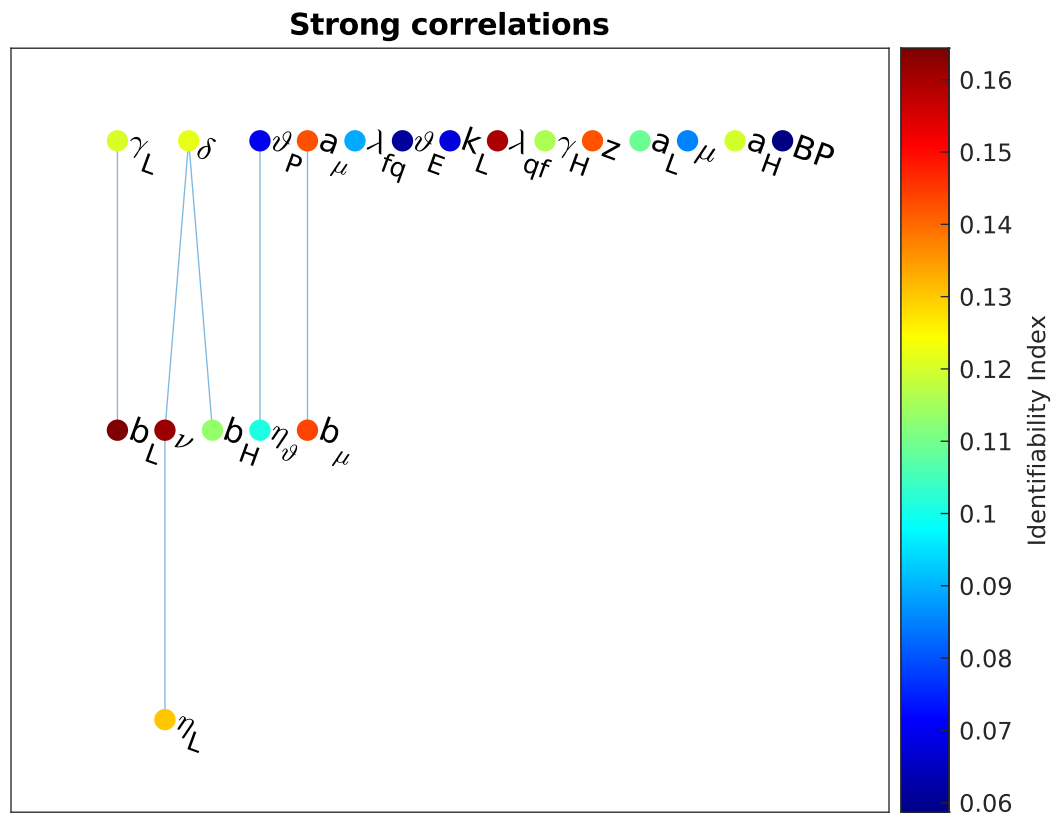
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0779'	'0.0178'	'0.0001'	'0.0896'
ϑ_E	'0'	'0.0025'	'0.0011'	'0.0002'	'0.0614'
γ_L	'0.5022'	'0.5988'	'0.5505'	'0.3479'	'0.1206'
k_L	'5.2519'	'5.7457'	'5.4988'	'5.5'	'0.068'
λ_{qf}	'0.4555'	'0.6201'	'0.5378'	'0.0914'	'0.1596'
δ	'0.0364'	'0.0431'	'0.0397'	'0.0515'	'0.1221'
η_L	'0.3379'	'0.4577'	'0.3978'	'0.7247'	'0.1303'
ϑ_P	'0'	'0.0001'	'0.0001'	'0.0001'	'0.0705'
γ_H	'0.6014'	'0.6987'	'0.6501'	'0.9704'	'0.1157'
z	'8.2795'	'12.4716'	'10.3756'	'20.2911'	'0.1423'
η_{ϑ}	'0.7655'	'0.8464'	'0.8059'	'0.7028'	'0.1009'
a_L	'2.8733'	'4.064'	'3.4687'	'9.5128'	'0.1092'
b_L	'8.4195'	'10.53'	'9.4747'	'5.4409'	'0.1644'
a_{μ}	'2.2367'	'4.1478'	'3.1922'	'1.1041'	'0.1426'
b_{μ}	'10.2407'	'12.1886'	'11.2146'	'14.0464'	'0.1439'
μ	'0'	'0.0259'	'0.004'	'0.0086'	'0.0855'
a_H	'10.7001'	'12.2395'	'11.4698'	'14.9109'	'0.1198'
b_H	'1.446'	'2.2974'	'1.8717'	'1.5065'	'0.1133'
ν	'168.3405'	'225.8795'	'197.11'	'341.83'	'0.1612'
BP	'173.3719'	'173.6295'	'173.5007'	'173.4999'	'0.0587'

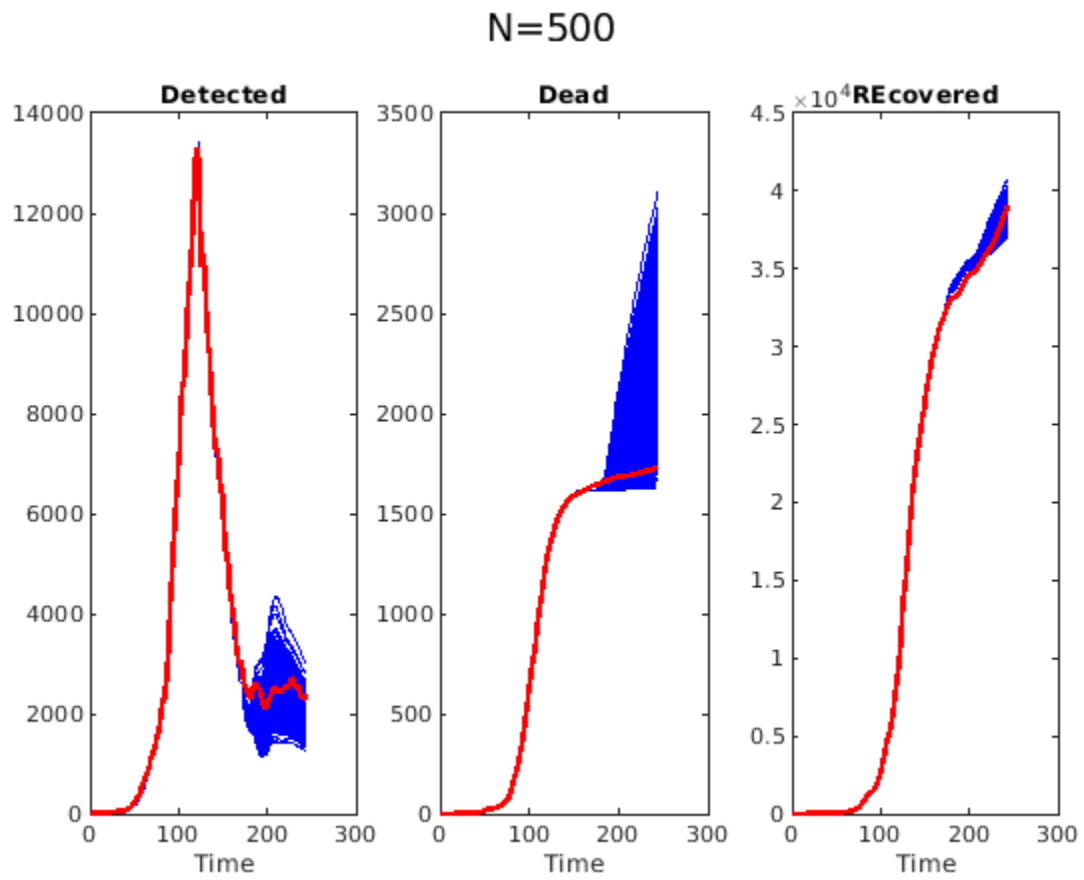
6.3. Identifiability analysys







6.4. Uncertainty analysis



Chapter 7. Extension number7

7.1. Basic information

The extension to be validated consists of the time series from the data245 to the 287. The status of the validation is: COMPLETED.

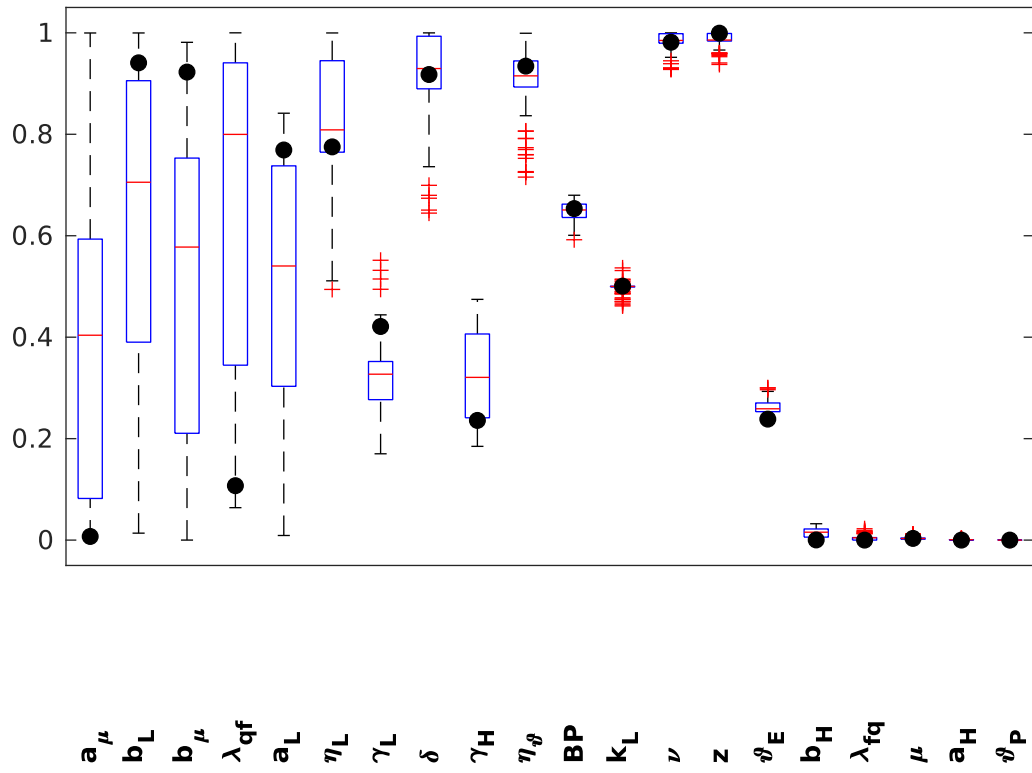
The number of estimations needed to perform the validation was2000.

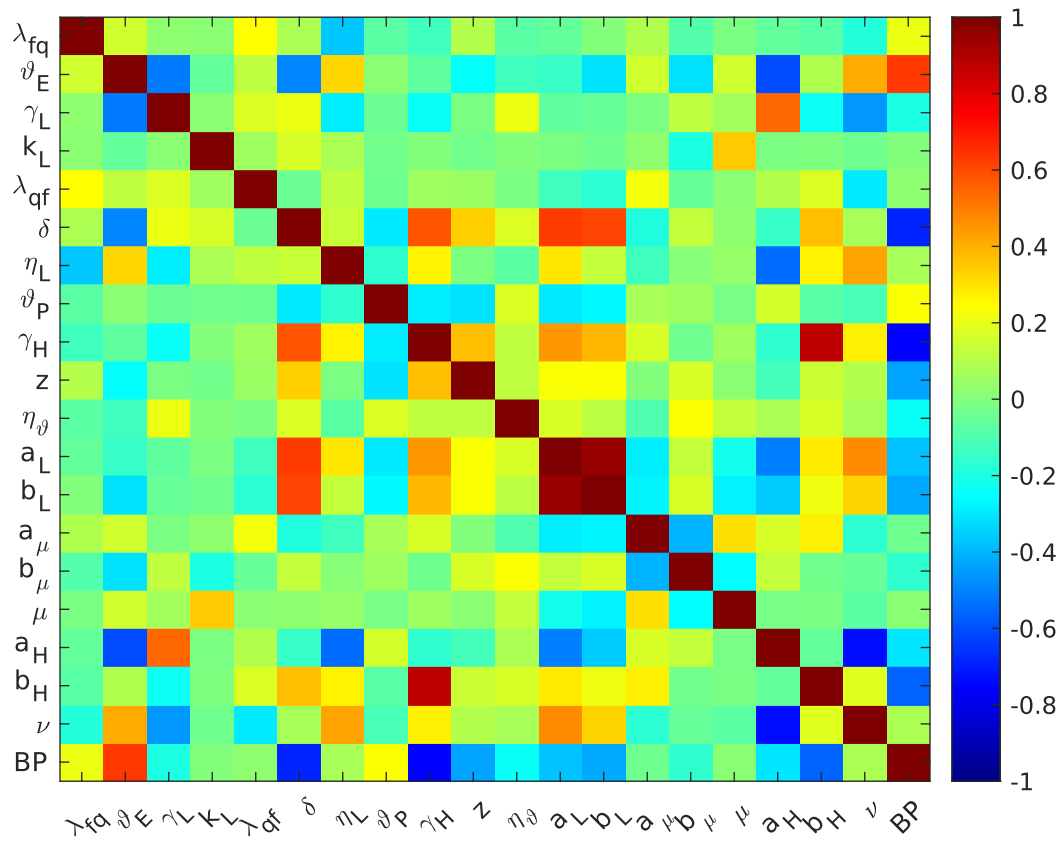
7.2. Estimated parameters with their intervals

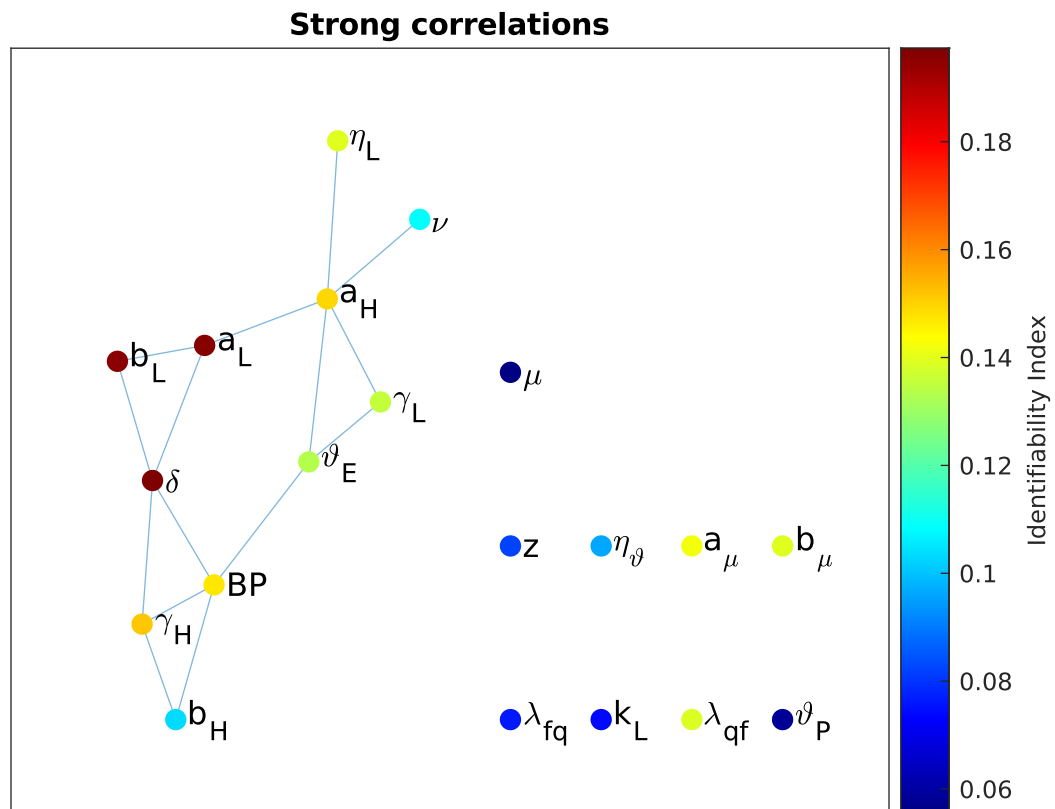
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.052'	'0.0046'	'0'	'0.0767'
ϑ_E	'0.2495'	'0.2682'	'0.2589'	'0.2385'	'0.1334'
γ_L	'0.2855'	'0.3702'	'0.3278'	'0.4211'	'0.1357'
k_L	'5.1843'	'5.8159'	'5.5001'	'5.5054'	'0.0742'
λ_{qf}	'0.7121'	'0.8875'	'0.7998'	'0.1073'	'0.1392'
δ	'0.1306'	'0.1471'	'0.1389'	'0.1377'	'0.1973'
η_L	'0.7523'	'0.8629'	'0.8076'	'0.7752'	'0.1396'
ϑ_P	'0'	'0.0001'	'0'	'0'	'0.0589'
γ_H	'0.298'	'0.3436'	'0.3208'	'0.2359'	'0.1514'
z	'28.8212'	'30'	'29.5719'	'29.9794'	'0.0828'
η_{ϑ}	'0.8741'	'0.9561'	'0.9151'	'0.9344'	'0.0962'
a_L	'7.6914'	'9.4389'	'8.5652'	'11.7665'	'0.1962'
b_L	'9.767'	'11.9856'	'10.8763'	'14.1724'	'0.1957'
a_{μ}	'5.5486'	'7.7599'	'6.6543'	'1.1005'	'0.1425'
b_{μ}	'7.9641'	'10.2106'	'9.0873'	'13.9173'	'0.1395'
μ	'0'	'0.0097'	'0.0032'	'0.0033'	'0.0557'
a_H	'1'	'1.0564'	'1.0099'	'1.0003'	'0.1494'
b_H	'1.1849'	'1.2512'	'1.218'	'1.0044'	'0.1038'
ν	'485.1609'	'499.7833'	'492.4721'	'490.732'	'0.1087'
BP	'246.6941'	'247.6877'	'247.1909'	'247.5'	'0.1474'

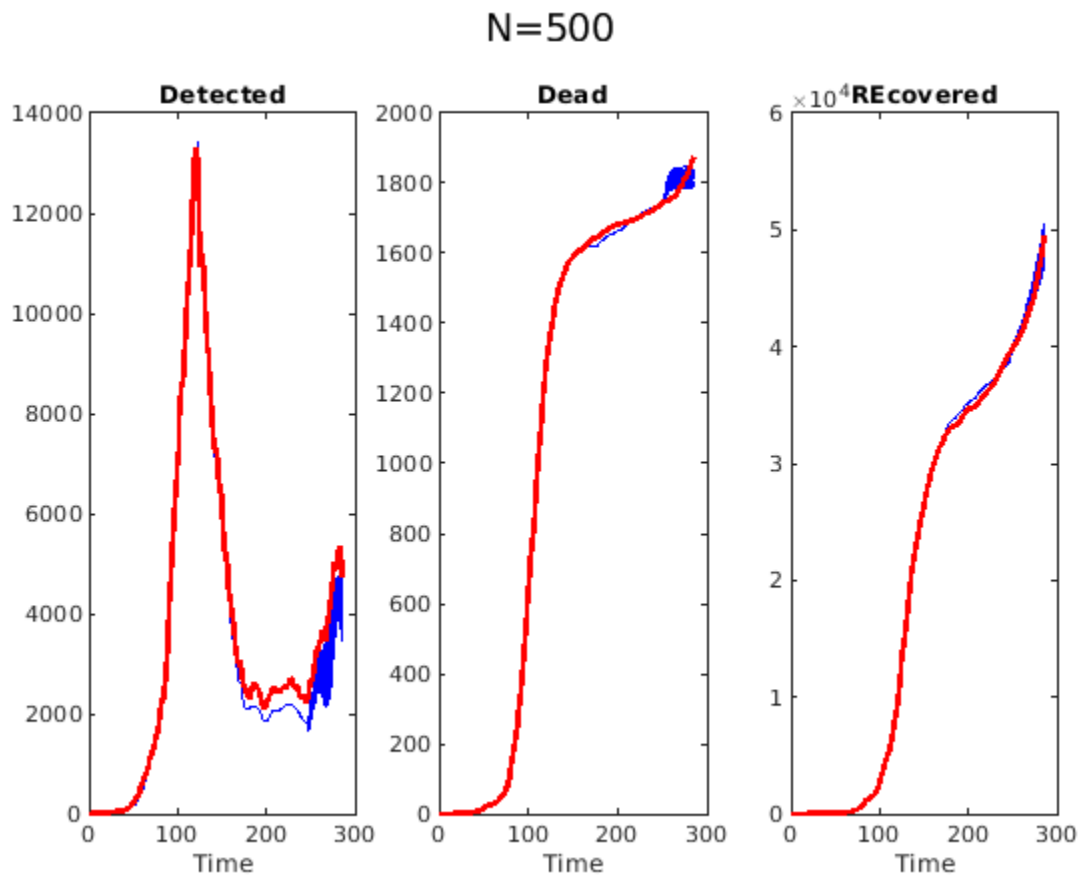
7.3. Identifiability analysis







7.4. Uncertainty analysis



Chapter 8. Extension number8

8.1. Basic information

The extension to be validated consists of the time series from the data287 to the 314. The status of the validation is: COMPLETED.

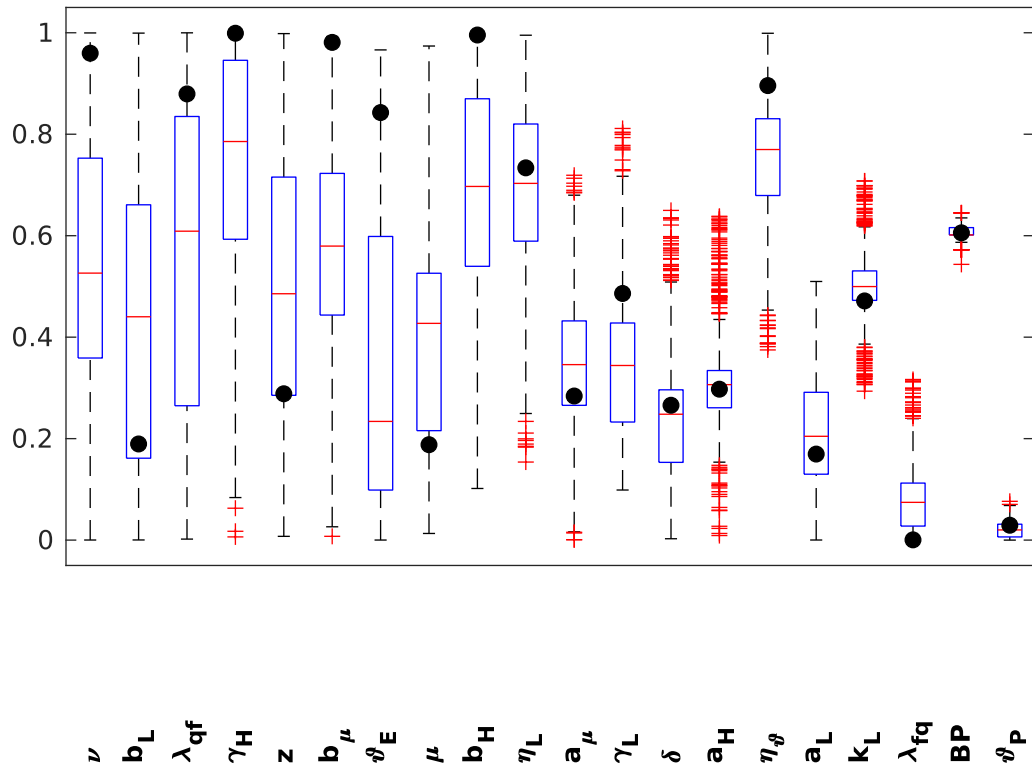
The number of estimations needed to perform the validation was1000.

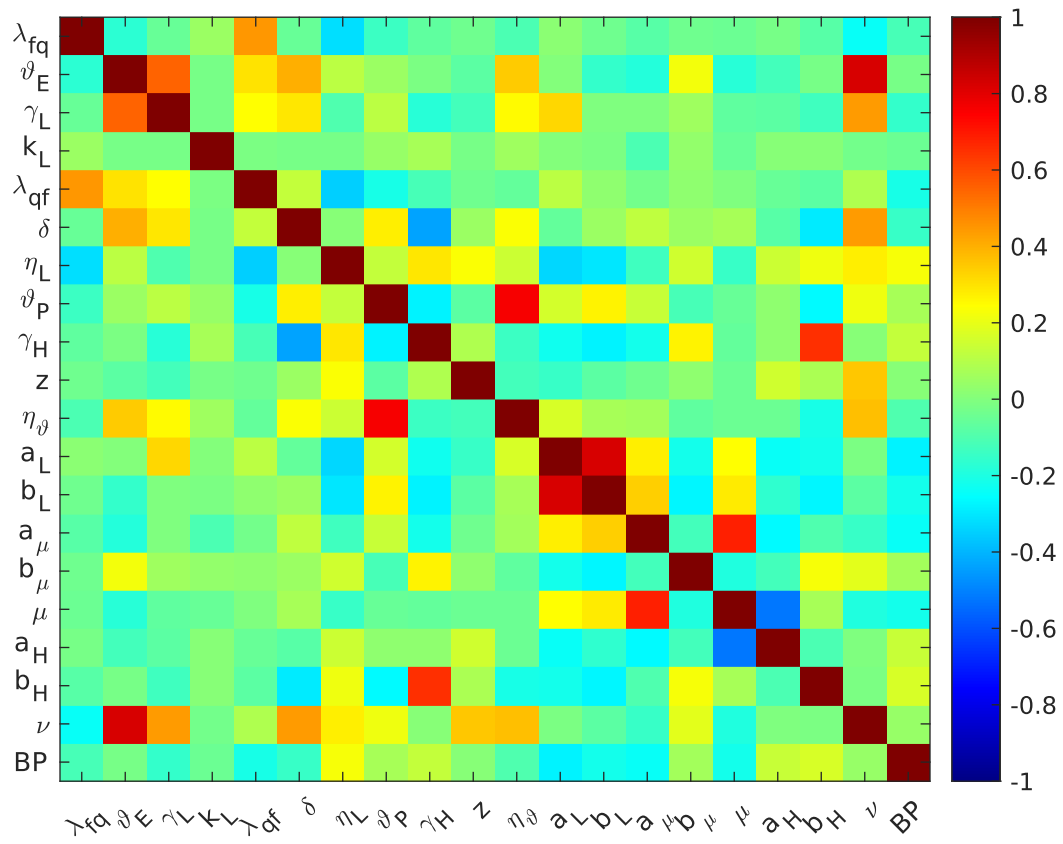
8.2. Estimated parameters with their intervals

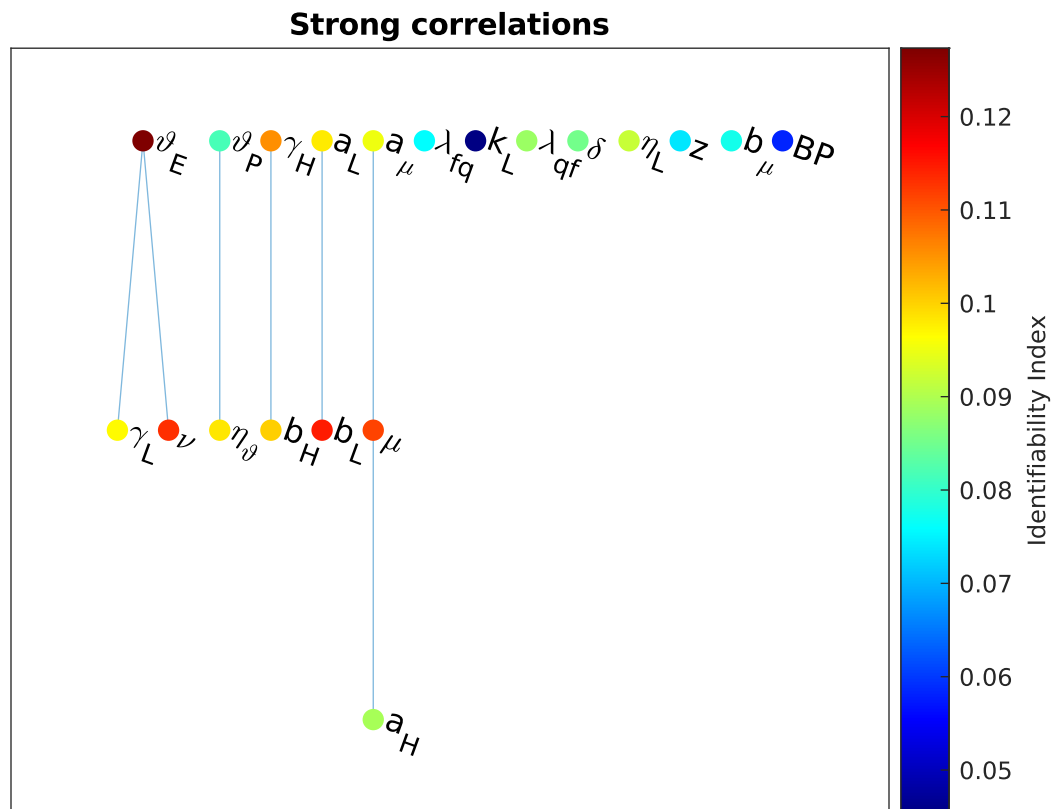
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0497'	'0.0991'	'0.0744'	'0.0005'	'0.0759'
ϑ_E	'0.2036'	'0.2643'	'0.2339'	'0.8427'	'0.1273'
γ_L	'0.3246'	'0.3637'	'0.3442'	'0.4861'	'0.0968'
k_L	'5.3841'	'5.6111'	'5.4976'	'5.2429'	'0.0455'
λ_{qf}	'0.5769'	'0.6408'	'0.6089'	'0.8795'	'0.0884'
δ	'0.0342'	'0.0403'	'0.0372'	'0.0399'	'0.0854'
η_L	'0.6815'	'0.7247'	'0.7031'	'0.7337'	'0.0921'
ϑ_P	'0.0183'	'0.0218'	'0.02'	'0.0293'	'0.0817'
γ_H	'0.762'	'0.8092'	'0.7856'	'0.9991'	'0.1054'
z	'13.7655'	'15.3696'	'14.5676'	'8.6531'	'0.074'
η_{ϑ}	'0.7508'	'0.7889'	'0.7698'	'0.8959'	'0.0983'
a_L	'3.6902'	'4.0385'	'3.8643'	'3.3739'	'0.0981'
b_L	'6.7323'	'7.5932'	'7.1628'	'3.6526'	'0.1146'
a_{μ}	'5.6098'	'6.075'	'5.8424'	'4.976'	'0.0951'
b_{μ}	'8.8097'	'9.4169'	'9.1133'	'14.7343'	'0.0775'
μ	'0.405'	'0.4494'	'0.4272'	'0.188'	'0.1116'
a_H	'4.9647'	'5.6153'	'5.29'	'5.1645'	'0.0895'
b_H	'10.4422'	'11.0757'	'10.759'	'14.9378'	'0.1002'
ν	'250.1695'	'276.0748'	'263.1222'	'479.8466'	'0.1131'
BP	'286.4234'	'286.5778'	'286.5006'	'286.7884'	'0.0584'

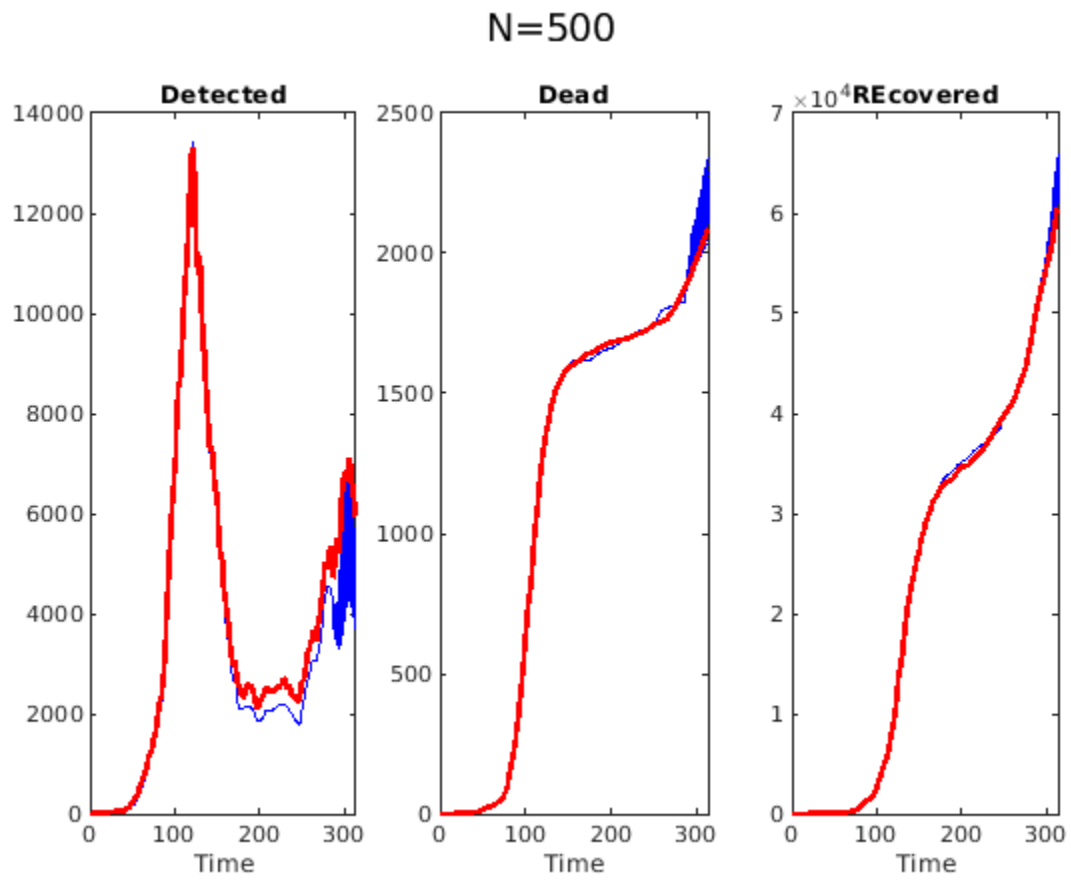
8.3. Identifiability analysis







8.4. Uncertainty analysis



Chapter 9. Extension number9

9.1. Basic information

The extension to be validated consists of the time series from the data314 to the 324. The status of the validation is: COMPLETED.

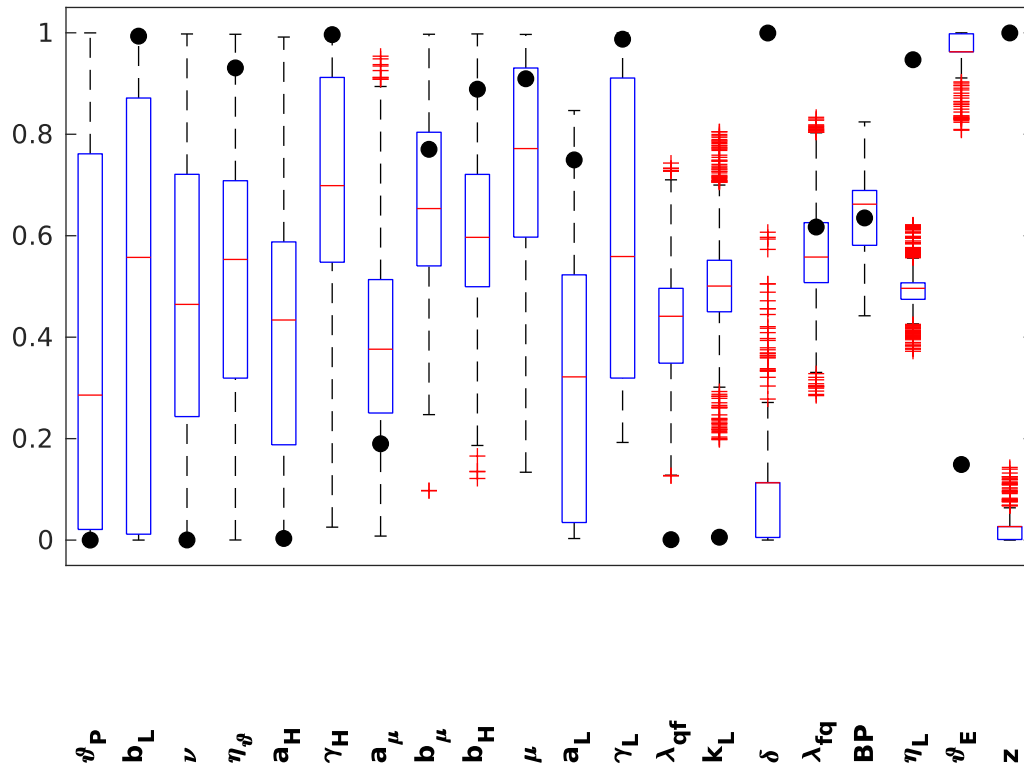
The number of estimations needed to perform the validation was1000.

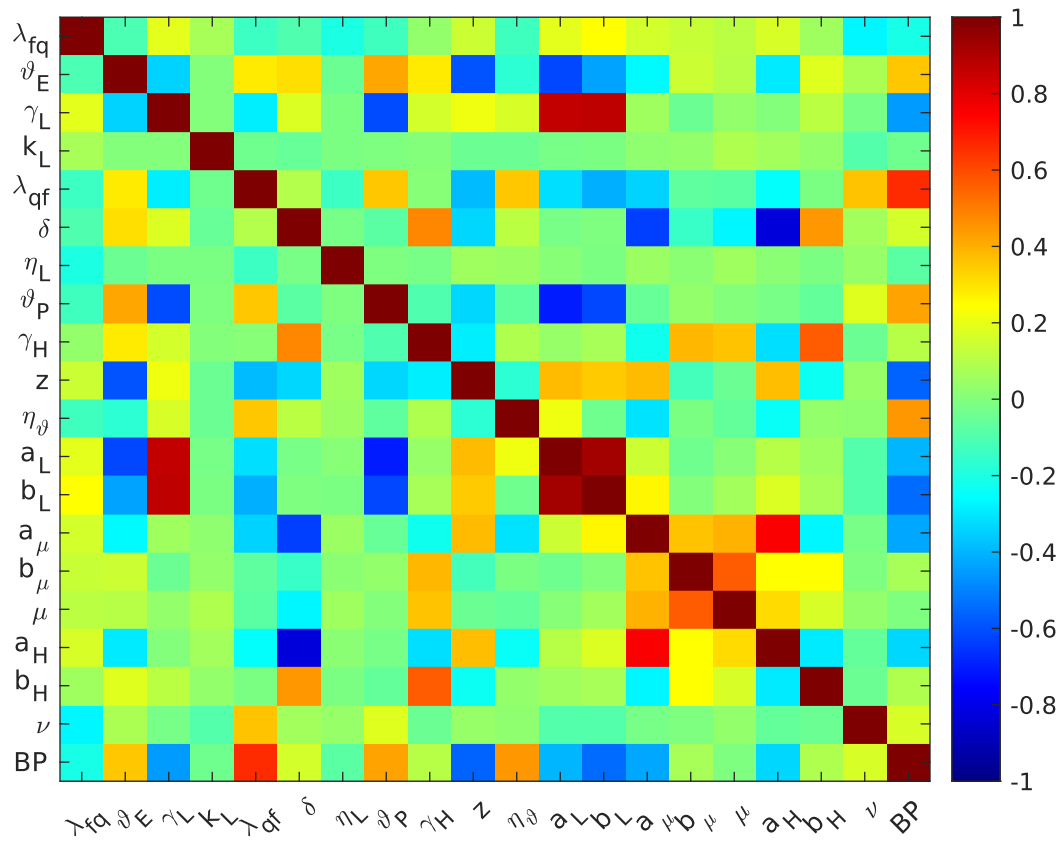
9.2. Estimated parameters with their intervals

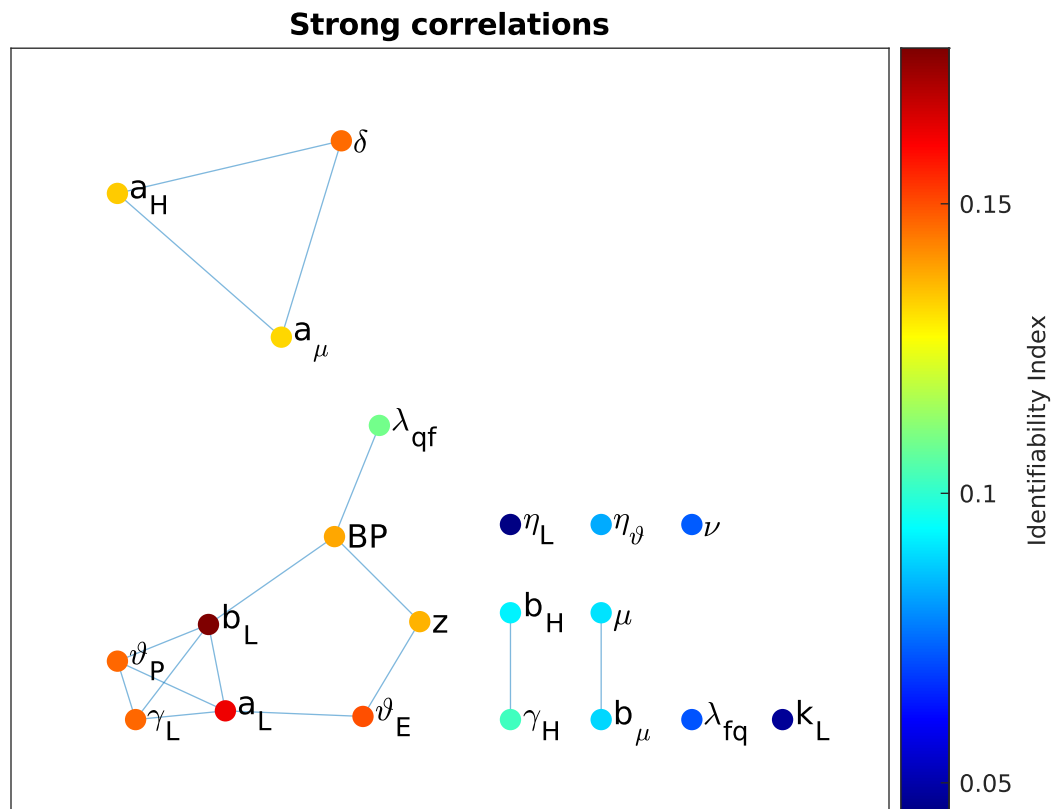
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.5456'	'0.5703'	'0.5579'	'0.6171'	'0.0722'
ϑ_E	'0.9256'	'0.9994'	'0.9625'	'0.149'	'0.1498'
γ_L	'0.5322'	'0.5858'	'0.559'	'0.9874'	'0.1468'
k_L	'5.3776'	'5.6363'	'5.5069'	'1.051'	'0.0479'
λ_{qf}	'0.4269'	'0.4555'	'0.4412'	'0.0008'	'0.109'
δ	'0.0107'	'0.0233'	'0.017'	'0.1499'	'0.1462'
η_L	'0.4871'	'0.5055'	'0.4963'	'0.9469'	'0.0449'
ϑ_P	'0.2539'	'0.3178'	'0.2858'	'0'	'0.1466'
γ_H	'0.6787'	'0.7188'	'0.6987'	'0.9964'	'0.1025'
z	'0.0913'	'1.5083'	'0.7998'	'29.9914'	'0.1367'
η_{ϑ}	'0.529'	'0.5775'	'0.5532'	'0.9308'	'0.0836'
a_L	'5.1884'	'5.8204'	'5.5044'	'11.4922'	'0.162'
b_L	'8.2829'	'9.3208'	'8.8019'	'14.9076'	'0.1769'
a_{μ}	'6.0107'	'6.5277'	'6.2692'	'3.6586'	'0.1323'
b_{μ}	'9.8879'	'10.3944'	'10.1412'	'11.7844'	'0.0892'
μ	'0.7538'	'0.7897'	'0.7718'	'0.9094'	'0.0903'
a_H	'6.7475'	'7.4004'	'7.0739'	'1.0451'	'0.1339'
b_H	'9.1032'	'9.606'	'9.3546'	'13.4439'	'0.0926'
ν	'219.1741'	'245.458'	'232.3161'	'0.1252'	'0.073'
BP	'311.2455'	'311.7545'	'311.5'	'310.4973'	'0.1383'

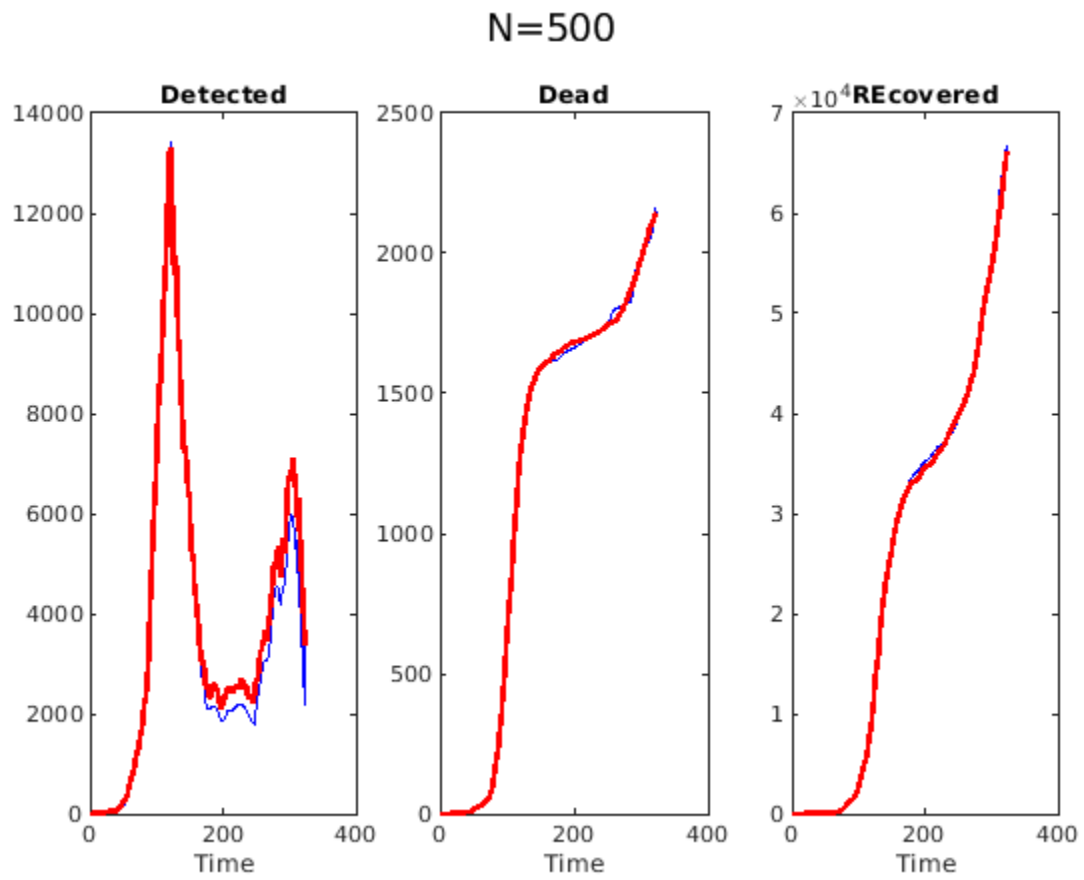
9.3. Identifiability analysis







9.4. Uncertainty analysis



Chapter 10. Extension number10

10.1. Basic information

The extension to be validated consists of the time series from the data324 to the 351. The status of the validation is: COMPLETED.

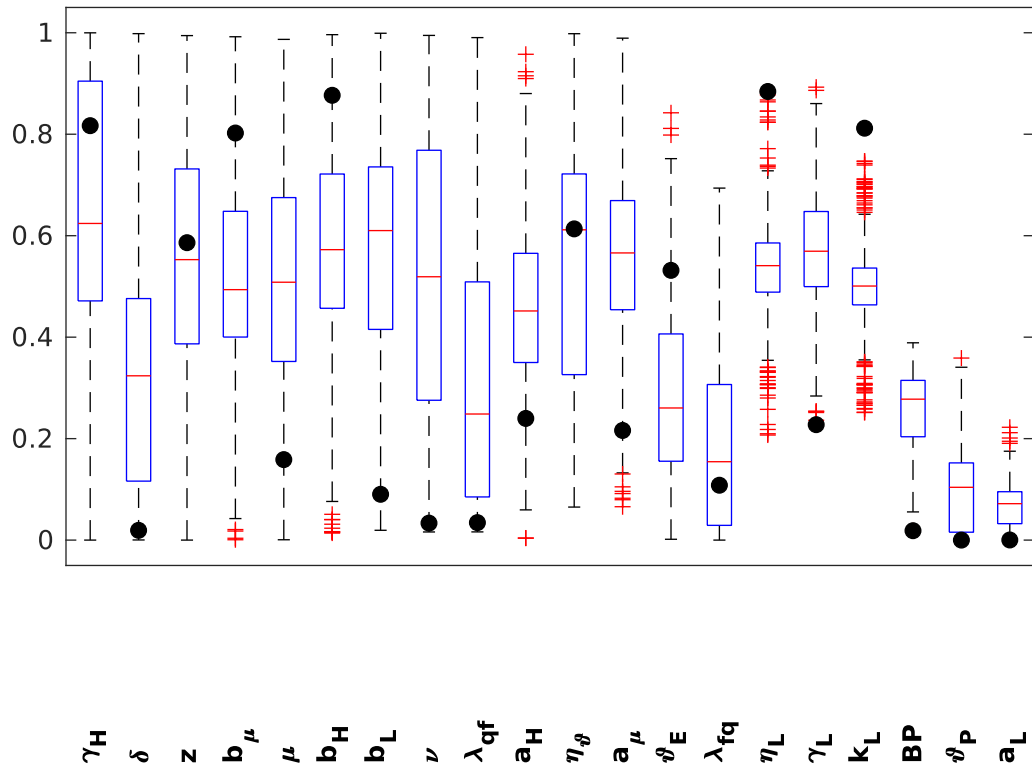
The number of estimations needed to perform the validation was1000.

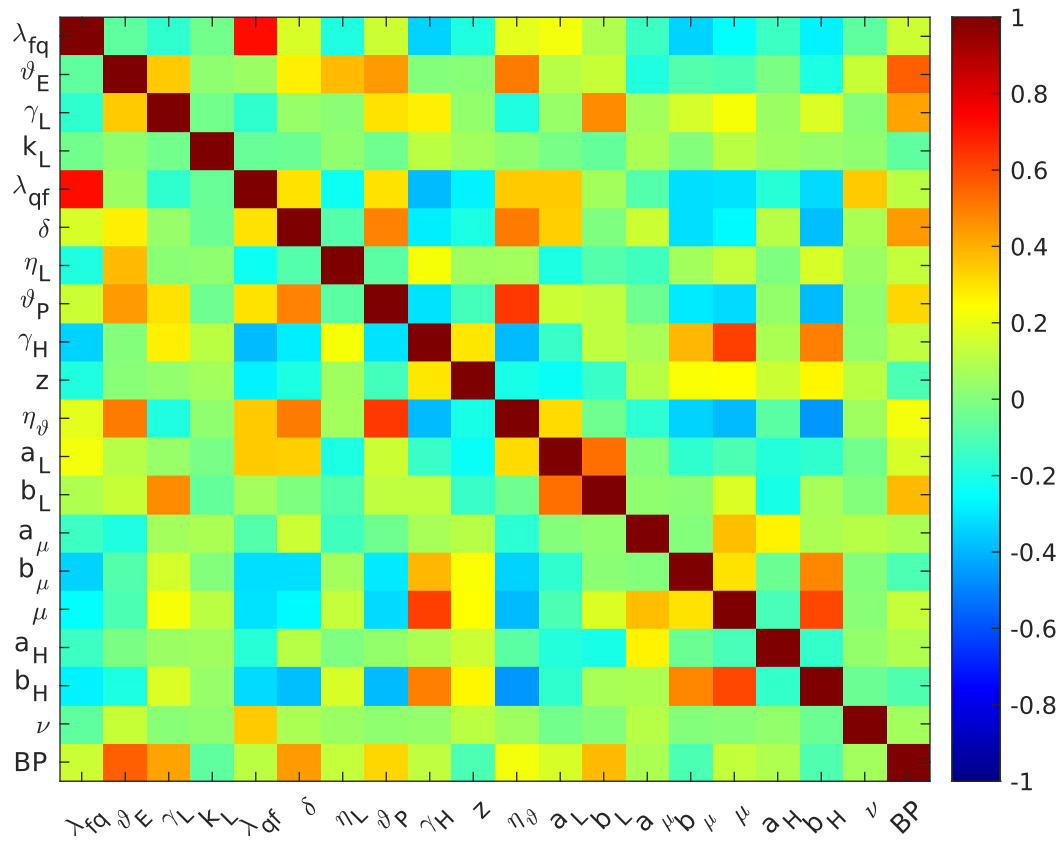
10.2. Estimated parameters with their intervals

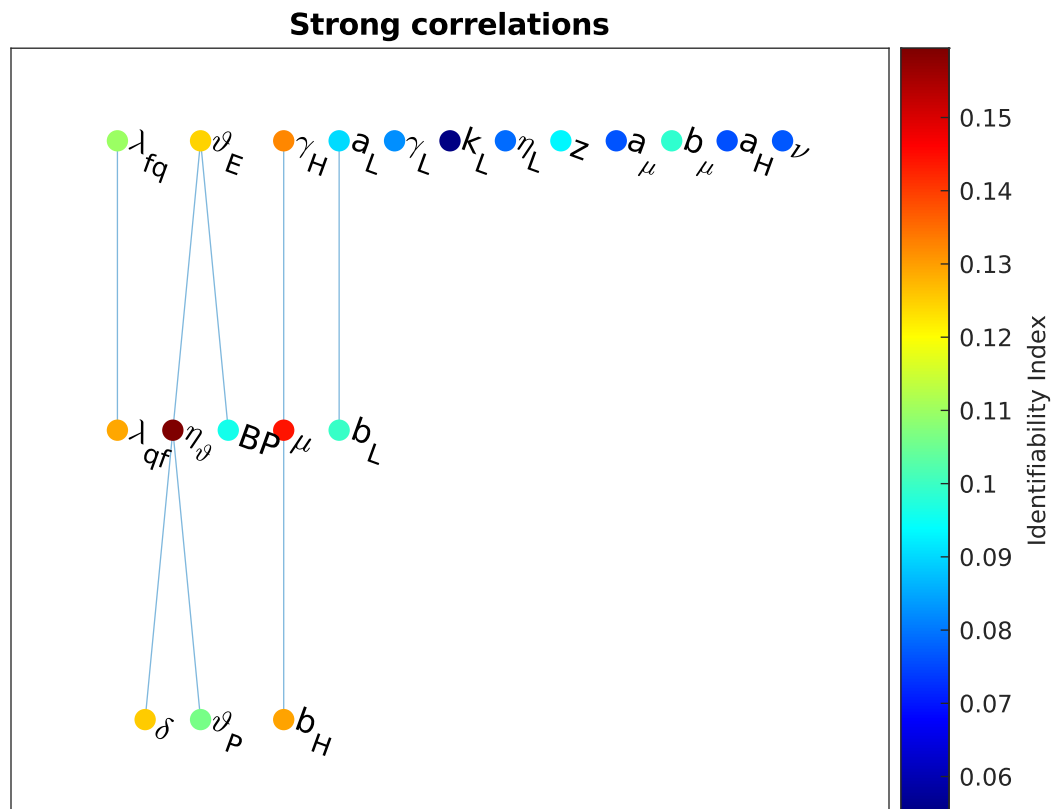
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1302'	'0.1788'	'0.1545'	'0.1082'	'0.1101'
ϑ_E	'0.2317'	'0.2892'	'0.2604'	'0.5317'	'0.1244'
γ_L	'0.5518'	'0.5871'	'0.5694'	'0.2275'	'0.0827'
k_L	'5.338'	'5.6758'	'5.5069'	'8.3068'	'0.0551'
λ_{qf}	'0.2184'	'0.2786'	'0.2485'	'0.0344'	'0.1291'
δ	'0.0438'	'0.0533'	'0.0486'	'0.0029'	'0.1254'
η_L	'0.5163'	'0.5656'	'0.5409'	'0.8843'	'0.0788'
ϑ_P	'0.0924'	'0.1158'	'0.1041'	'0'	'0.1061'
γ_H	'0.5883'	'0.6599'	'0.6241'	'0.8169'	'0.1323'
z	'15.6789'	'17.49'	'16.5845'	'17.5868'	'0.0934'
η_{ϑ}	'0.5787'	'0.6445'	'0.6116'	'0.6134'	'0.1595'
a_L	'1.8702'	'2.1398'	'2.005'	'1.0033'	'0.0903'
b_L	'9.1549'	'9.9273'	'9.5411'	'2.2639'	'0.0996'
a_{μ}	'8.5804'	'9.2683'	'8.9244'	'4.0255'	'0.0766'
b_{μ}	'7.5206'	'8.3017'	'7.9112'	'12.2334'	'0.099'
μ	'0.4739'	'0.5426'	'0.5083'	'0.1586'	'0.144'
a_H	'6.9485'	'7.6978'	'7.3231'	'4.3575'	'0.0763'
b_H	'8.5788'	'9.4503'	'9.0146'	'13.2742'	'0.1295'
ν	'241.4122'	'277.6571'	'259.5346'	'16.7324'	'0.0769'
BP	'321.1966'	'321.8034'	'321.5'	'314.5'	'0.096'

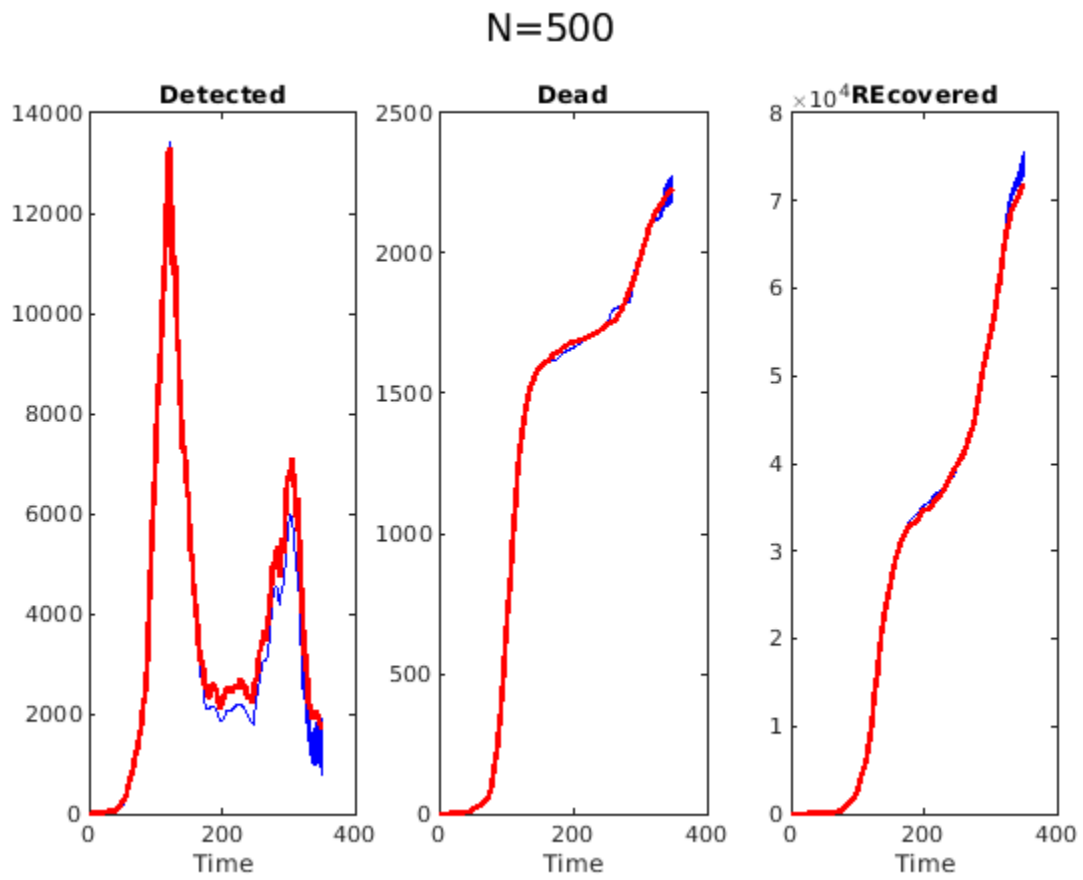
10.3. Identifiability analysis







10.4. Uncertainty analysis



Chapter 11. Extension number11

11.1. Basic information

The extension to be validated consists of the time series from the data351 to the 382. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

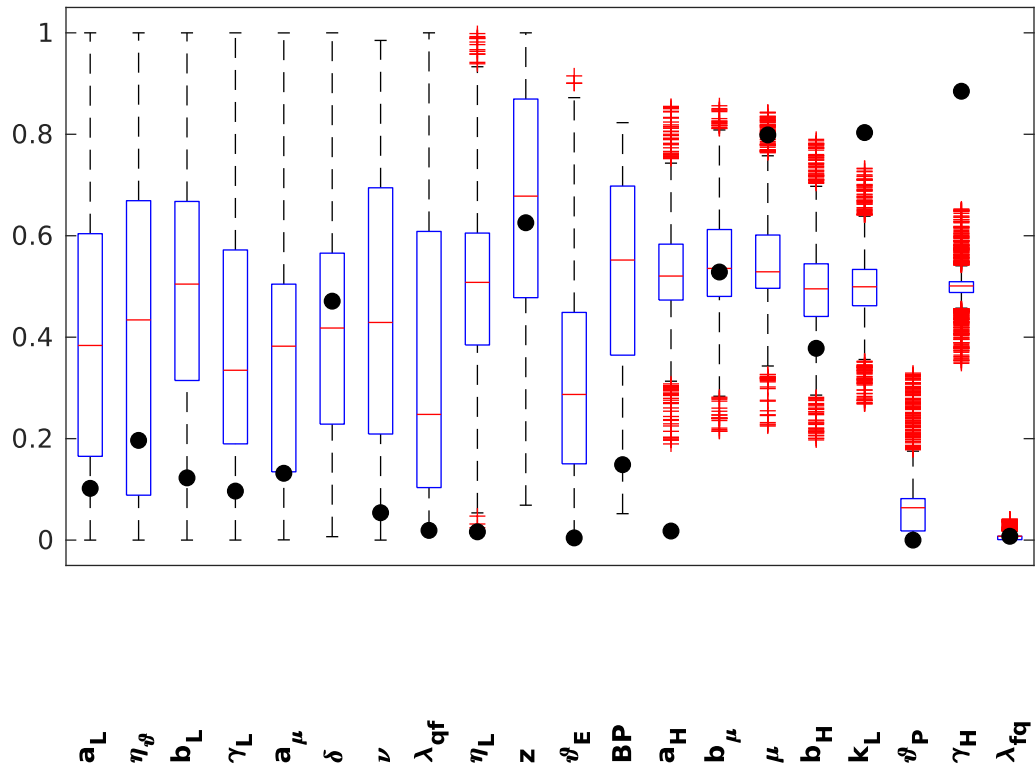
11.2. Estimated parameters with their intervals

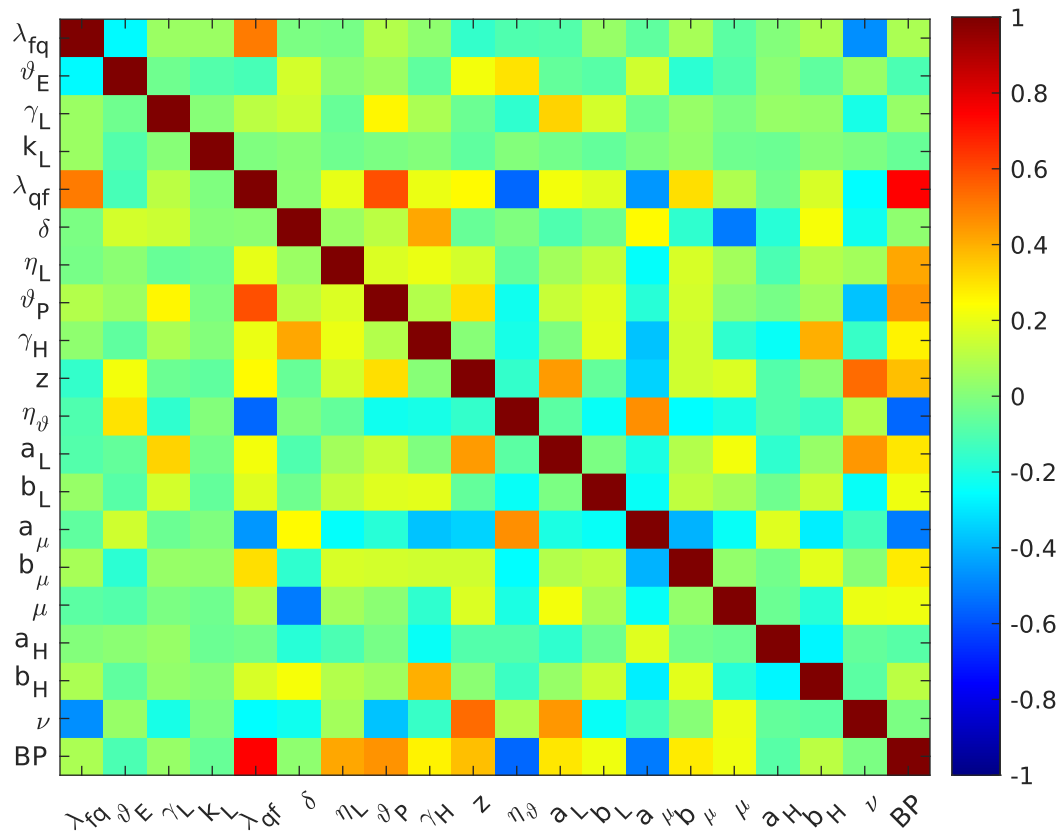
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

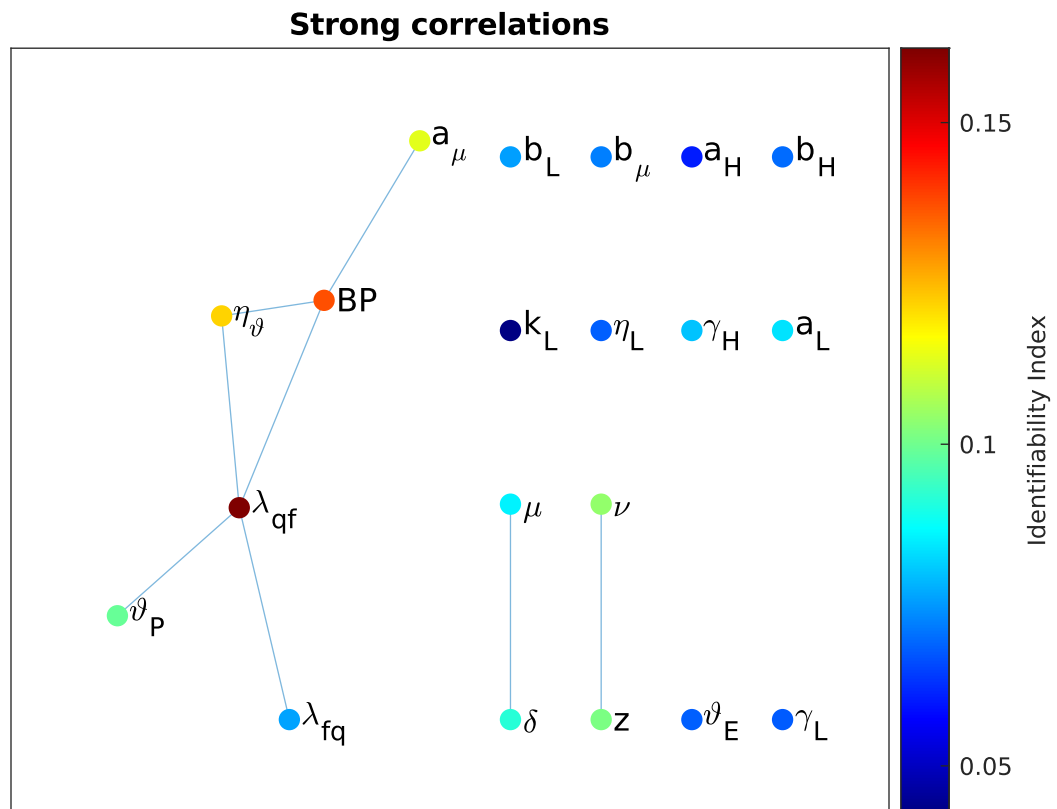
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0056'	'0.0121'	'0.0077'	'0.0075'	'0.0762'
ϑ_E	'0.0004'	'0.0089'	'0.2871'	'0.0043'	'0.0686'
γ_L	'0.0474'	'0.1815'	'0.3348'	'0.0966'	'0.0679'
k_L	'1.4869'	'8.9683'	'5.4942'	'8.2304'	'0.0428'
λ_{qf}	'0.0157'	'0.0195'	'0.2478'	'0.0191'	'0.1616'
δ	'0.0023'	'0.1154'	'0.0627'	'0.0707'	'0.092'
η_L	'0'	'0.0348'	'0.5081'	'0.0163'	'0.0685'
ϑ_P	'0'	'0'	'0.0638'	'0'	'0.0992'
γ_H	'0.1247'	'0.923'	'0.501'	'0.8848'	'0.0802'
z	'18.3237'	'23.1957'	'20.3418'	'18.7685'	'0.1013'
η_{ϑ}	'0.1669'	'0.2162'	'0.4341'	'0.1966'	'0.1219'
a_L	'1.7954'	'9.4415'	'6.3718'	'2.428'	'0.084'
b_L	'2.6094'	'12.6409'	'8.0653'	'2.7178'	'0.0759'
a_{μ}	'2.7394'	'12.8057'	'6.3516'	'2.8441'	'0.1137'
b_{μ}	'1.2898'	'12.592'	'8.4977'	'8.3987'	'0.0721'
μ	'0.0396'	'1'	'0.5289'	'0.7987'	'0.0857'
a_H	'1.1534'	'2.8583'	'8.2874'	'1.2501'	'0.0607'
b_H	'1.9609'	'11.1639'	'7.9343'	'6.2928'	'0.0702'
ν	'26.7064'	'33.9048'	'214.5227'	'26.9879'	'0.1043'
BP	'330.201'	'339.4286'	'350.5'	'331.1372'	'0.137'

11.3. Identifiability analysis

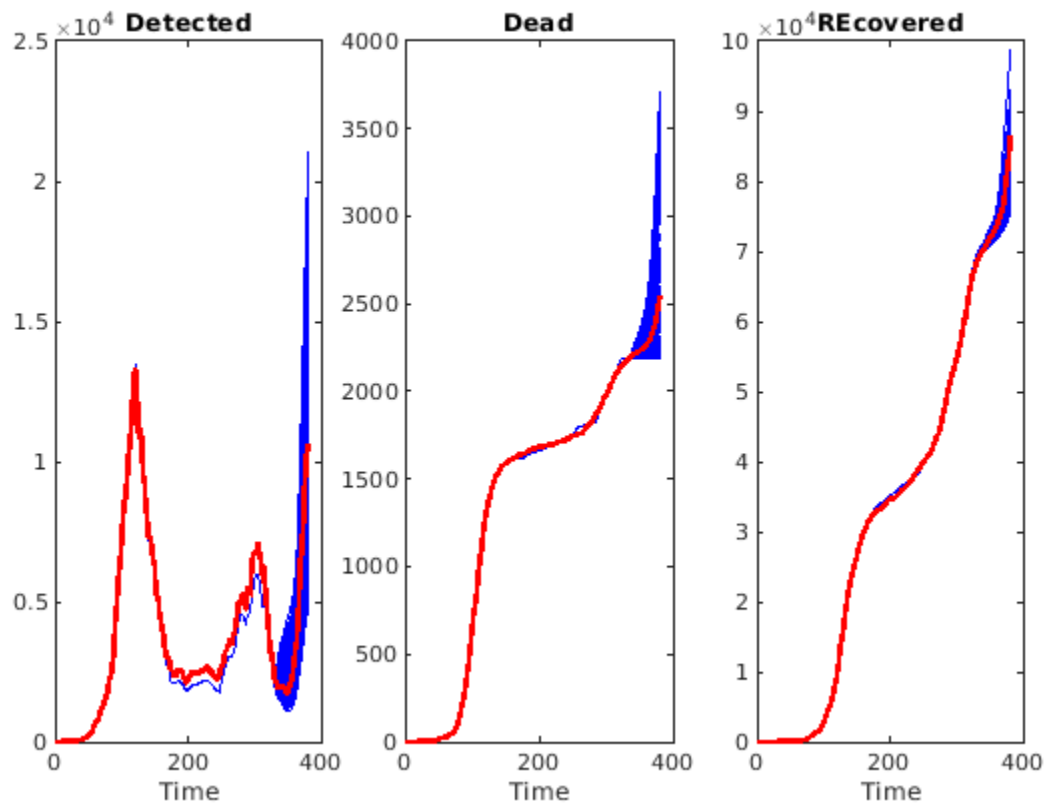






11.4. Uncertainty analysis

N=500



Chapter 12. Extension number12

12.1. Basic information

The extension to be validated consists of the time series from the data382 to the 404. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

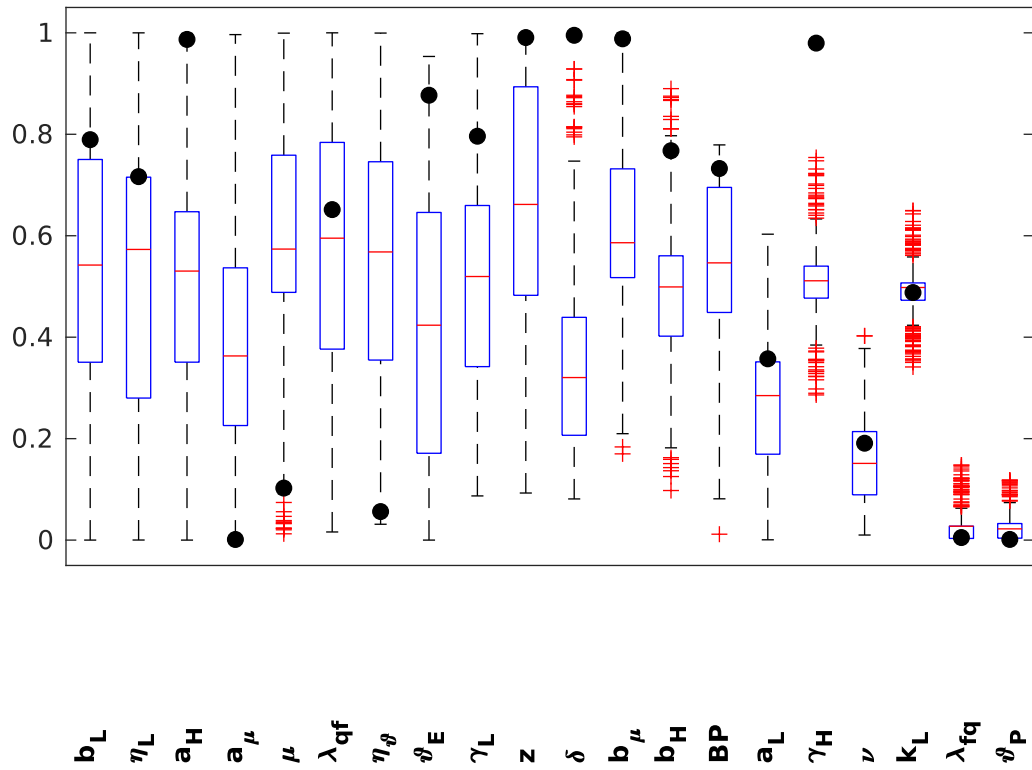
12.2. Estimated parameters with their intervals

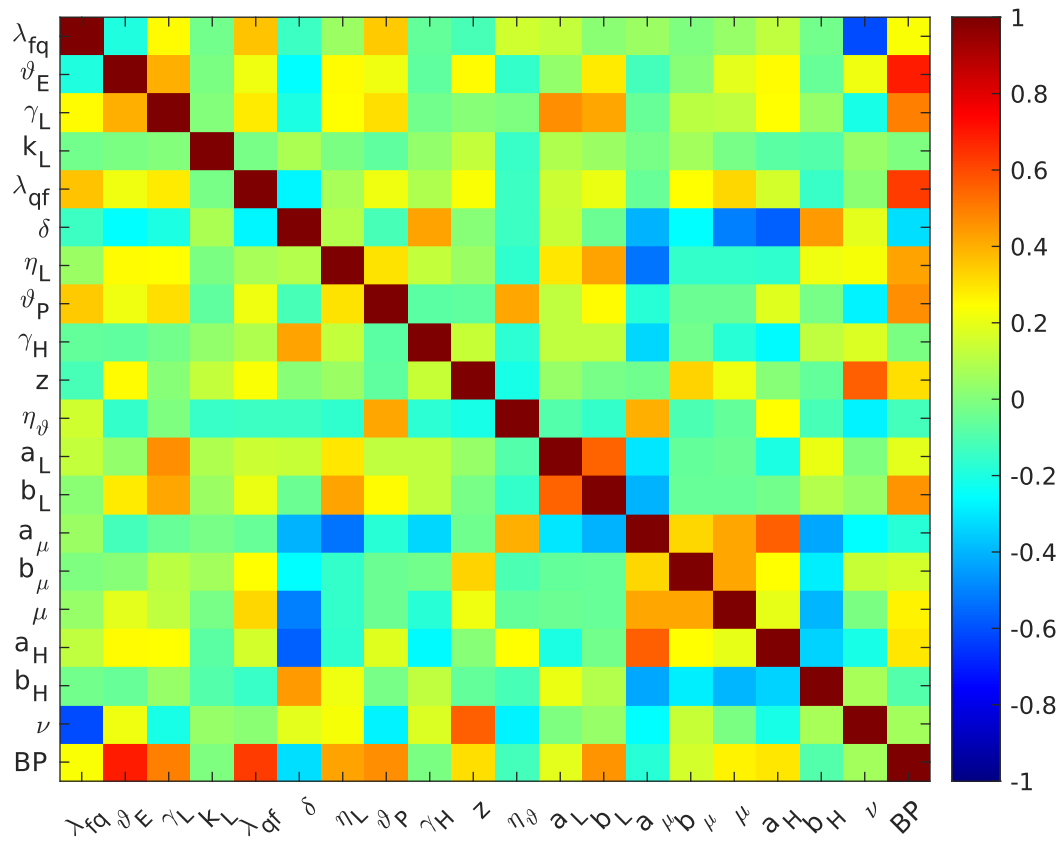
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

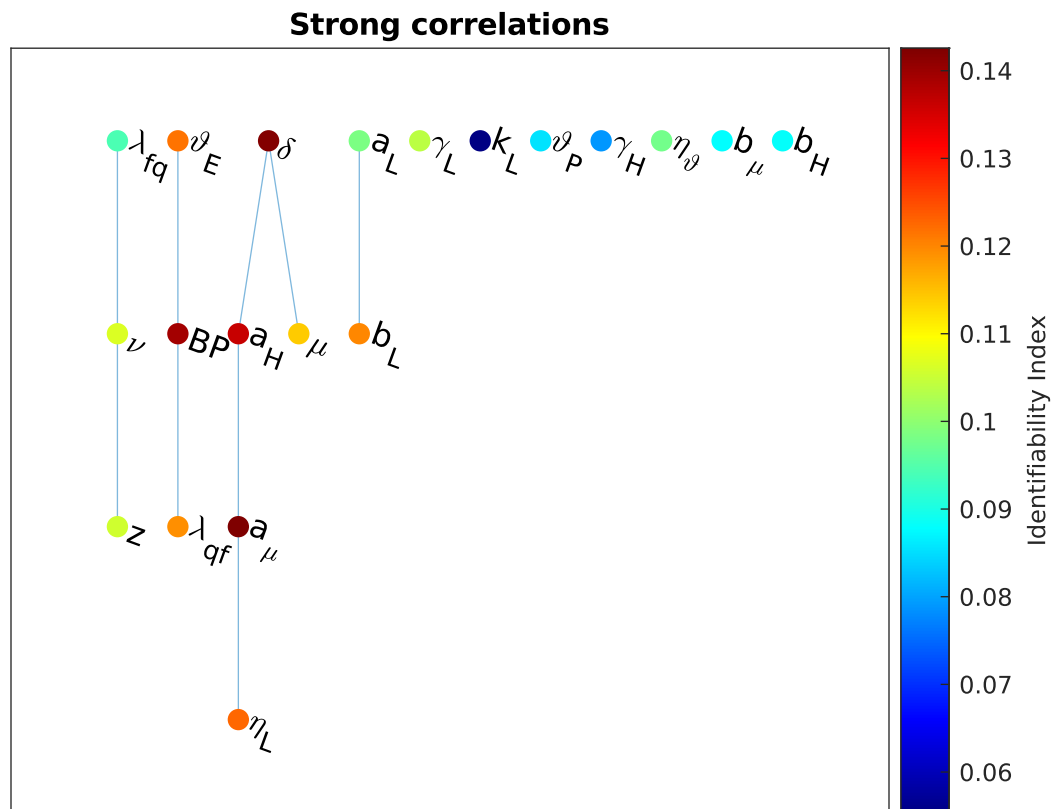
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0113'	'0.0275'	'0.005'	'0.0945'
\vartheta_E	'0.6738'	'0.8905'	'0.4236'	'0.877'	'0.1217'
\gamma_L	'0.2893'	'1'	'0.5196'	'0.7962'	'0.104'
k_L	'1'	'10'	'5.4816'	'5.3919'	'0.0554'
\lambda_{qf}	'0.4398'	'1'	'0.5952'	'0.6515'	'0.1191'
\delta	'0'	'0.15'	'0.0483'	'0.1493'	'0.142'
\eta_L	'0'	'1'	'0.573'	'0.7165'	'0.1227'
\vartheta_P	'0'	'0.2419'	'0.0222'	'0.0013'	'0.0856'
\gamma_H	'0'	'1'	'0.5112'	'0.9797'	'0.0791'
z	'14.0268'	'30'	'19.8516'	'29.7206'	'0.1056'
\eta_{\vartheta}	'0'	'0.1265'	'0.5681'	'0.0562'	'0.0976'
a_L	'1.222'	'9.4474'	'4.9889'	'6.0033'	'0.0983'
b_L	'8.6455'	'15'	'8.5908'	'12.0515'	'0.1199'
a_{\mu}	'1'	'15'	'6.0826'	'1.0171'	'0.1426'
b_{\mu}	'1'	'15'	'9.2066'	'14.8348'	'0.0879'
\mu	'0'	'0.2308'	'0.5737'	'0.1026'	'0.1143'
a_H	'1'	'15'	'8.4247'	'14.8185'	'0.1363'
b_H	'1'	'14.44'	'7.987'	'11.7465'	'0.0883'
\nu	'68.0676'	'106.2583'	'75.9073'	'95.4917'	'0.1066'
BP	'382.2124'	'385.6678'	'374.5'	'382.4995'	'0.1393'

12.3. Identifiability analysis

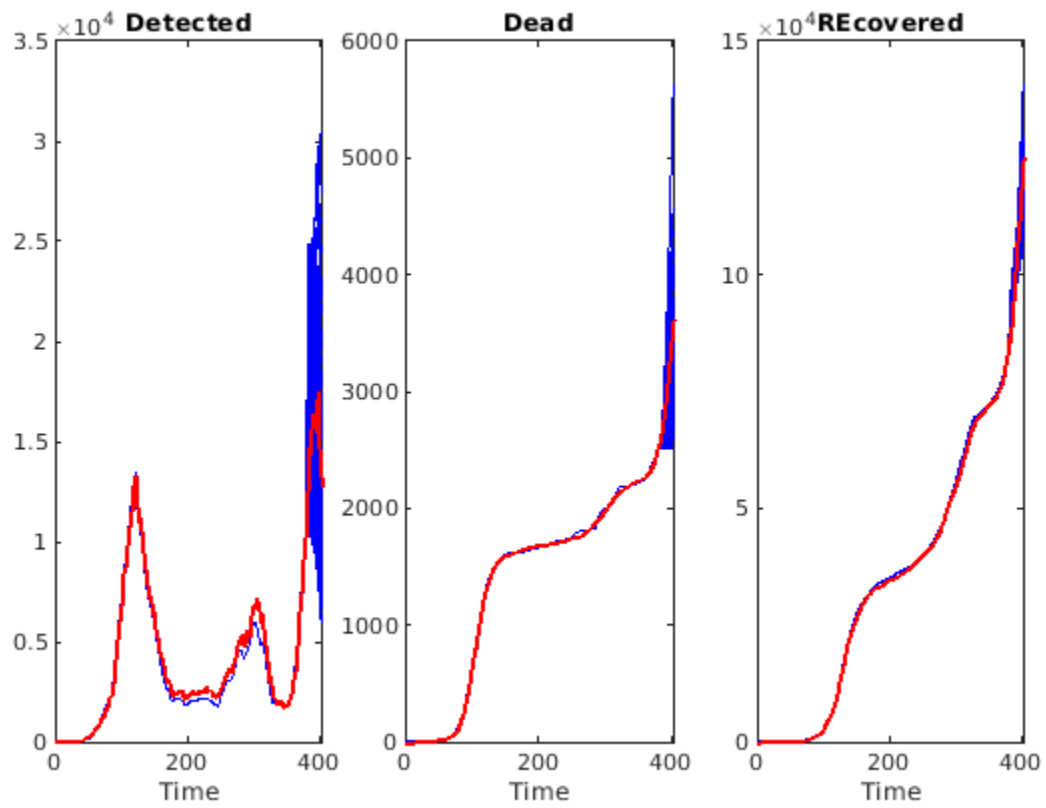






12.4. Uncertainty analysis

N=500



Chapter 13. Extension number13

13.1. Basic information

The extension to be validated consists of the time series from the data404 to the 404. The status of the validation is: COMPLETED.

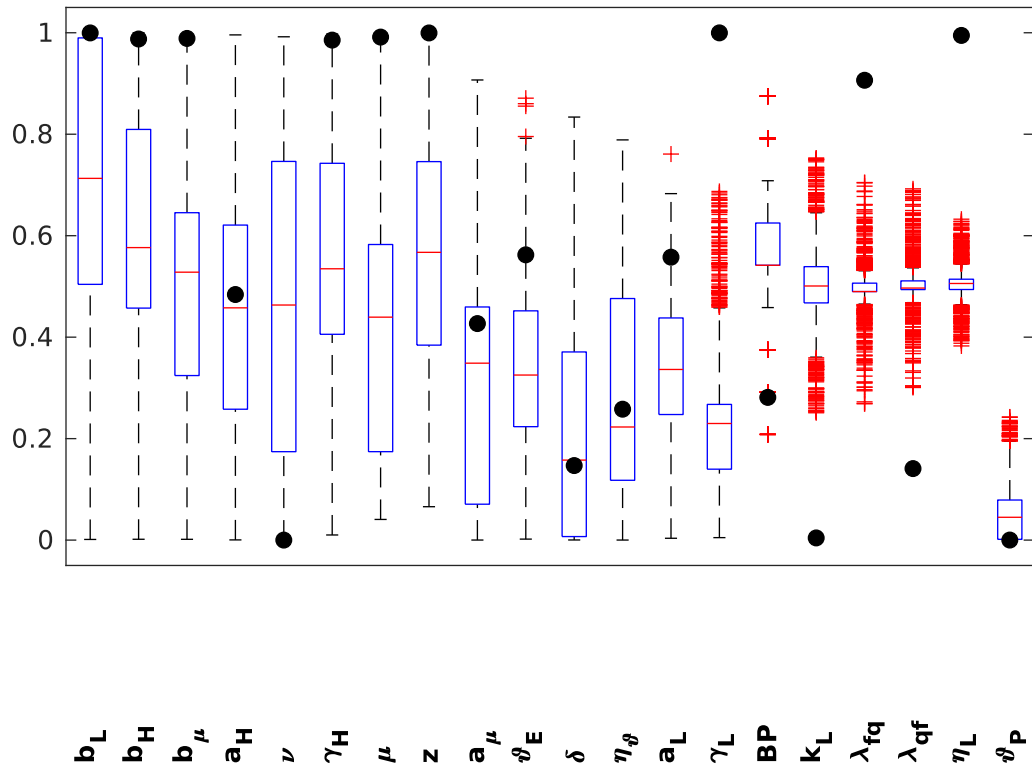
The number of estimations needed to perform the validation was1000.

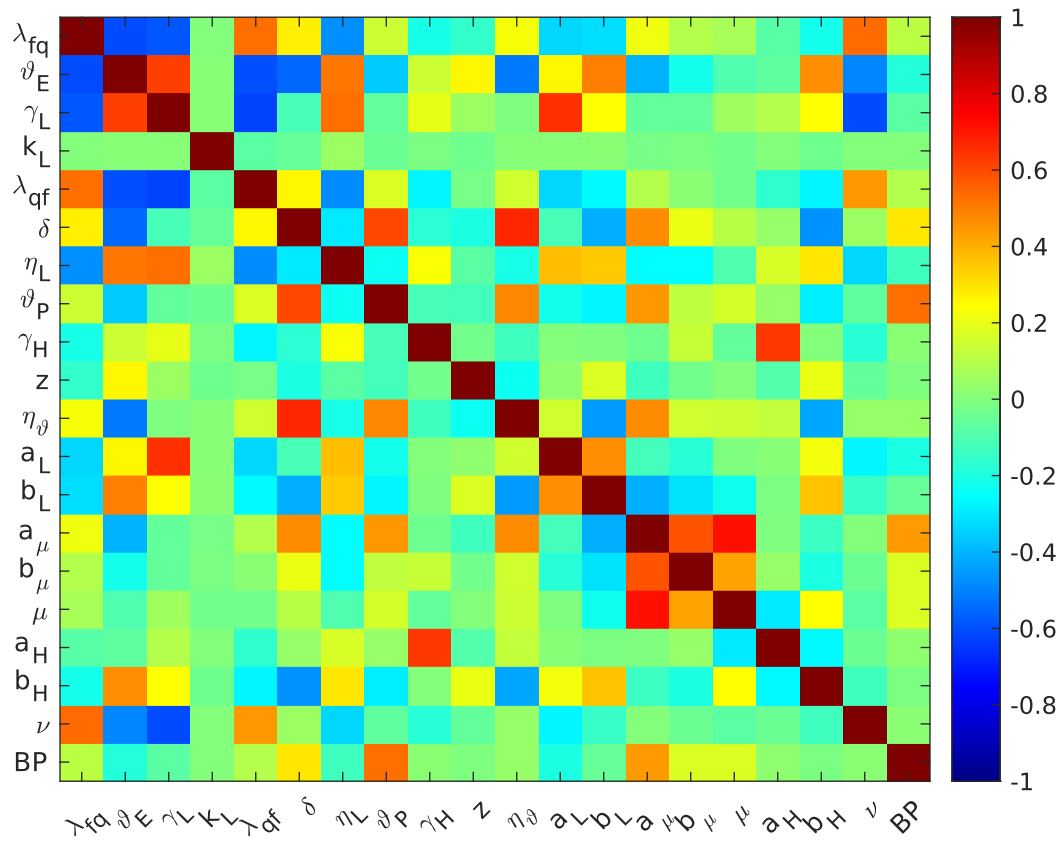
13.2. Estimated parameters with their intervals

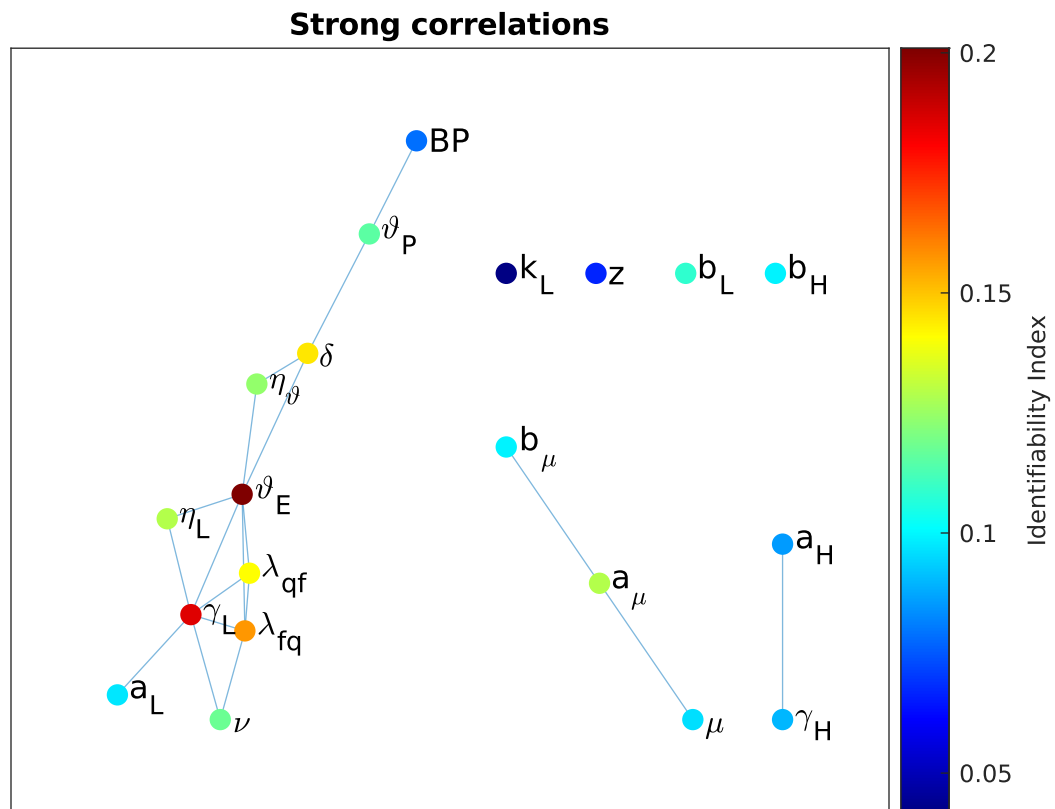
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4727'	'0.507'	'0.4899'	'0.9064'	'0.157'
\vartheta_E	'0.3101'	'0.3406'	'0.3253'	'0.5623'	'0.201'
\gamma_L	'0.2049'	'0.2548'	'0.2298'	'0.9998'	'0.1857'
k_L	'5.4053'	'5.6101'	'5.5077'	'1.0386'	'0.0419'
\lambda_{qf}	'0.4793'	'0.5143'	'0.4968'	'0.141'	'0.1412'
\delta	'0.0213'	'0.026'	'0.0237'	'0.022'	'0.145'
\eta_L	'0.4931'	'0.5185'	'0.5058'	'0.9947'	'0.1292'
\vartheta_P	'0.0349'	'0.055'	'0.045'	'0.0001'	'0.1157'
\gamma_H	'0.5147'	'0.5548'	'0.5348'	'0.9855'	'0.0897'
z	'16.4595'	'17.5712'	'17.0154'	'29.9884'	'0.0672'
\eta_{\vartheta}	'0.2067'	'0.2391'	'0.2229'	'0.258'	'0.1242'
a_L	'5.5611'	'5.8563'	'5.7087'	'8.8068'	'0.0973'
b_L	'10.6825'	'11.2809'	'10.9817'	'14.9951'	'0.1085'
a_{\mu}	'5.6482'	'6.1161'	'5.8821'	'6.9748'	'0.1295'
b_{\mu}	'8.1'	'8.6864'	'8.3932'	'14.8435'	'0.0991'
\mu	'0.4187'	'0.4602'	'0.4394'	'0.9915'	'0.096'
a_H	'7.1224'	'7.6955'	'7.409'	'7.7767'	'0.0857'
b_H	'8.8134'	'9.3297'	'9.0715'	'14.8274'	'0.0993'
\nu	'219.8341'	'243.5066'	'231.6704'	'0.0105'	'0.1177'
BP	'388.3941'	'388.6059'	'388.5'	'385.3756'	'0.0788'

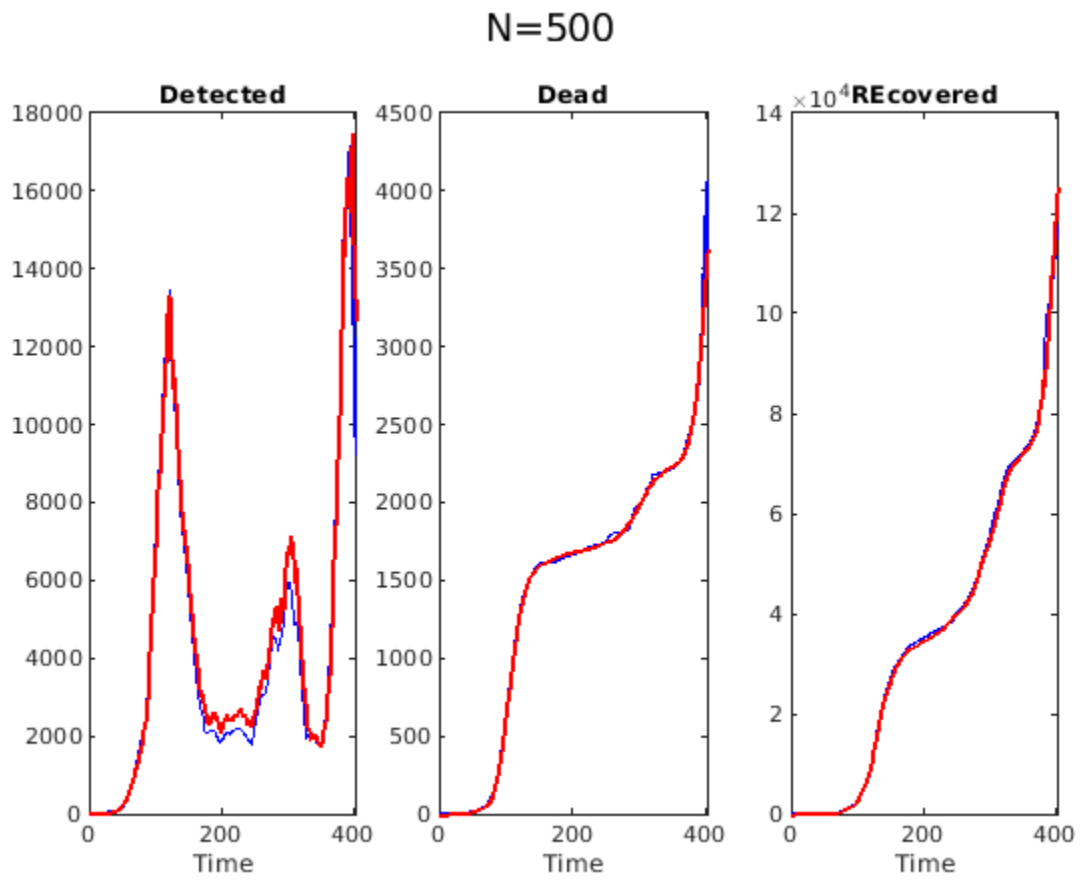
13.3. Identifiability analysis







13.4. Uncertainty analysis



Chapter 14. Extension number14

14.1. Basic information

The extension to be validated consists of the time series from the data404 to the 434. The status of the validation is: COMPLETED.

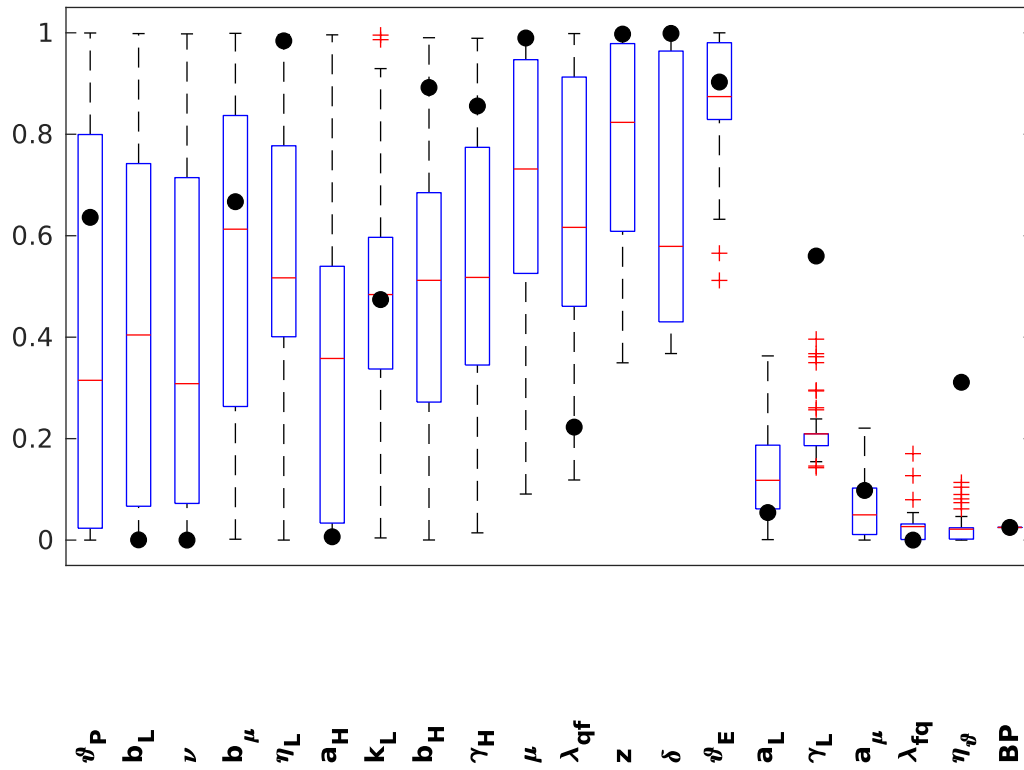
The number of estimations needed to perform the validation was1000.

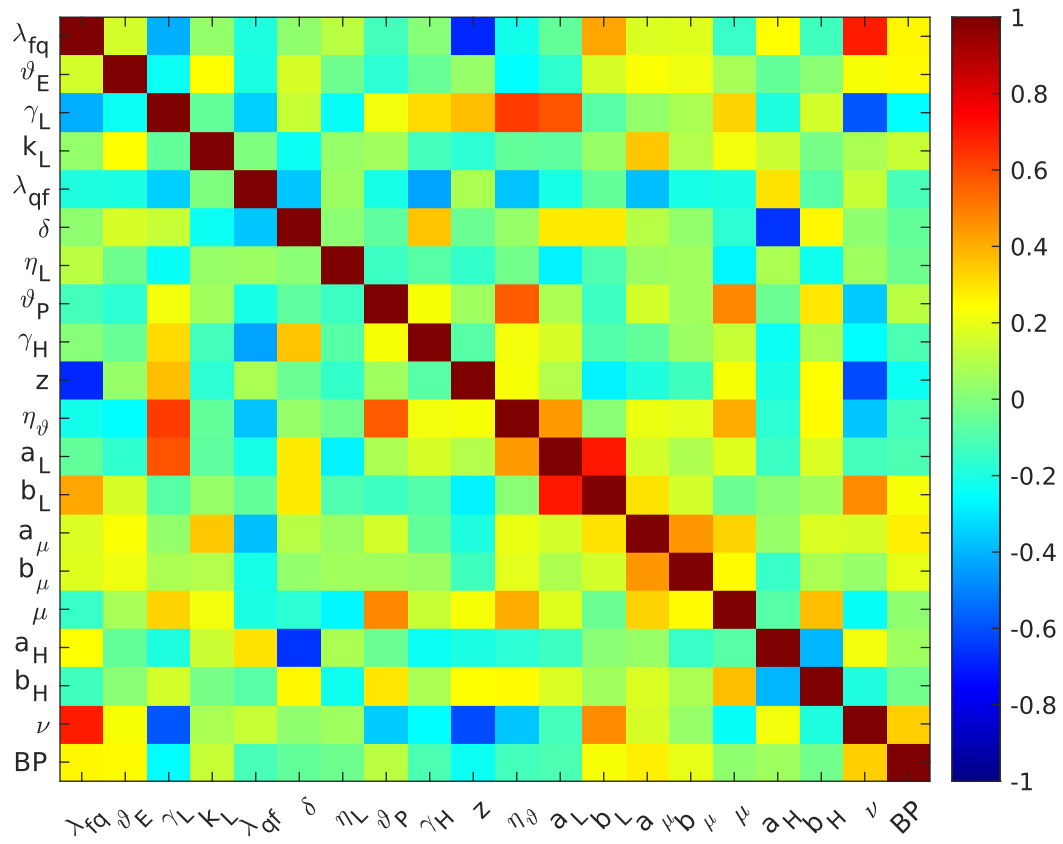
14.2. Estimated parameters with their intervals

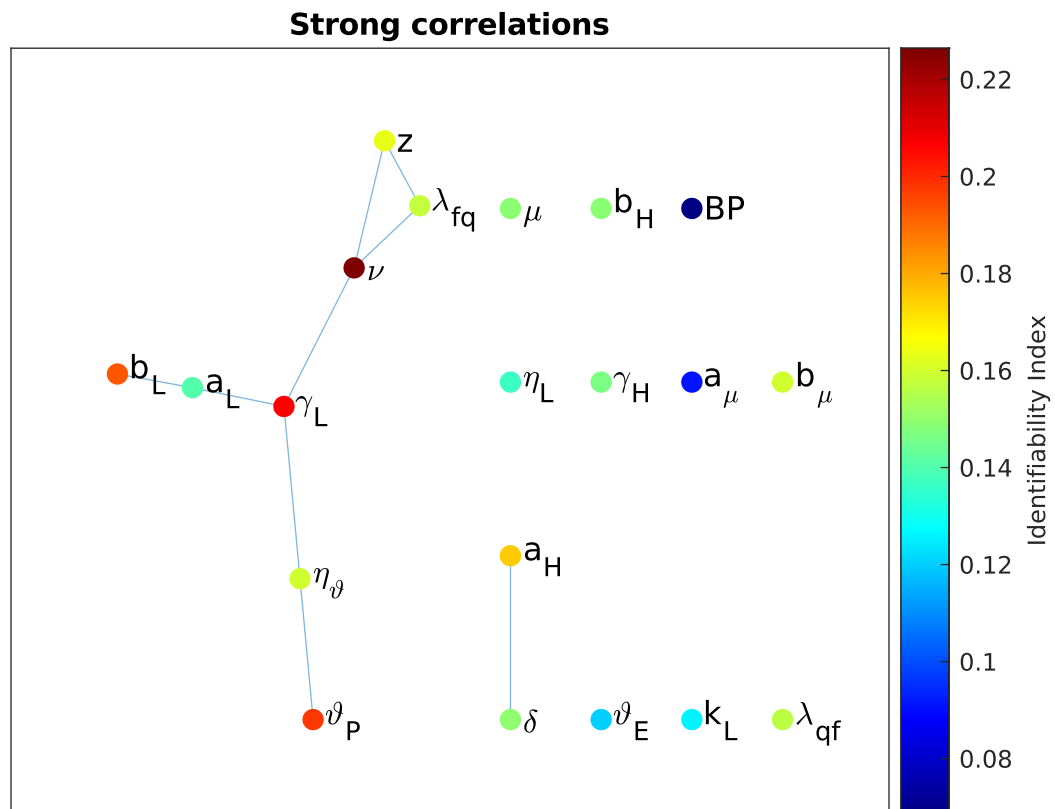
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.1095'	'0.0318'	'0'	'0.1582'
\vartheta_E	'0.8156'	'0.9317'	'0.8737'	'0.903'	'0.1202'
\gamma_L	'0.1314'	'0.2878'	'0.2096'	'0.56'	'0.2065'
k_L	'4.6985'	'6.0139'	'5.3562'	'5.2667'	'0.1257'
\lambda_{qf}	'0.5341'	'0.6988'	'0.6165'	'0.2227'	'0.1566'
\delta	'0.0762'	'0.0975'	'0.0868'	'0.1498'	'0.1501'
\eta_L	'0.4307'	'0.6033'	'0.517'	'0.9841'	'0.1372'
\vartheta_P	'0.1994'	'0.4306'	'0.315'	'0.6362'	'0.1977'
\gamma_H	'0.4349'	'0.6007'	'0.5178'	'0.8557'	'0.1465'
z	'22.8445'	'26.5635'	'24.704'	'29.9232'	'0.1634'
\eta_{\vartheta}	'0'	'0.0997'	'0.0243'	'0.3111'	'0.1596'
a_L	'2.1175'	'3.2198'	'2.6686'	'1.7601'	'0.1407'
b_L	'5.1259'	'8.1963'	'6.6611'	'1.0065'	'0.1931'
a_{\mu}	'1.4558'	'1.9638'	'1.7098'	'2.3702'	'0.0917'
b_{\mu}	'8.1755'	'10.9855'	'9.5805'	'10.339'	'0.1595'
\mu	'0.6599'	'0.8032'	'0.7316'	'0.9897'	'0.1491'
a_H	'4.681'	'7.3443'	'6.0127'	'1.0915'	'0.1753'
b_H	'7.0006'	'9.3372'	'8.1689'	'13.4905'	'0.1491'
\nu	'104.6162'	'203.7557'	'154.1859'	'0.0098'	'0.2265'
BP	'404.3581'	'404.6419'	'404.5'	'404.5'	'0.069'

14.3. Identifiability analysis

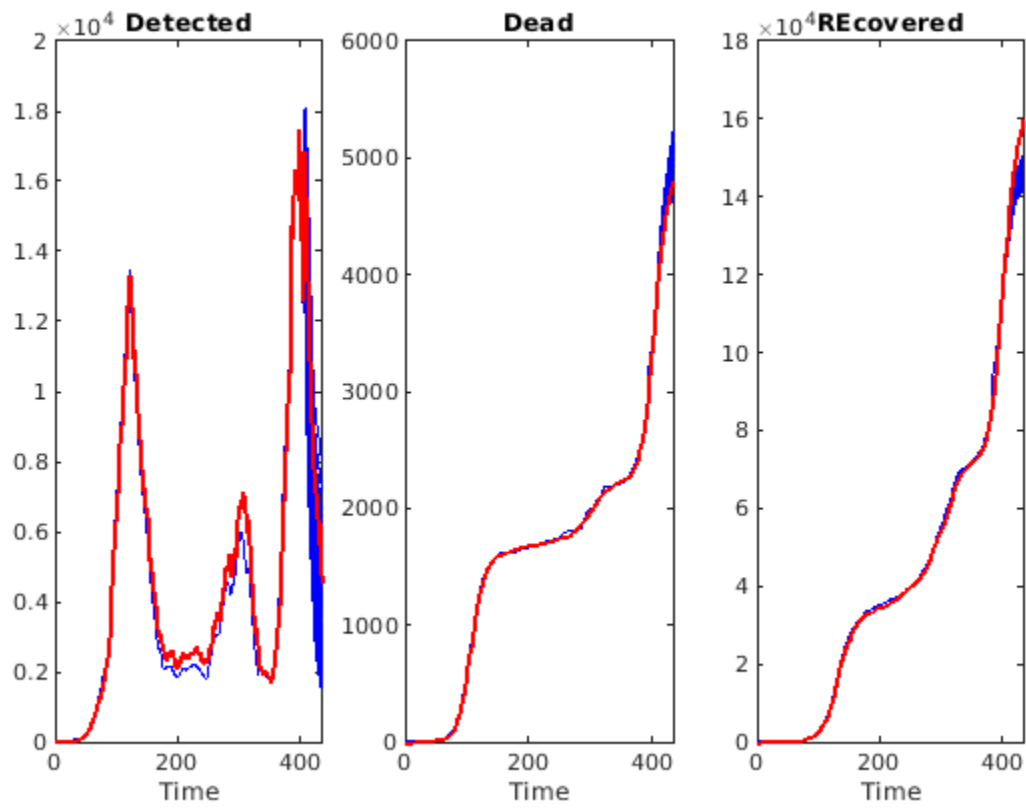






14.4. Uncertainty analysys

N=500



Chapter 15. Extension number15

15.1. Basic information

The extension to be validated consists of the time series from the data434 to the 454. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

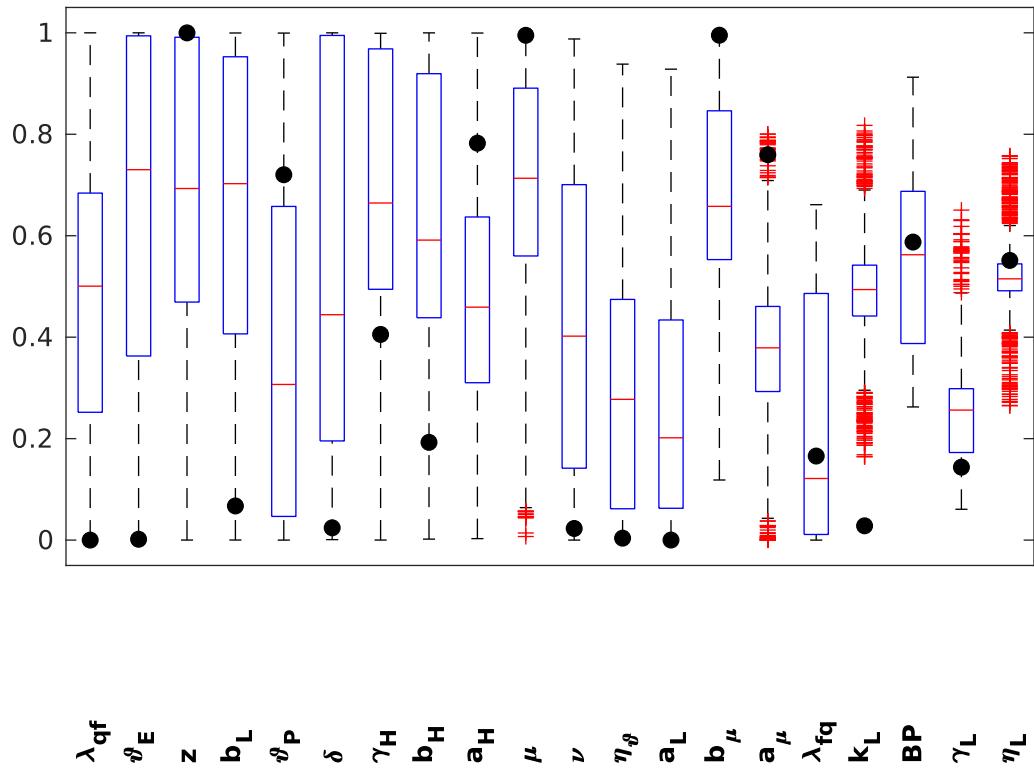
15.2. Estimated parameters with their intervals

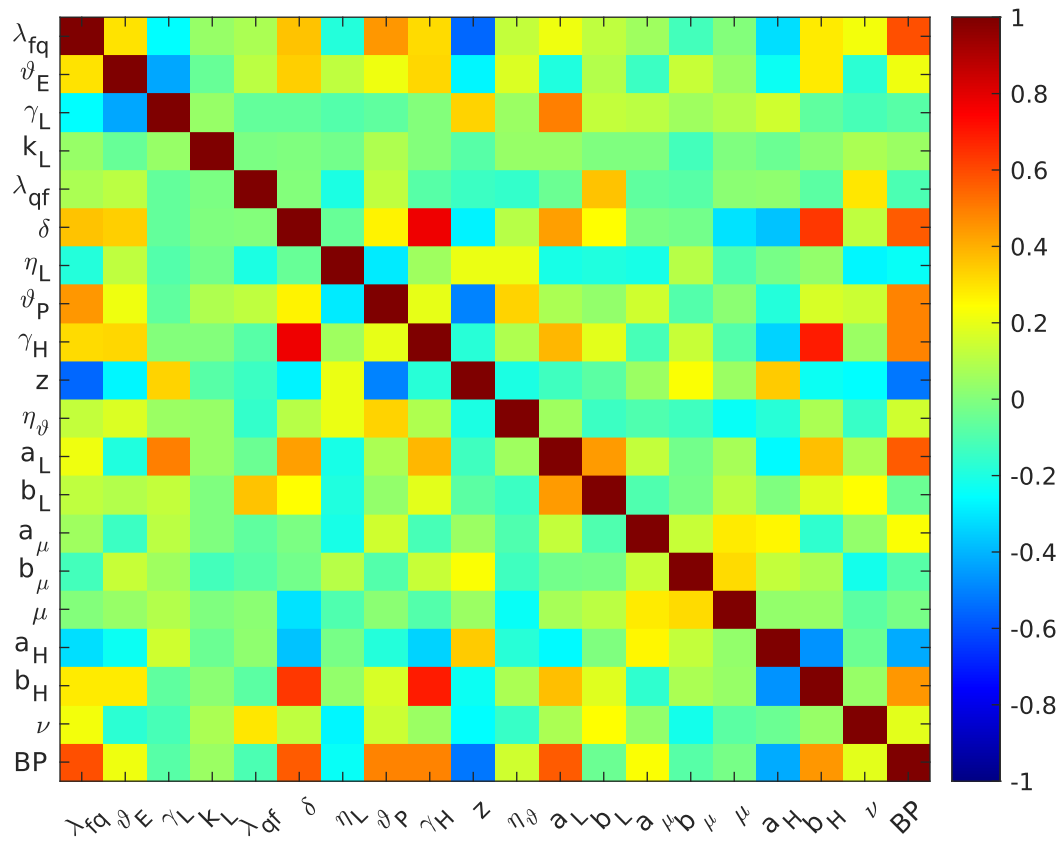
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

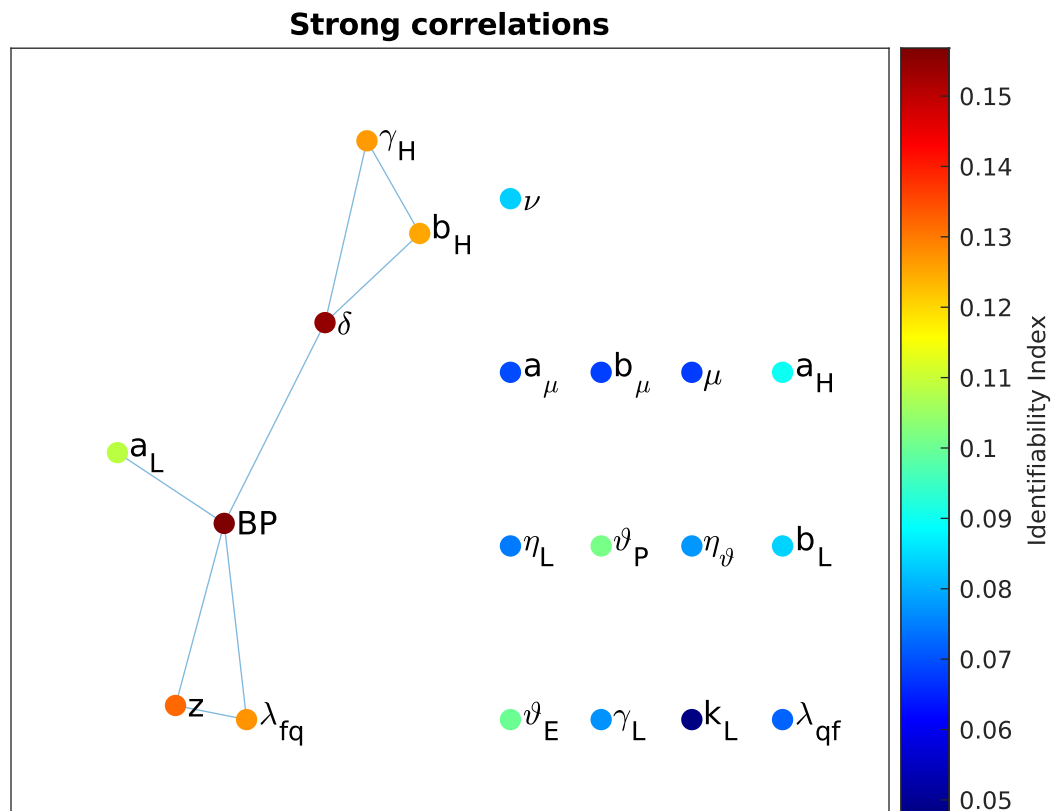
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1307'	'1'	'0.1217'	'0.1657'	'0.1275'
ϑ_E	'0'	'0.0038'	'0.7302'	'0.0017'	'0.1004'
γ_L	'0.0912'	'0.1571'	'0.2563'	'0.1437'	'0.0772'
k_L	'1'	'10'	'5.4448'	'1.2535'	'0.0483'
λ_{qf}	'0'	'0.0001'	'0.5006'	'0'	'0.0721'
δ	'0'	'0.0082'	'0.0666'	'0.0036'	'0.1544'
η_L	'0'	'1'	'0.515'	'0.5513'	'0.0748'
ϑ_P	'0'	'1'	'0.3068'	'0.7202'	'0.1013'
γ_H	'0'	'0.9122'	'0.6645'	'0.4054'	'0.1265'
z	'1.3269'	'30'	'20.793'	'29.9956'	'0.1319'
η_{ϑ}	'0'	'0.0086'	'0.2775'	'0.0038'	'0.0775'
a_L	'1'	'2.1362'	'3.8232'	'1.0016'	'0.1086'
b_L	'1'	'4.0062'	'10.8365'	'1.9424'	'0.0839'
a_{μ}	'1'	'15'	'6.3063'	'11.6358'	'0.0698'
b_{μ}	'1'	'15'	'10.21'	'14.9335'	'0.0685'
μ	'0'	'1'	'0.7133'	'0.9951'	'0.0682'
a_H	'1'	'15'	'7.4287'	'11.9542'	'0.09'
b_H	'1'	'15'	'9.2794'	'3.6977'	'0.1251'
ν	'0'	'25.7954'	'201.0217'	'11.4646'	'0.0838'
BP	'424.5306'	'441.0306'	'426.5'	'427.5'	'0.1568'

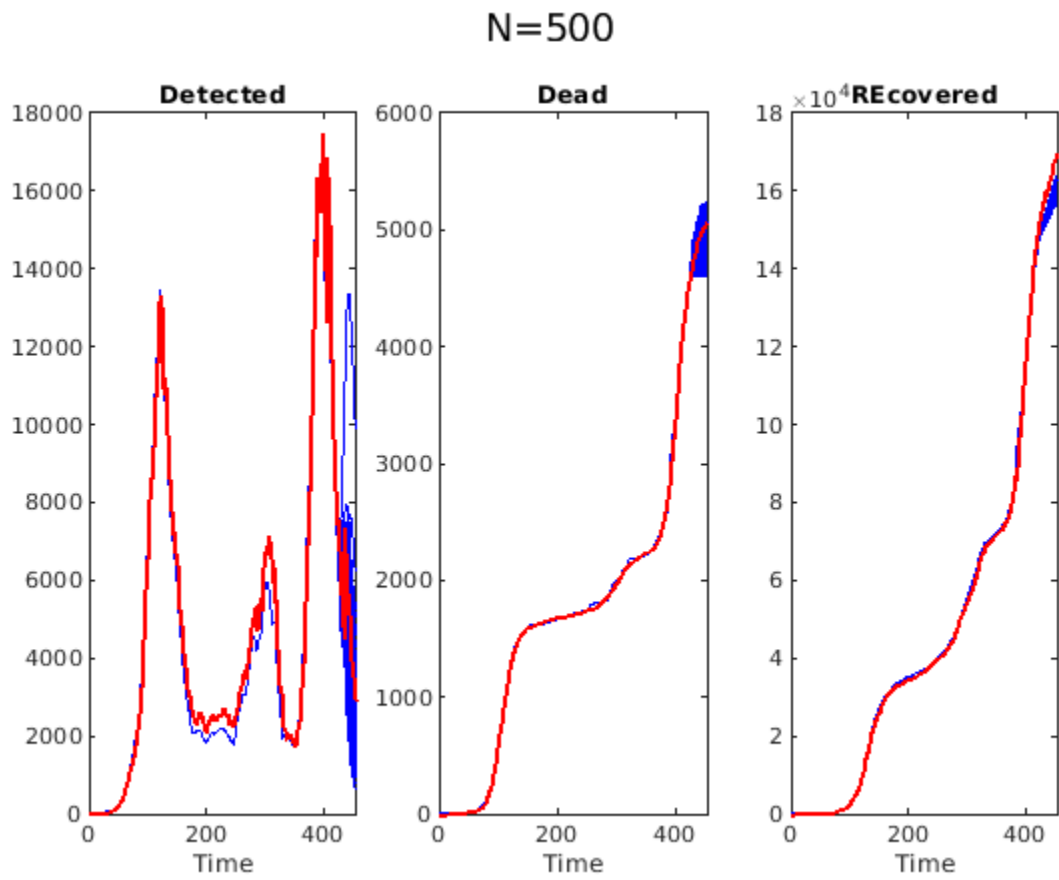
15.3. Identifiability analysis







15.4. Uncertainty analysys



Chapter 16. Extension number16

16.1. Basic information

The extension to be validated consists of the time series from the data454 to the 455. The status of the validation is: COMPLETED.

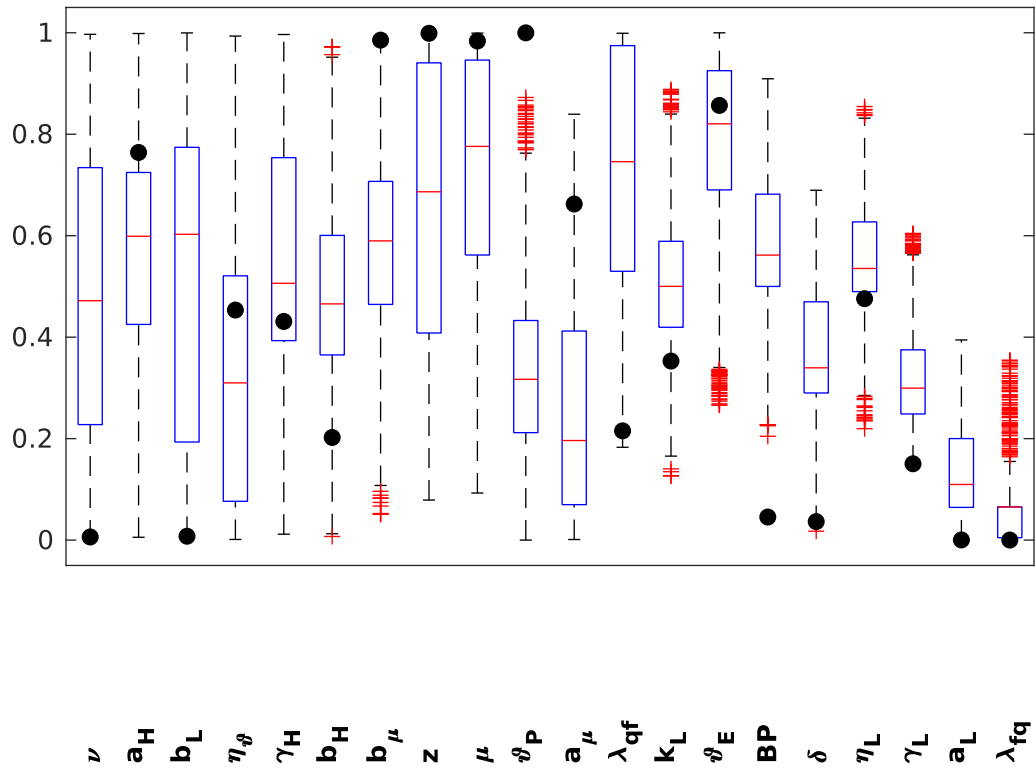
The number of estimations needed to perform the validation was1000.

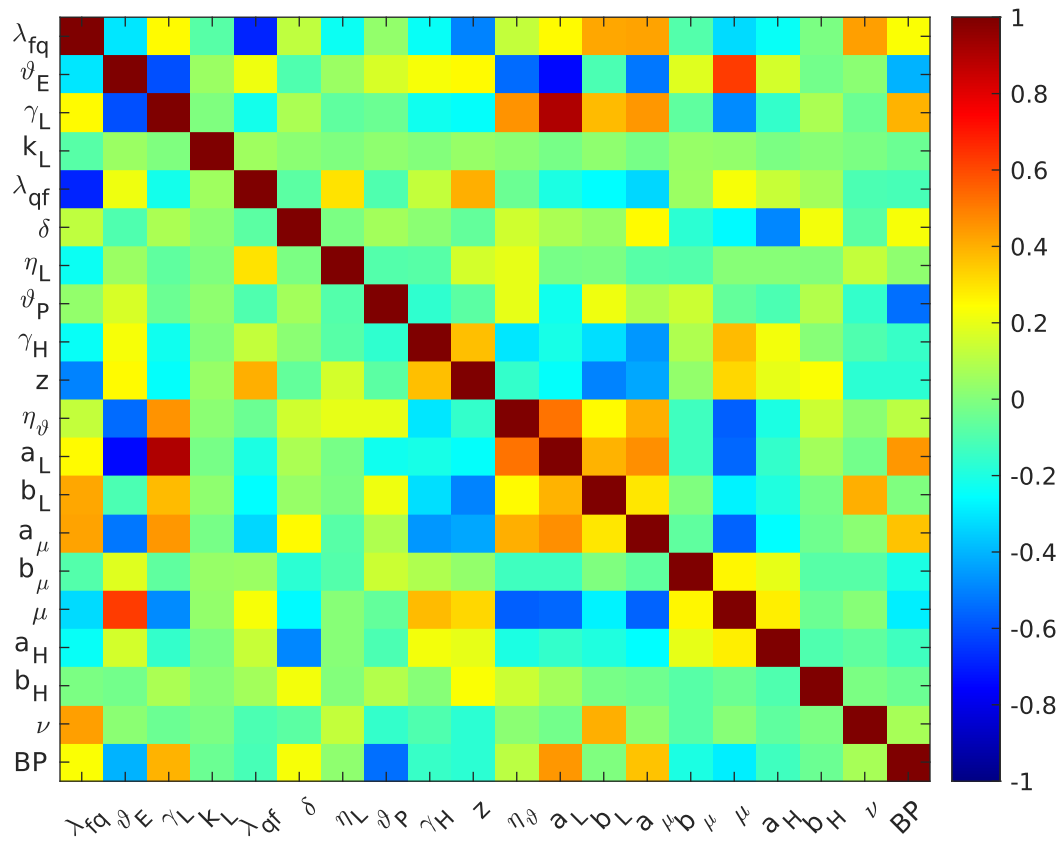
16.2. Estimated parameters with their intervals

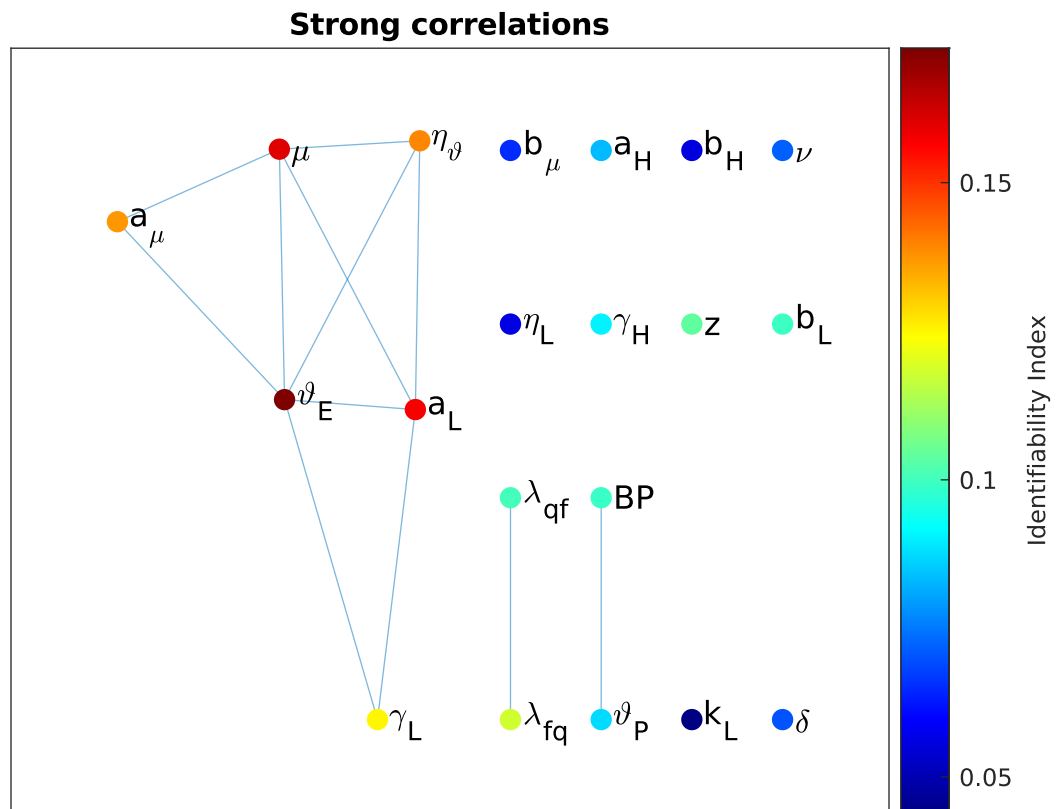
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.0475'	'0.0834'	'0.0654'	'0.0001'	'0.118'
\vartheta_E	'0.8013'	'0.8395'	'0.8204'	'0.8568'	'0.1726'
\gamma_L	'0.2887'	'0.3105'	'0.2996'	'0.1504'	'0.1252'
k_L	'5.3891'	'5.6128'	'5.501'	'4.1758'	'0.0441'
\lambda_{qf}	'0.7291'	'0.7628'	'0.7459'	'0.2153'	'0.1006'
\delta	'0.0489'	'0.053'	'0.0509'	'0.0055'	'0.0703'
\eta_L	'0.5237'	'0.547'	'0.5354'	'0.4758'	'0.0564'
\vartheta_P	'0.2994'	'0.335'	'0.3172'	'0.9998'	'0.0877'
\gamma_H	'0.4869'	'0.5254'	'0.5062'	'0.4309'	'0.0904'
z	'19.9385'	'21.2546'	'20.5965'	'29.9676'	'0.104'
\eta_{\vartheta}	'0.2897'	'0.3301'	'0.3099'	'0.4534'	'0.1394'
a_L	'2.3747'	'2.6999'	'2.5373'	'1.0043'	'0.1571'
b_L	'9.1148'	'9.7644'	'9.4396'	'1.1072'	'0.0995'
a_{\mu}	'3.4991'	'4.0096'	'3.7544'	'10.2733'	'0.1372'
b_{\mu}	'9.0556'	'9.456'	'9.2558'	'14.7968'	'0.0655'
\mu	'0.7604'	'0.7915'	'0.776'	'0.9837'	'0.1602'
a_H	'9.1392'	'9.6299'	'9.3845'	'11.6972'	'0.0835'
b_H	'7.3203'	'7.7177'	'7.519'	'3.8323'	'0.0557'
\nu	'224.566'	'247.2761'	'235.921'	'3.0806'	'0.072'
BP	'440.0422'	'440.3156'	'440.1789'	'434.5'	'0.0992'

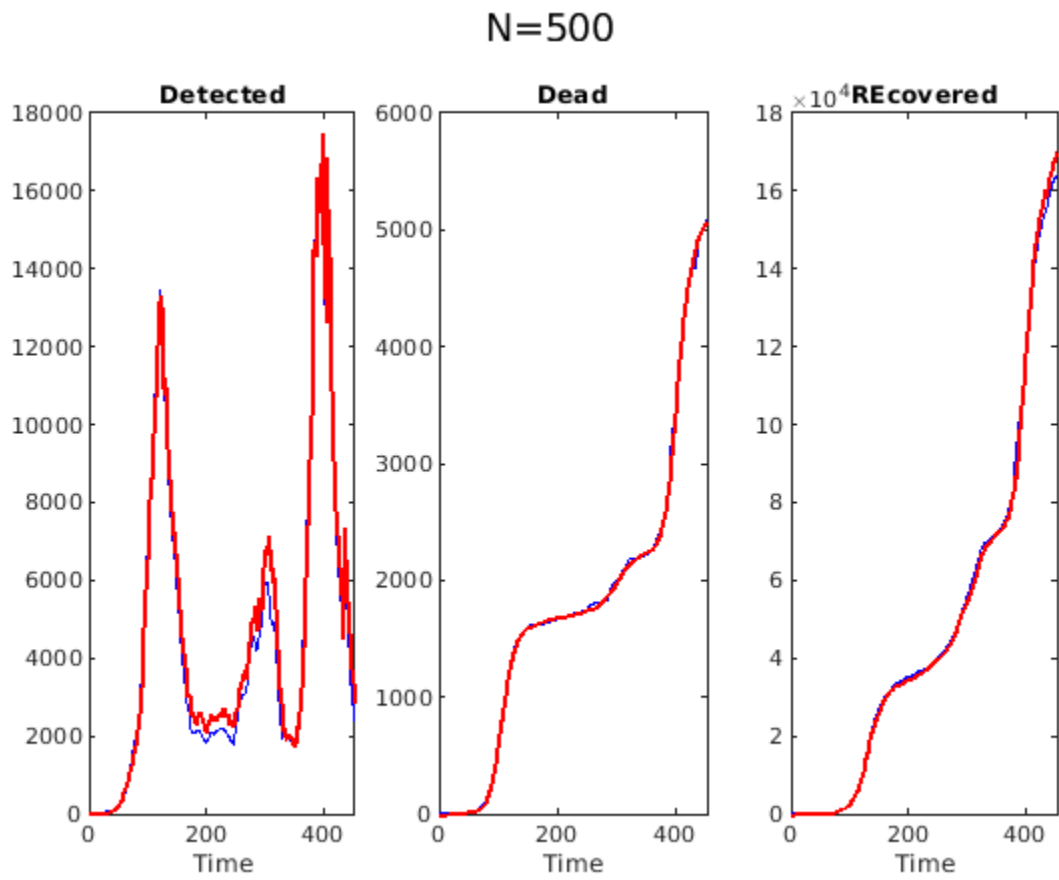
16.3. Identifiability analysis







16.4. Uncertainty analysis



Chapter 17. Extension number17

17.1. Basic information

The extension to be validated consists of the time series from the data455 to the 467. The status of the validation is: COMPLETED.

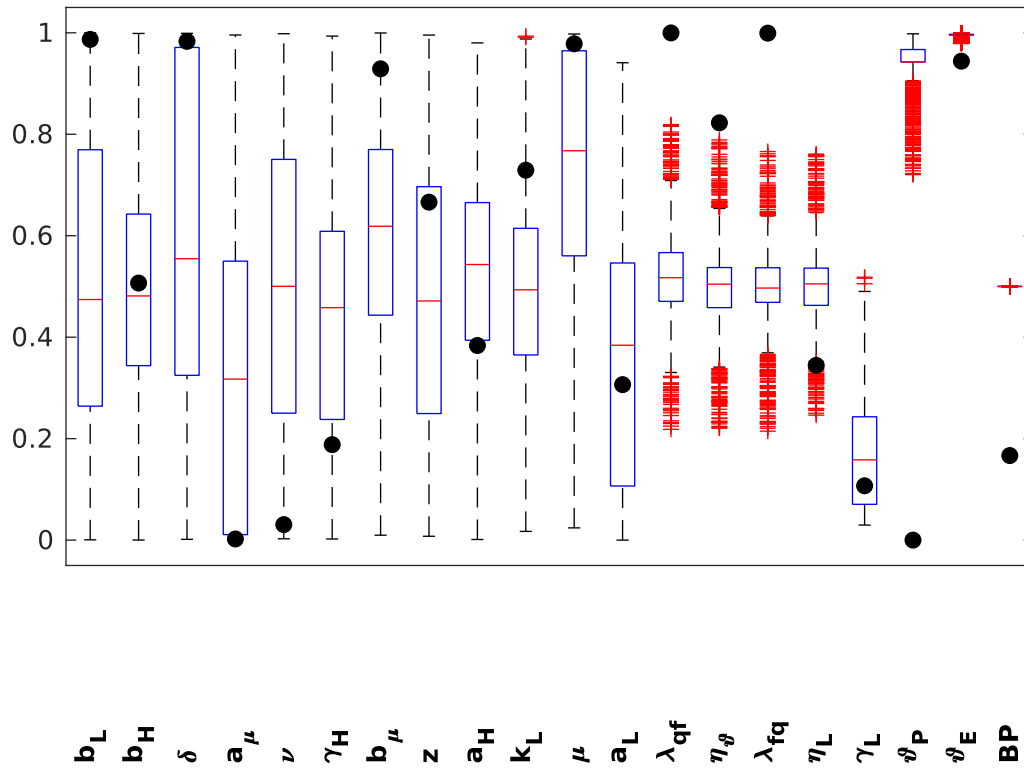
The number of estimations needed to perform the validation was1000.

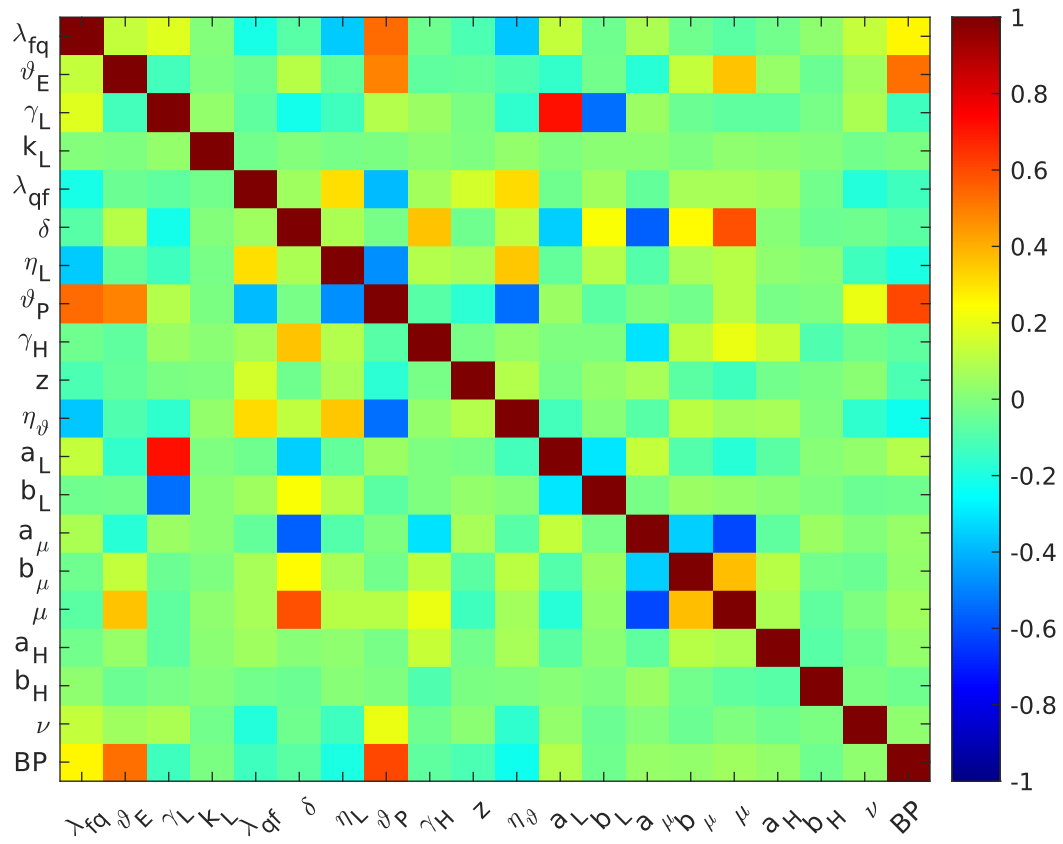
17.2. Estimated parameters with their intervals

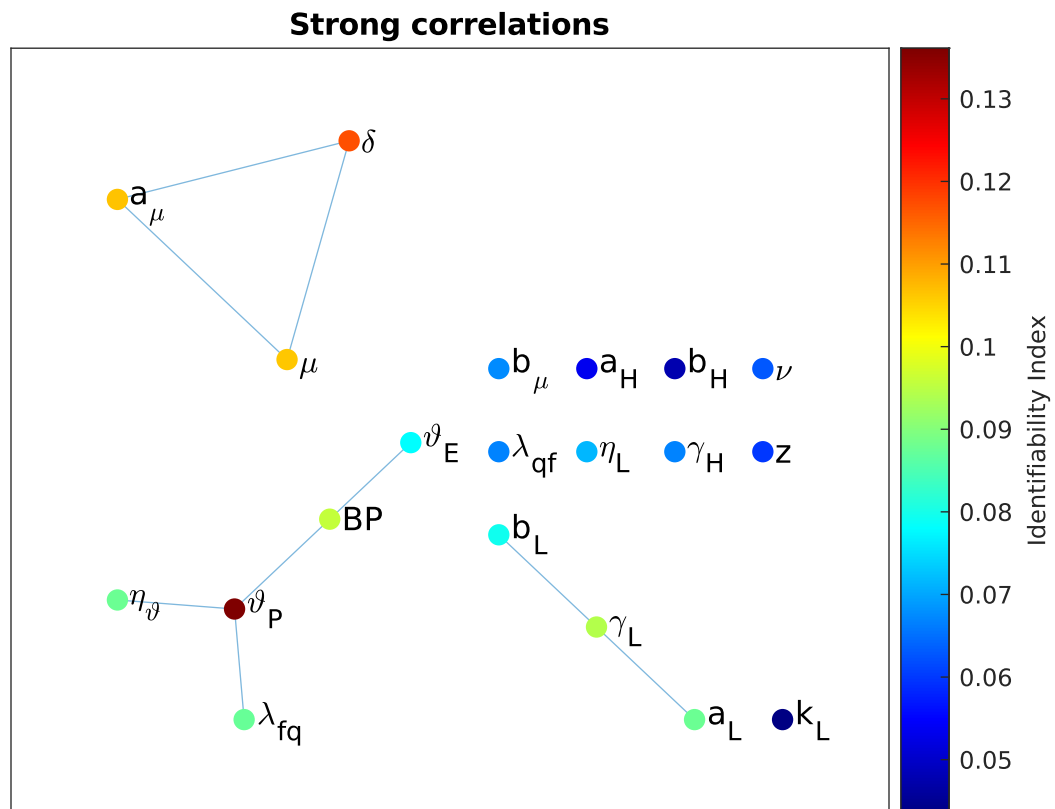
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4822'	'0.5116'	'0.4969'	'0.9993'	'0.0874'
ϑ_E	'0.9863'	'1'	'0.9956'	'0.9441'	'0.0781'
γ_L	'0.1491'	'0.1678'	'0.1584'	'0.1071'	'0.0943'
k_L	'5.306'	'5.5751'	'5.4406'	'7.5628'	'0.0436'
λ_{qf}	'0.5044'	'0.5301'	'0.5172'	'0.9998'	'0.0669'
δ	'0.0792'	'0.0872'	'0.0832'	'0.1475'	'0.1171'
η_L	'0.4927'	'0.5175'	'0.5051'	'0.3445'	'0.0718'
ϑ_P	'0.9175'	'0.9672'	'0.9423'	'0'	'0.1361'
γ_H	'0.4389'	'0.4776'	'0.4582'	'0.1882'	'0.0671'
z	'13.5567'	'14.7291'	'14.1429'	'19.9854'	'0.06'
η_{ϑ}	'0.4914'	'0.5175'	'0.5045'	'0.8226'	'0.0878'
a_L	'6.1209'	'6.6347'	'6.3778'	'5.2909'	'0.0879'
b_L	'7.333'	'7.9458'	'7.6394'	'14.8171'	'0.0798'
a_{μ}	'5.1387'	'5.7469'	'5.4428'	'1.0316'	'0.1067'
b_{μ}	'9.4182'	'9.9047'	'9.6614'	'14.0059'	'0.0675'
μ	'0.7514'	'0.7836'	'0.7675'	'0.9783'	'0.1064'
a_H	'8.3807'	'8.8297'	'8.6052'	'6.3707'	'0.0537'
b_H	'7.5215'	'7.9557'	'7.7386'	'8.094'	'0.0478'
ν	'238.9564'	'261.3212'	'250.1388'	'15.2897'	'0.0631'
BP	'455.4633'	'455.5367'	'455.5'	'454.5'	'0.0959'

17.3. Identifiability analysis

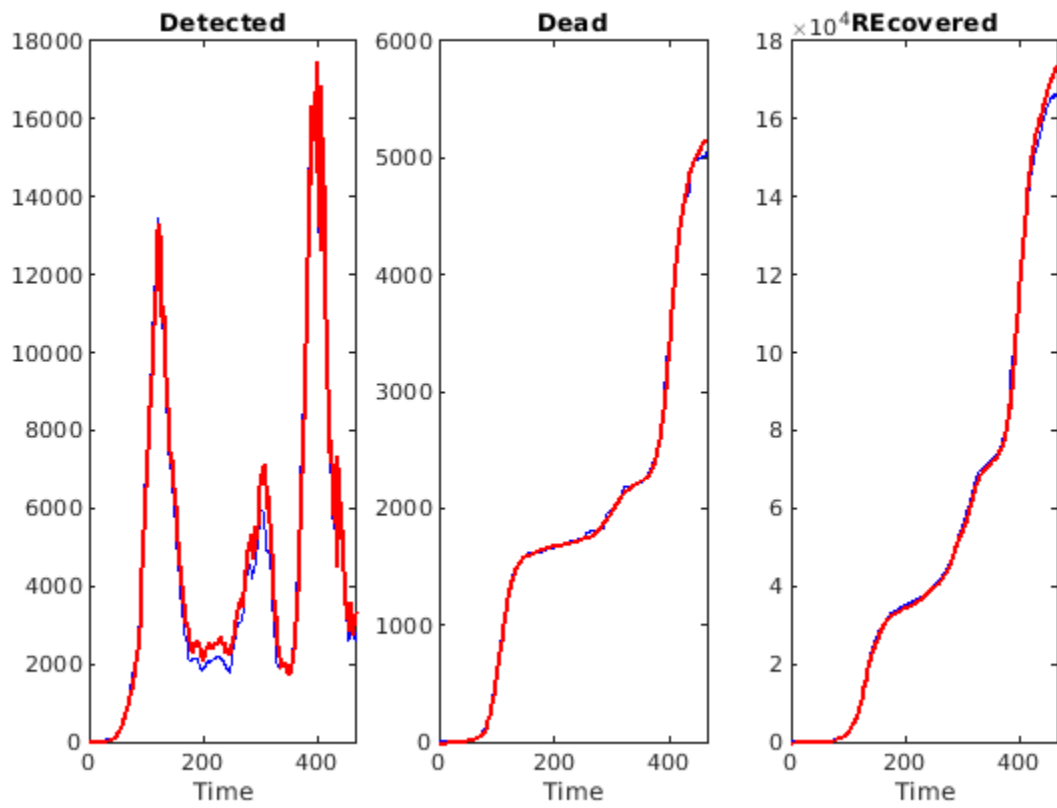






17.4. Uncertainty analysis

N=500



Chapter 18. Extension number18

18.1. Basic information

The extension to be validated consists of the time series from the data467 to the 476. The status of the validation is: COMPLETED.

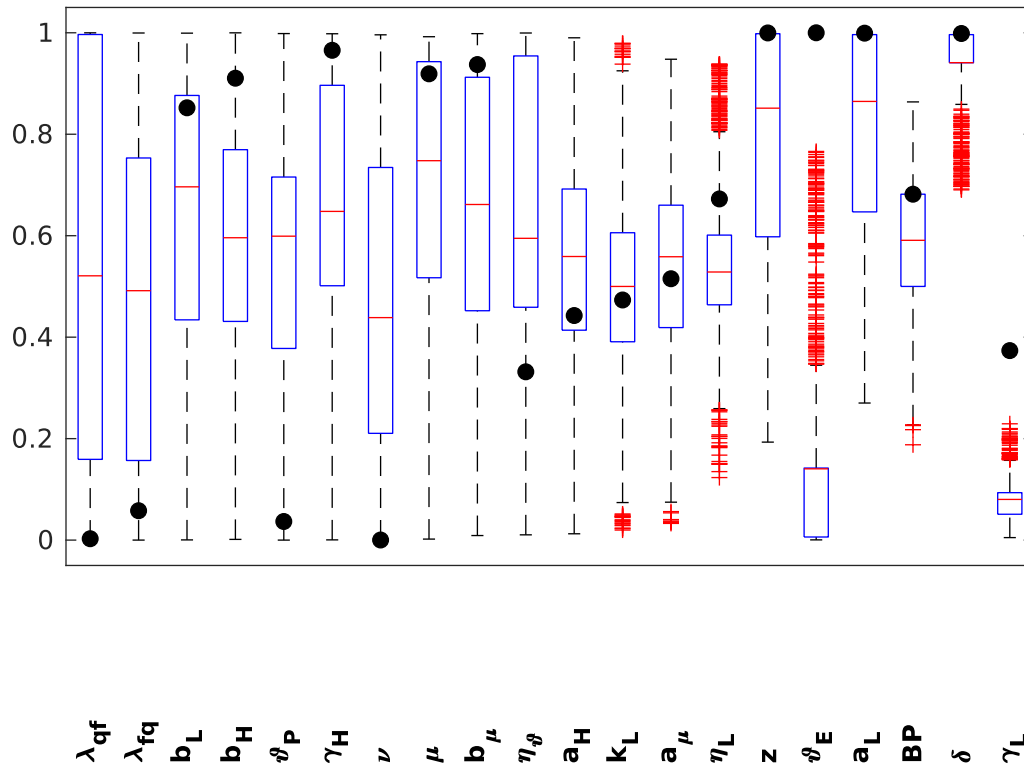
The number of estimations needed to perform the validation was1000.

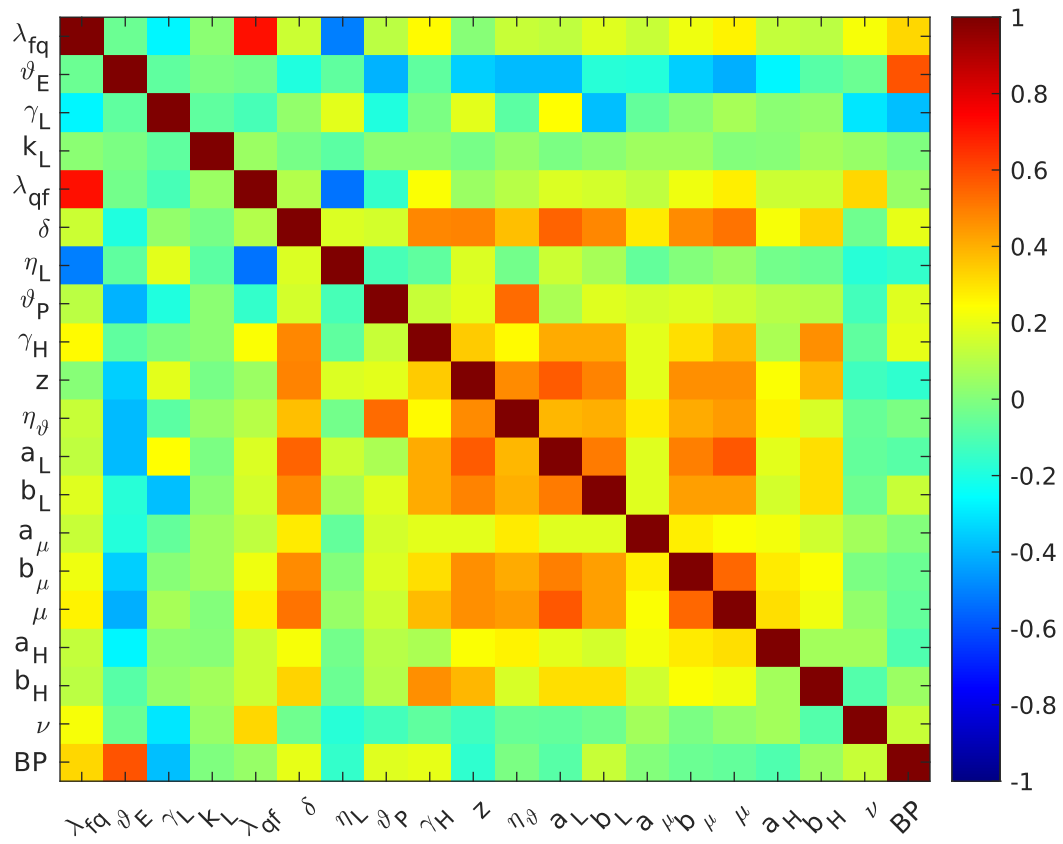
18.2. Estimated parameters with their intervals

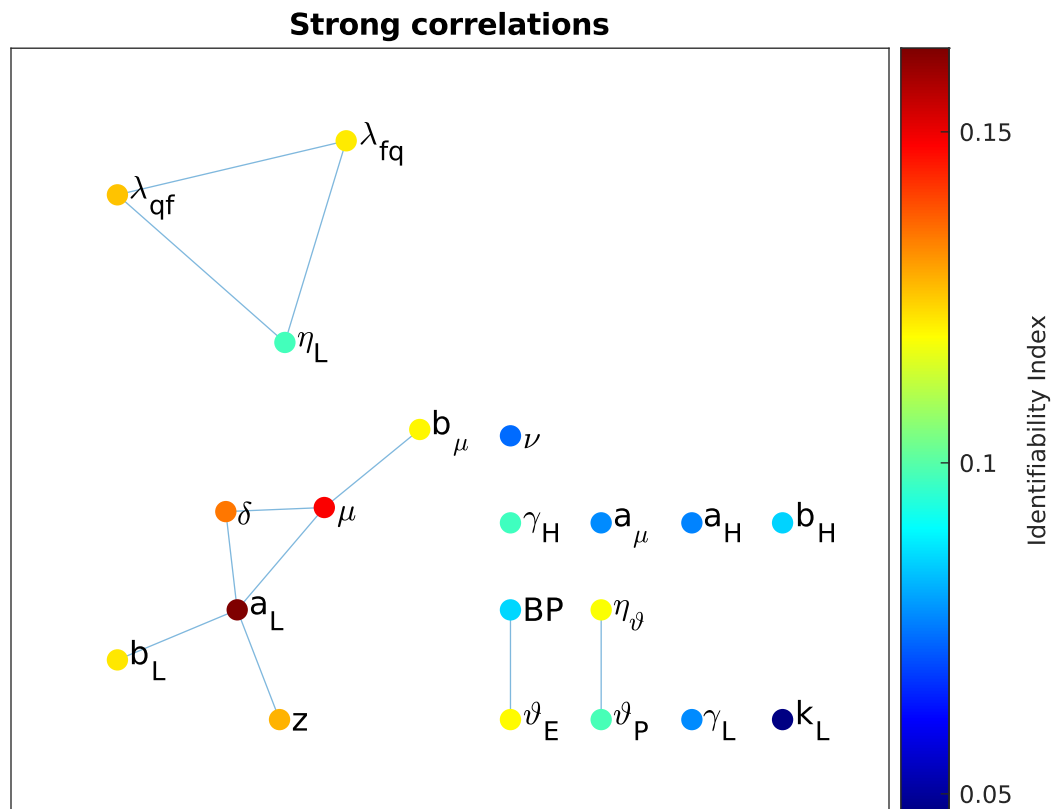
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4691'	'0.5141'	'0.4916'	'0.0579'	'0.1215'
ϑ_E	'0.1111'	'0.1729'	'0.142'	'1'	'0.1196'
γ_L	'0.0622'	'0.0987'	'0.0805'	'0.3735'	'0.0772'
k_L	'5.3694'	'5.6306'	'5.5'	'5.2596'	'0.0472'
λ_{qf}	'0.4912'	'0.5507'	'0.5209'	'0.0027'	'0.1257'
δ	'0.1384'	'0.1439'	'0.1411'	'0.1498'	'0.1344'
η_L	'0.5134'	'0.5436'	'0.5285'	'0.6725'	'0.0981'
ϑ_P	'0.5791'	'0.6191'	'0.5991'	'0.0367'	'0.0983'
γ_H	'0.6299'	'0.6659'	'0.6479'	'0.9655'	'0.0977'
z	'24.846'	'26.2121'	'25.5291'	'29.9896'	'0.1278'
η_{ϑ}	'0.5741'	'0.6156'	'0.5948'	'0.3317'	'0.1186'
a_L	'12.8339'	'13.3711'	'13.1025'	'14.989'	'0.1626'
b_L	'10.4697'	'11.0275'	'10.7486'	'12.9296'	'0.1218'
a_{μ}	'8.6249'	'9.0119'	'8.8184'	'8.2123'	'0.0771'
b_{μ}	'9.9821'	'10.5405'	'10.2613'	'14.123'	'0.1202'
μ	'0.7299'	'0.7658'	'0.7479'	'0.9191'	'0.1482'
a_H	'8.6187'	'9.0331'	'8.8259'	'7.1972'	'0.0765'
b_H	'9.0863'	'9.6015'	'9.3439'	'13.746'	'0.0852'
ν	'207.5632'	'230.984'	'219.2736'	'0.0916'	'0.0736'
BP	'461.3572'	'461.6427'	'461.5'	'462.4997'	'0.0859'

18.3. Identifiability analysis

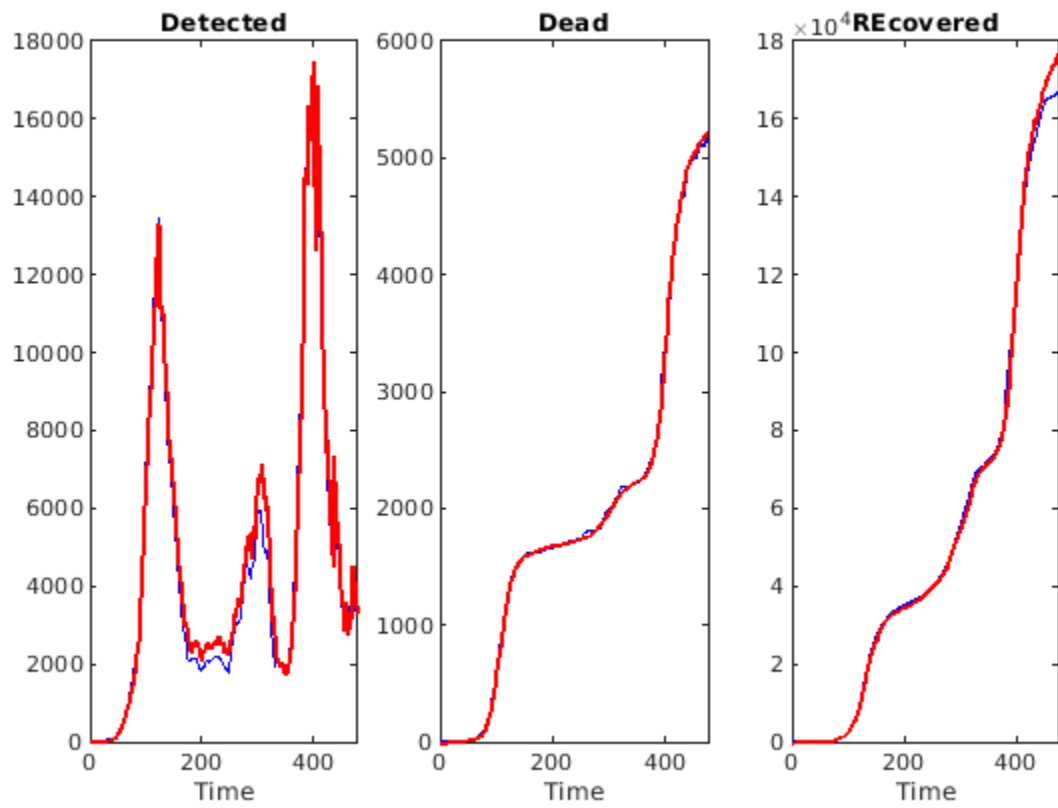






18.4. Uncertainty analysys

N=500



Chapter 19. Extension number19

19.1. Basic information

The extension to be validated consists of the time series from the data476 to the 483. The status of the validation is: COMPLETED.

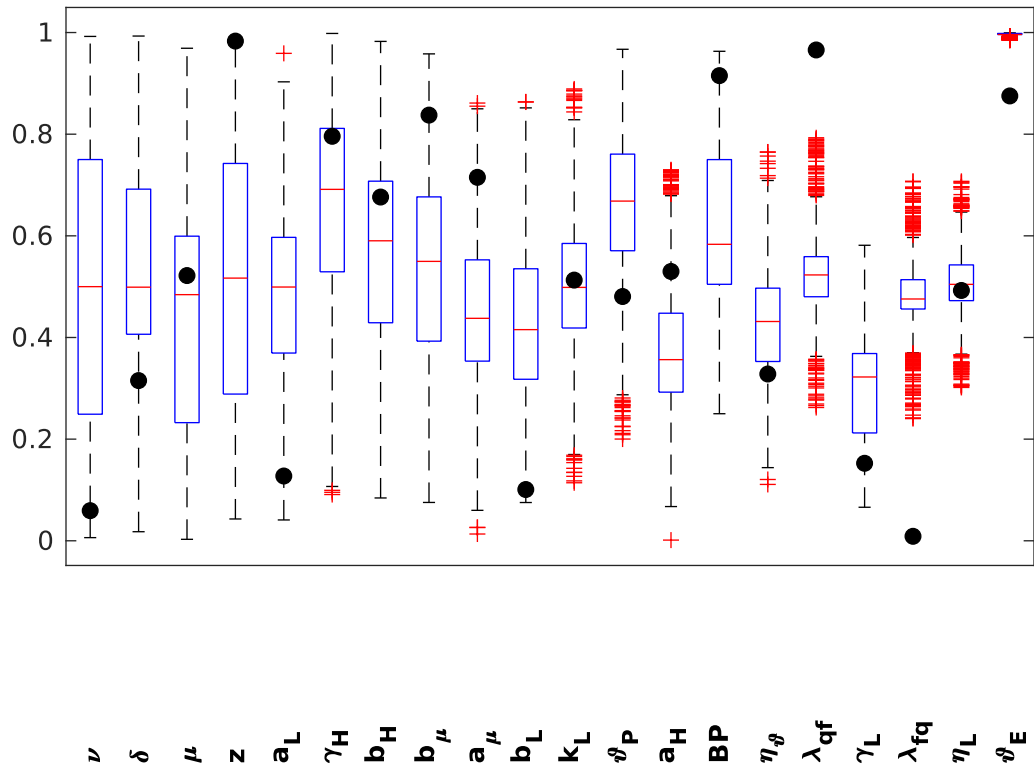
The number of estimations needed to perform the validation was1000.

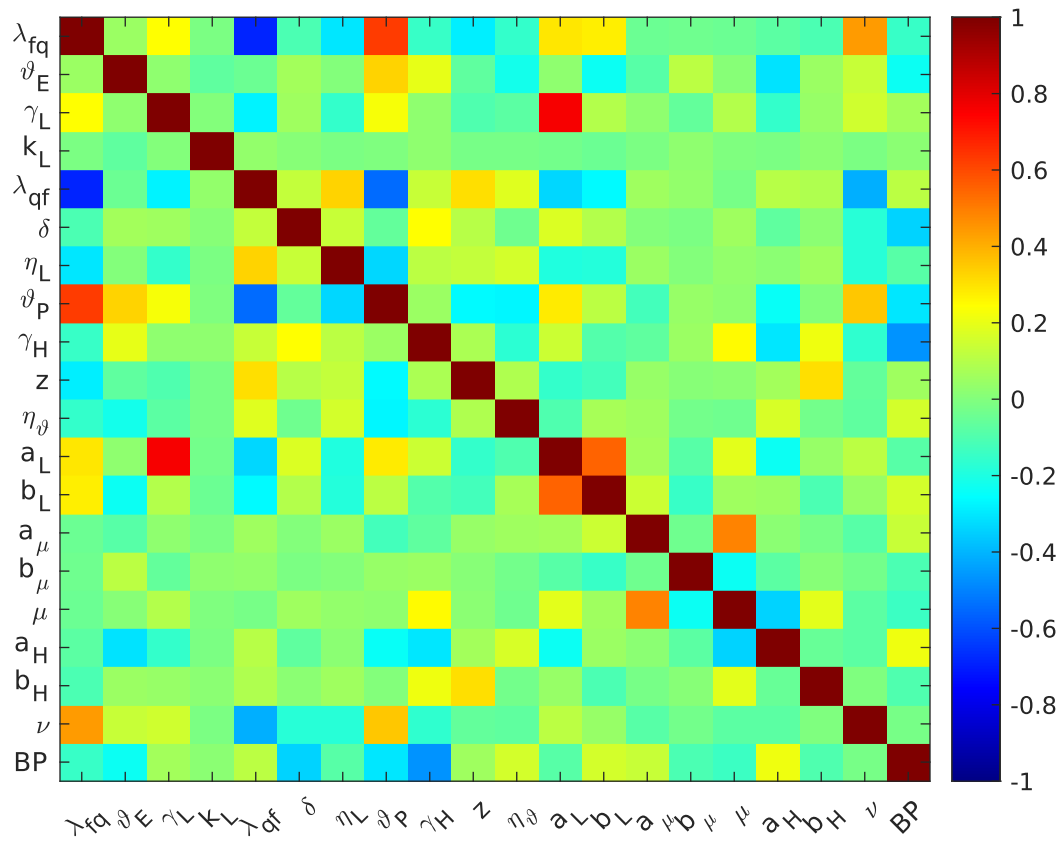
19.2. Estimated parameters with their intervals

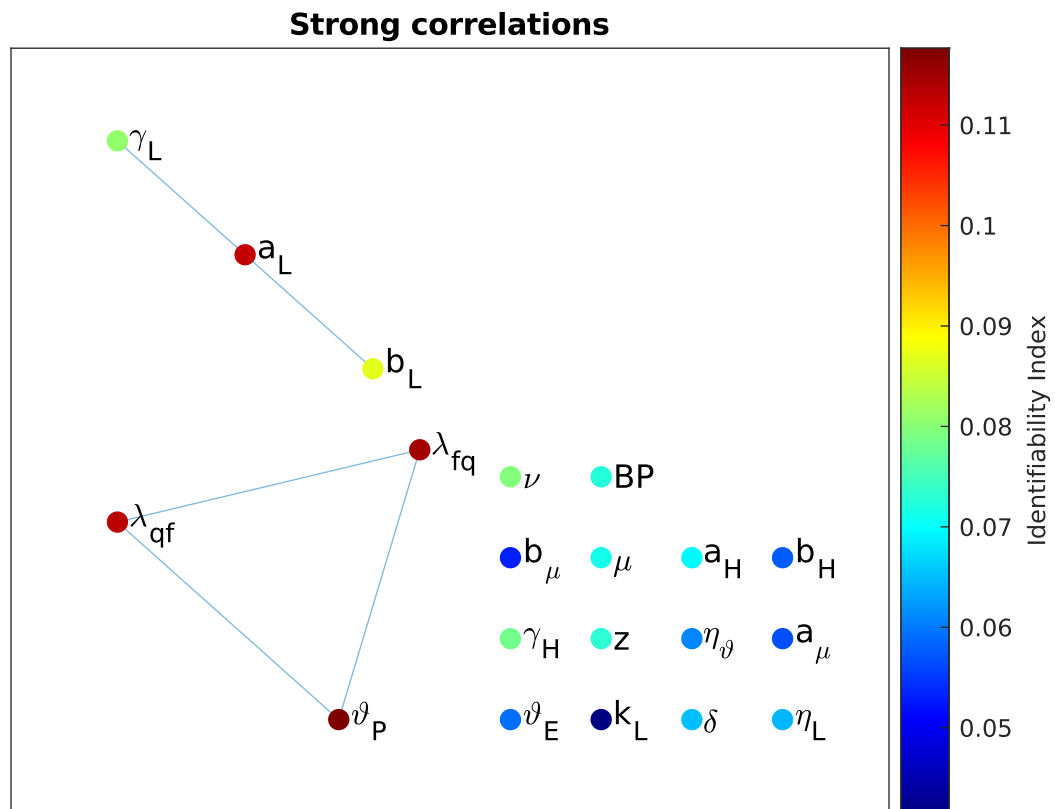
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4618'	'0.4897'	'0.4757'	'0.0088'	'0.1149'
\vartheta_E	'0.9882'	'1'	'0.9961'	'0.8753'	'0.0593'
\gamma_L	'0.3122'	'0.3325'	'0.3223'	'0.1525'	'0.0809'
k_L	'5.3826'	'5.5913'	'5.487'	'5.6164'	'0.0416'
\lambda_{qf}	'0.5114'	'0.5348'	'0.5231'	'0.9657'	'0.113'
\delta	'0.0724'	'0.0773'	'0.0748'	'0.0473'	'0.0654'
\eta_L	'0.4961'	'0.513'	'0.5045'	'0.4925'	'0.0645'
\vartheta_P	'0.6532'	'0.6831'	'0.6682'	'0.4806'	'0.1177'
\gamma_H	'0.6746'	'0.708'	'0.6913'	'0.7958'	'0.0785'
z	'14.9153'	'16.0944'	'15.5049'	'29.4953'	'0.0732'
\eta_{\vartheta}	'0.4217'	'0.4412'	'0.4314'	'0.3281'	'0.061'
a_L	'7.7819'	'8.1901'	'7.986'	'2.7839'	'0.1126'
b_L	'6.6238'	'7.0104'	'6.8171'	'2.412'	'0.0868'
a_{\mu}	'6.9551'	'7.3006'	'7.1278'	'11.0114'	'0.0569'
b_{\mu}	'8.5002'	'8.8923'	'8.6963'	'12.7257'	'0.0534'
\mu	'0.4668'	'0.5017'	'0.4843'	'0.5219'	'0.0714'
a_H	'5.8119'	'6.1689'	'5.9904'	'8.4186'	'0.0698'
b_H	'9.0609'	'9.466'	'9.2635'	'10.4687'	'0.0577'
\nu	'238.8071'	'261.211'	'250.0091'	'29.6372'	'0.0798'
BP	'470.4345'	'470.5655'	'470.5'	'472.4913'	'0.0726'

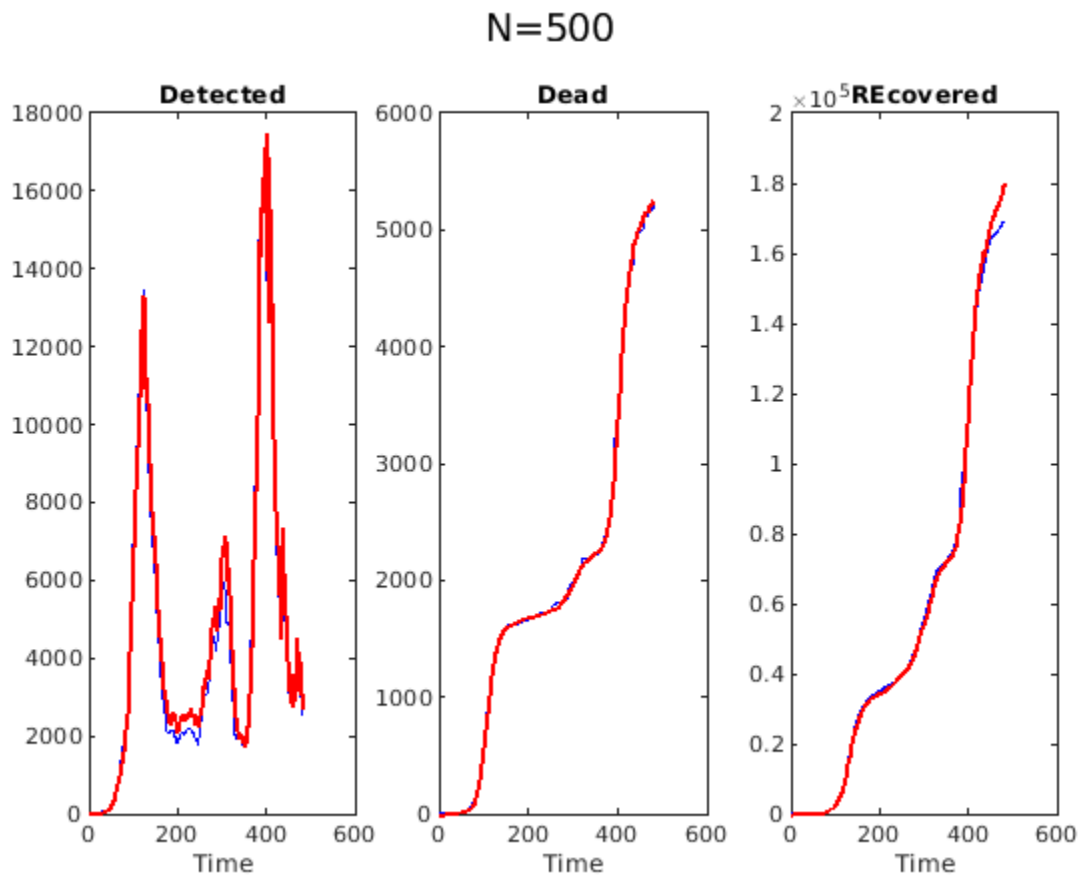
19.3. Identifiability analysis







19.4. Uncertainty analysis



Chapter 20. Extension number20

20.1. Basic information

The extension to be validated consists of the time series from the data483 to the 491. The status of the validation is: COMPLETED.

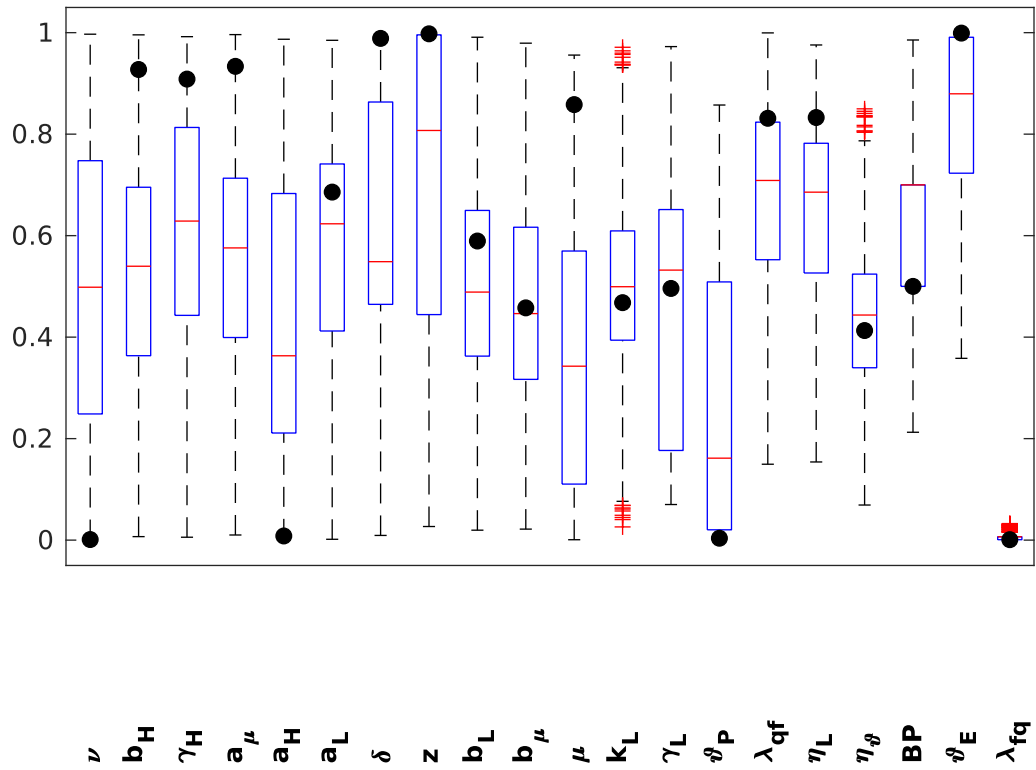
The number of estimations needed to perform the validation was1000.

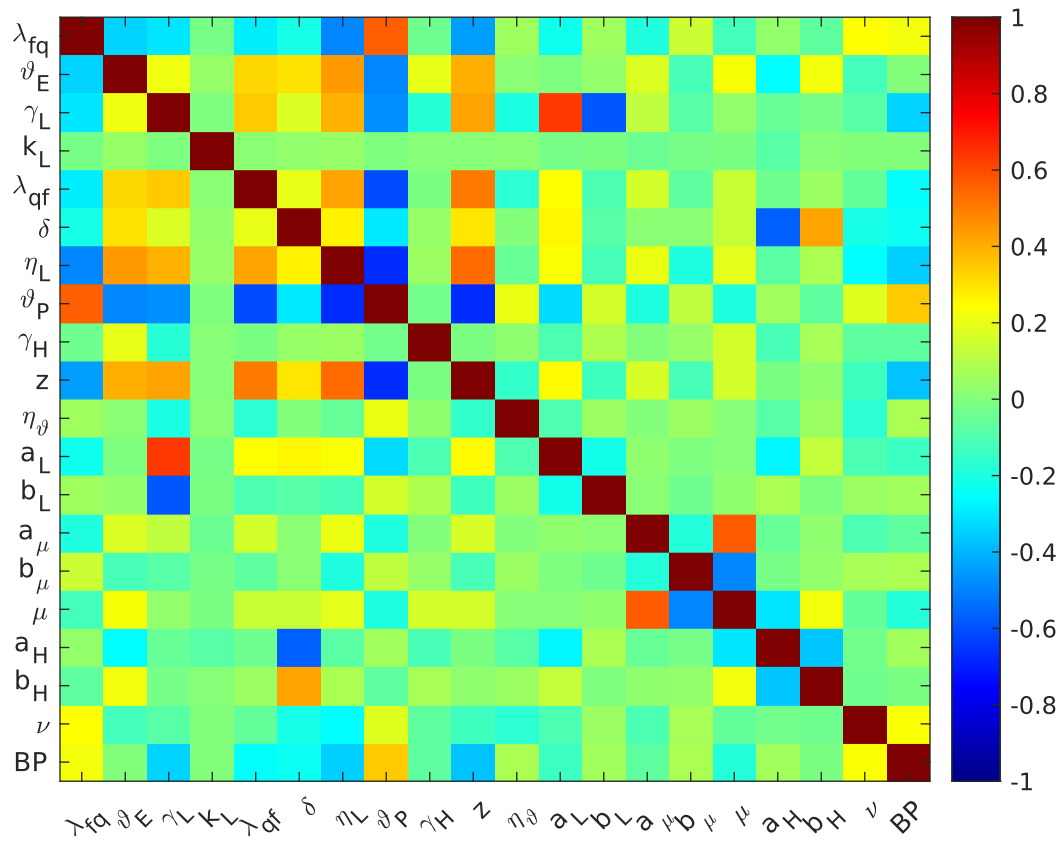
20.2. Estimated parameters with their intervals

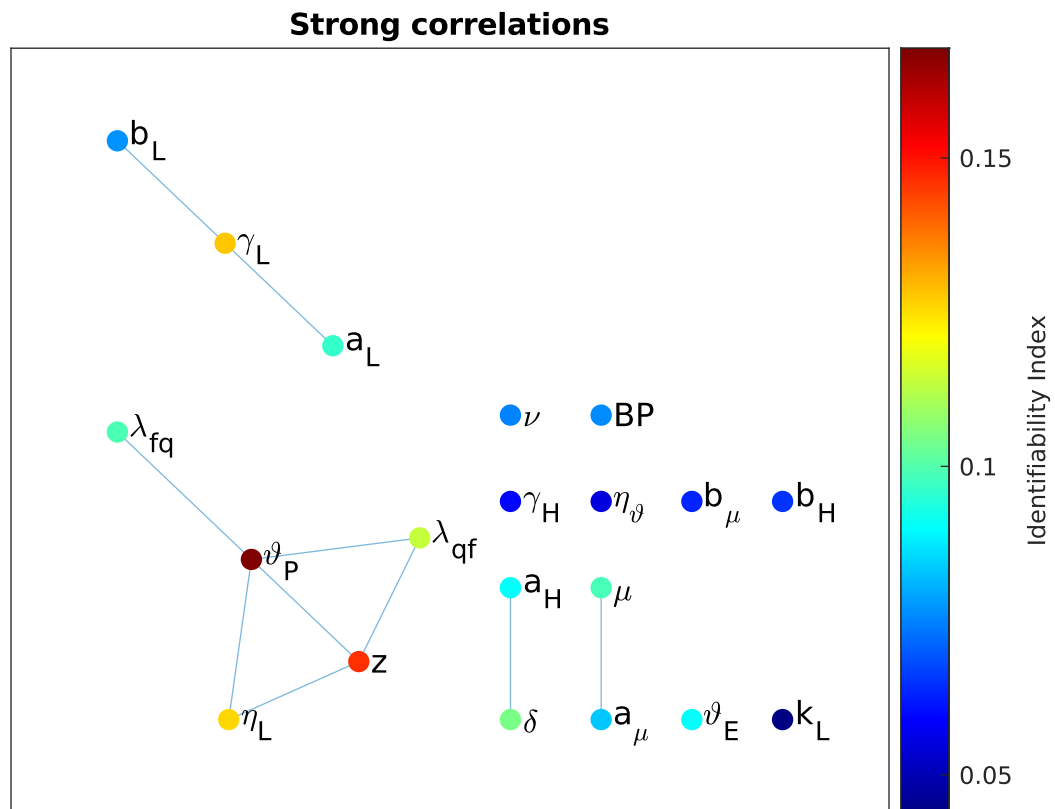
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0233'	'0.0066'	'0.0009'	'0.0995'
\vartheta_E	'0.8627'	'0.8958'	'0.8793'	'0.9991'	'0.0907'
\gamma_L	'0.5128'	'0.5514'	'0.5321'	'0.4959'	'0.1277'
k_L	'5.37'	'5.6184'	'5.4942'	'5.2114'	'0.0439'
\lambda_{qf}	'0.6948'	'0.7227'	'0.7087'	'0.8313'	'0.1137'
\delta	'0.0793'	'0.0853'	'0.0823'	'0.1483'	'0.1048'
\eta_L	'0.673'	'0.6981'	'0.6855'	'0.8328'	'0.1258'
\vartheta_P	'0.1396'	'0.1844'	'0.162'	'0.0037'	'0.1678'
\gamma_H	'0.6104'	'0.647'	'0.6287'	'0.9085'	'0.0599'
z	'23.5165'	'24.918'	'24.2172'	'29.9314'	'0.1461'
\eta_{\vartheta}	'0.4322'	'0.455'	'0.4436'	'0.413'	'0.0552'
a_L	'9.4764'	'9.9773'	'9.7268'	'10.6014'	'0.0966'
b_L	'7.6239'	'8.062'	'7.8429'	'9.2515'	'0.0771'
a_{\mu}	'8.8314'	'9.2915'	'9.0614'	'14.0707'	'0.0833'
b_{\mu}	'7.0365'	'7.4623'	'7.2494'	'7.4075'	'0.0637'
\mu	'0.3221'	'0.3634'	'0.3427'	'0.8582'	'0.0987'
a_H	'5.7876'	'6.3839'	'6.0857'	'1.1146'	'0.0906'
b_H	'8.3259'	'8.7859'	'8.5559'	'13.9838'	'0.0654'
\nu	'237.9445'	'260.4219'	'249.1832'	'0.5723'	'0.0752'
BP	'479.4392'	'479.5608'	'479.5'	'478.5'	'0.0759'

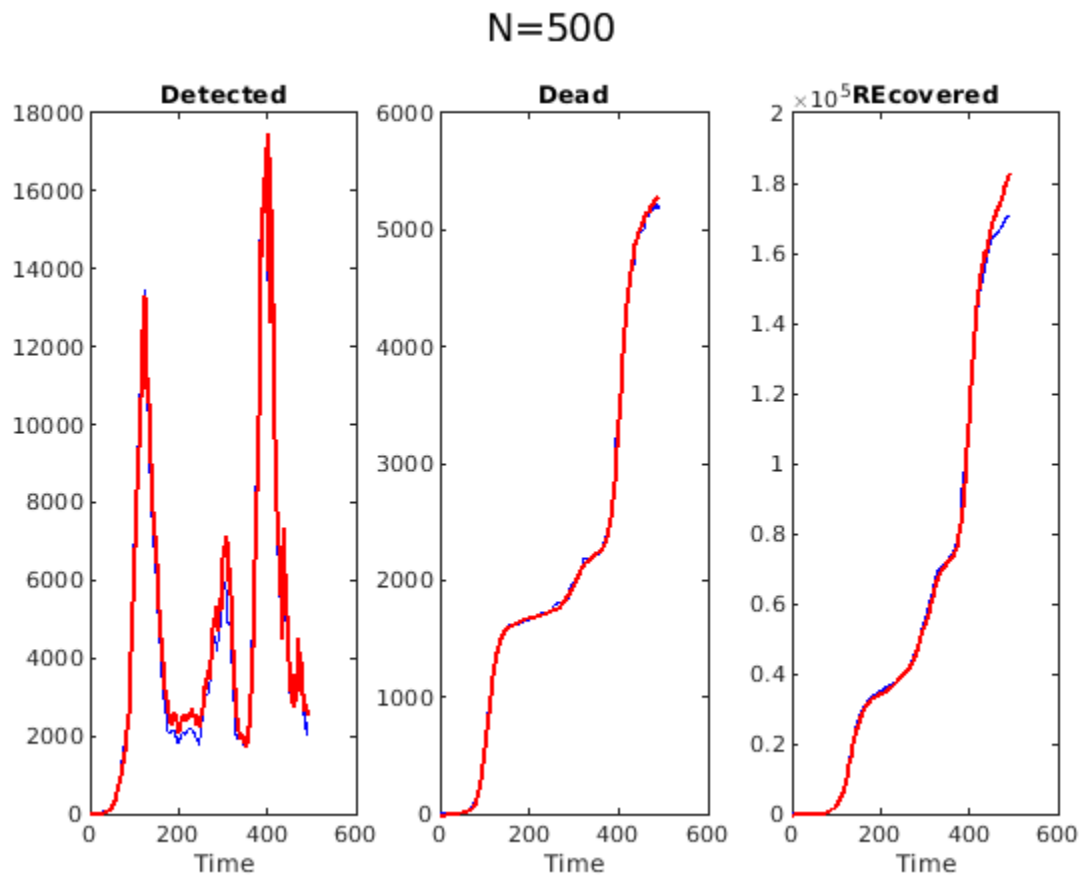
20.3. Identifiability analysis







20.4. Uncertainty analysis



Chapter 21. Extension number21

21.1. Basic information

The extension to be validated consists of the time series from the data491 to the 498. The status of the validation is: COMPLETED.

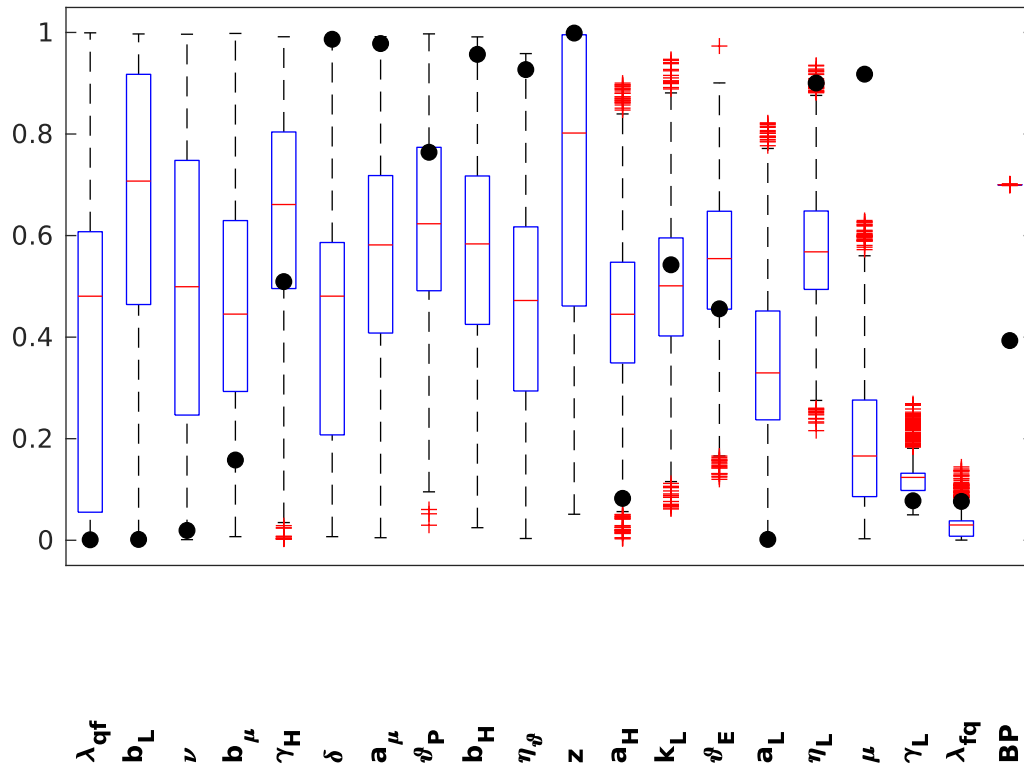
The number of estimations needed to perform the validation was1000.

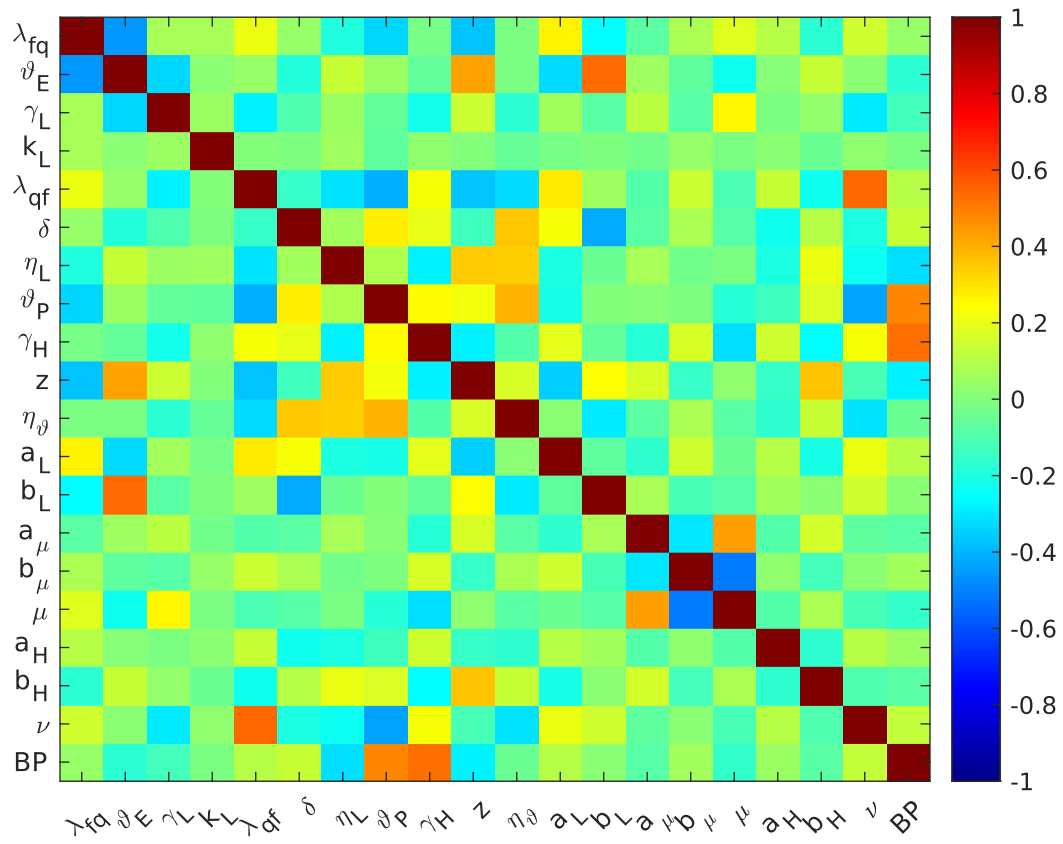
21.2. Estimated parameters with their intervals

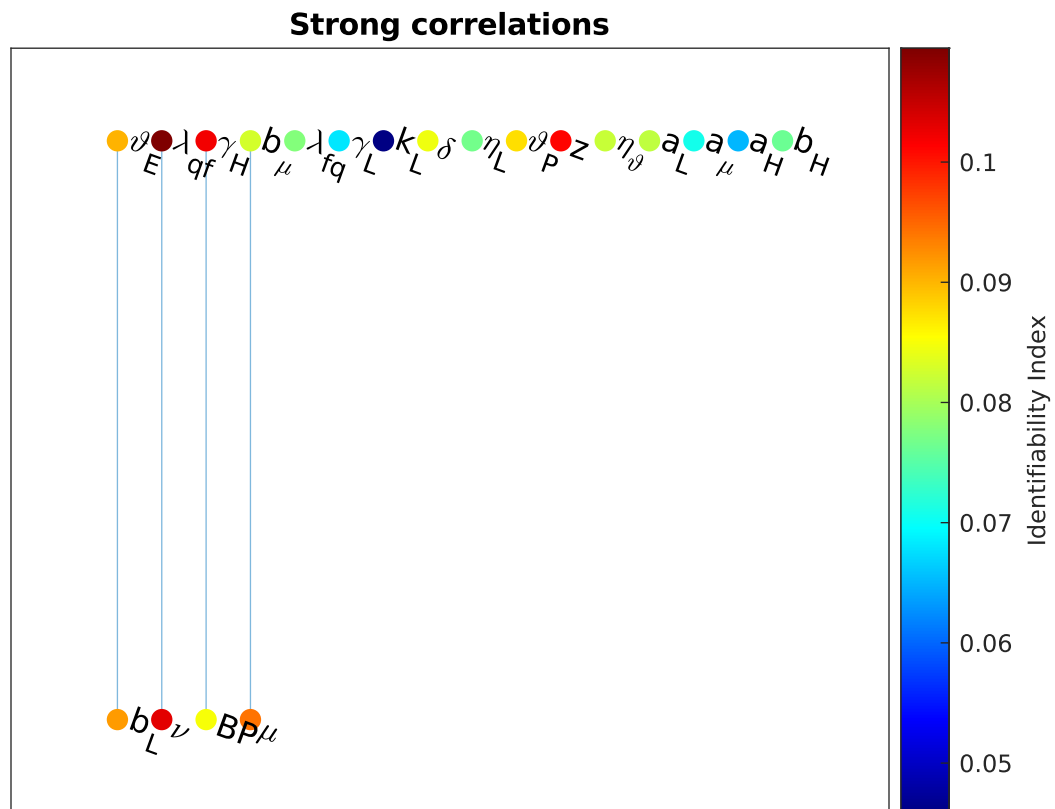
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0161'	'0.0441'	'0.0301'	'0.0765'	'0.0779'
ϑ_E	'0.5425'	'0.5665'	'0.5545'	'0.4558'	'0.0903'
γ_L	'0.1122'	'0.1354'	'0.1238'	'0.0778'	'0.0682'
k_L	'5.3838'	'5.6347'	'5.5092'	'5.8824'	'0.0459'
λ_{qf}	'0.459'	'0.5022'	'0.4806'	'0.0009'	'0.1095'
δ	'0.0689'	'0.0753'	'0.0721'	'0.148'	'0.0845'
η_L	'0.5558'	'0.5801'	'0.568'	'0.9004'	'0.0768'
ϑ_P	'0.6082'	'0.6383'	'0.6233'	'0.764'	'0.0875'
γ_H	'0.643'	'0.6793'	'0.6612'	'0.5093'	'0.1022'
z	'23.3806'	'24.7345'	'24.0576'	'29.9634'	'0.1011'
η_{ϑ}	'0.4541'	'0.4902'	'0.4722'	'0.9269'	'0.0819'
a_L	'5.3851'	'5.8436'	'5.6144'	'1.0239'	'0.0815'
b_L	'10.5933'	'11.211'	'10.9021'	'1.0227'	'0.0917'
a_{μ}	'8.9019'	'9.3831'	'9.1425'	'14.694'	'0.0709'
b_{μ}	'6.9938'	'7.4758'	'7.2348'	'3.2122'	'0.0828'
μ	'0.1466'	'0.1853'	'0.166'	'0.9179'	'0.0942'
a_H	'7.0209'	'7.4504'	'7.2356'	'2.1548'	'0.0652'
b_H	'8.9365'	'9.4039'	'9.1702'	'14.3963'	'0.0763'
ν	'238.3862'	'260.8891'	'249.6377'	'9.6863'	'0.1031'
BP	'486.4454'	'486.5546'	'486.5'	'484.9662'	'0.0849'

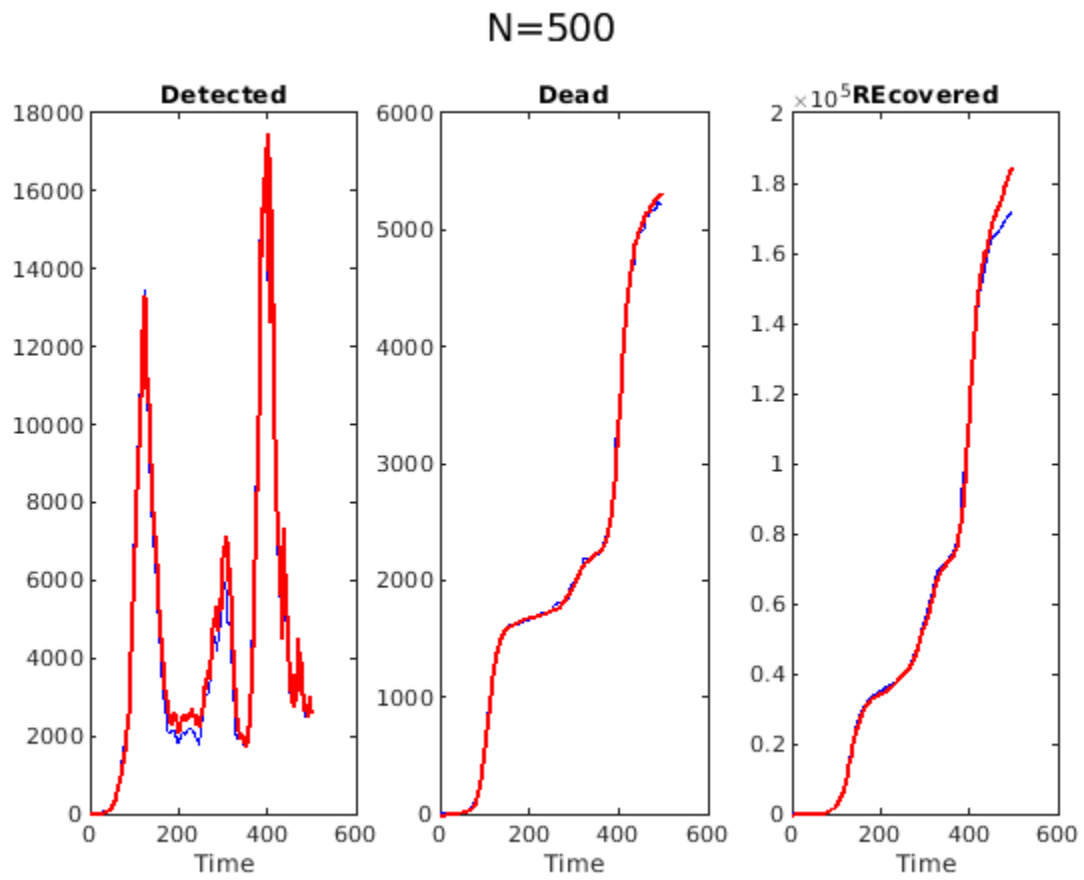
21.3. Identifiability analysis







21.4. Uncertainty analysis



Chapter 22. Extension number22

22.1. Basic information

The extension to be validated consists of the time series from the data498 to the 512. The status of the validation is: COMPLETED.

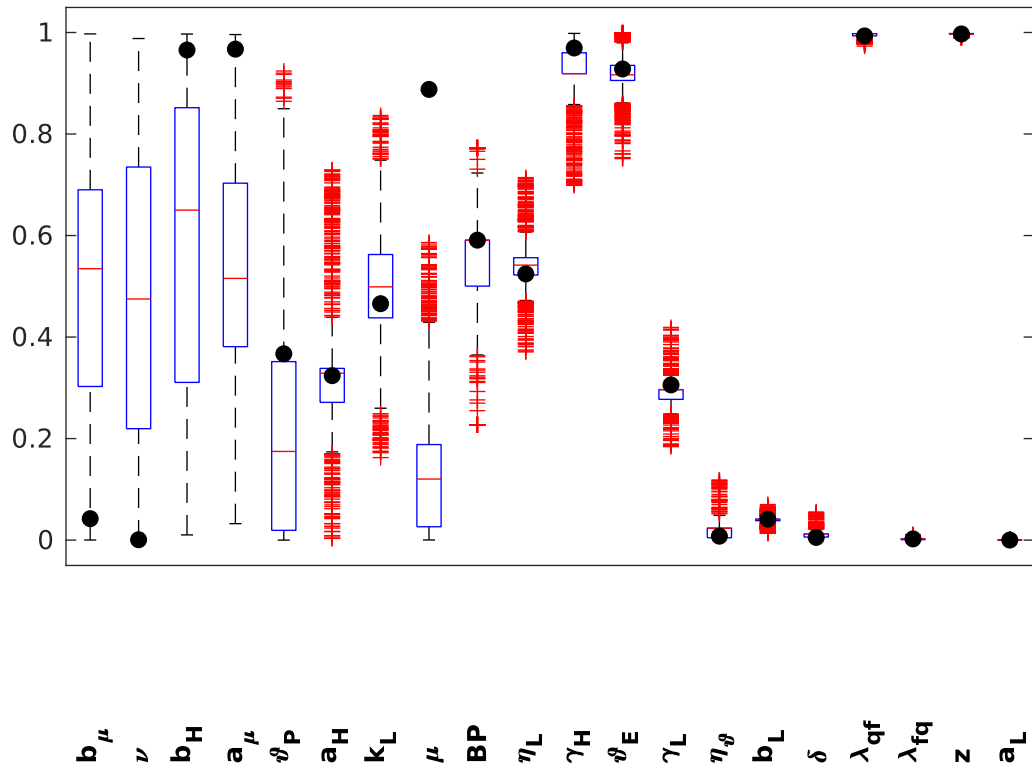
The number of estimations needed to perform the validation was1000.

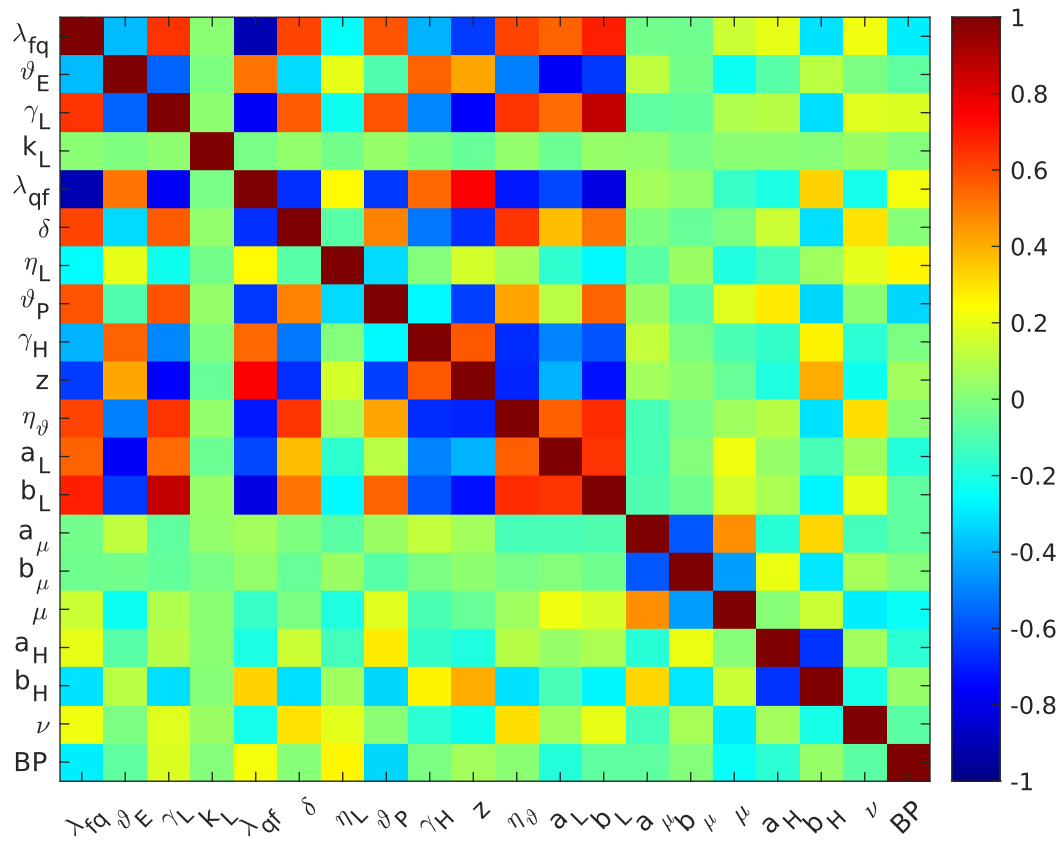
22.2. Estimated parameters with their intervals

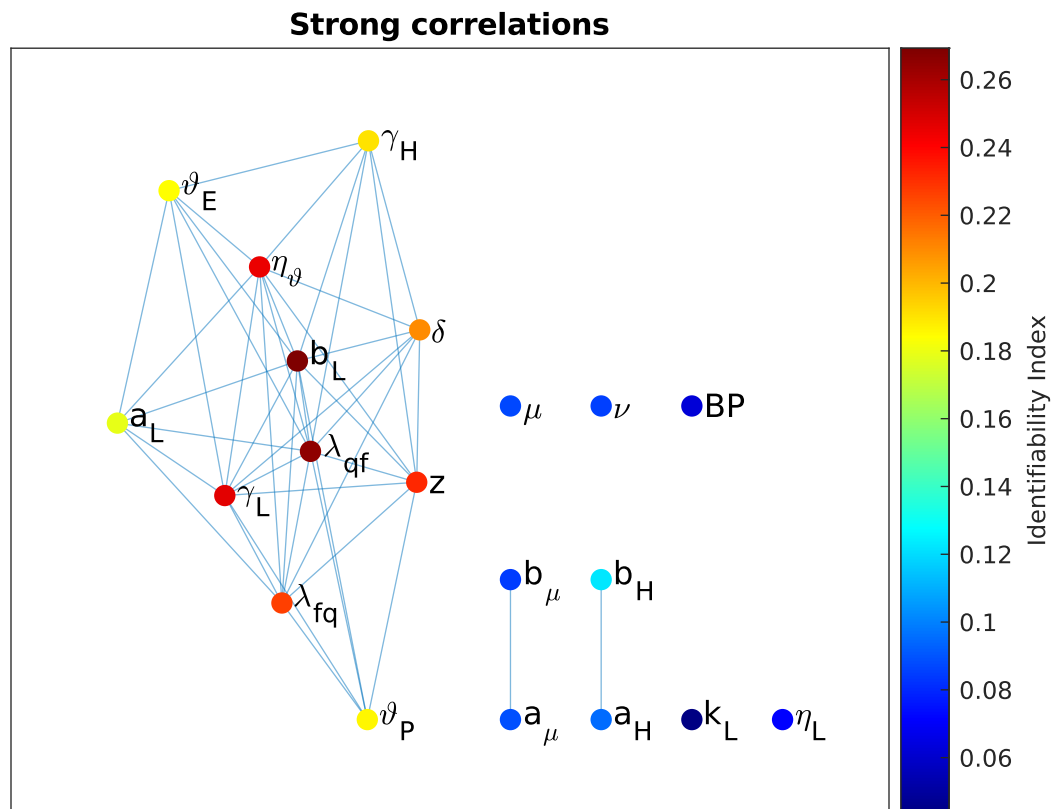
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0156'	'0.0023'	'0.0024'	'0.2263'
ϑ_E	'0.9029'	'0.9303'	'0.9166'	'0.9281'	'0.184'
γ_L	'0.2827'	'0.3103'	'0.2965'	'0.3058'	'0.247'
k_L	'5.3784'	'5.6014'	'5.4899'	'5.1915'	'0.0439'
λ_{qf}	'0.9793'	'1'	'0.9936'	'0.9932'	'0.2654'
δ	'0'	'0.0054'	'0.0018'	'0.0008'	'0.2097'
η_L	'0.5323'	'0.5511'	'0.5417'	'0.5244'	'0.0715'
ϑ_P	'0.1521'	'0.1982'	'0.1751'	'0.367'	'0.1862'
γ_H	'0.9026'	'0.9352'	'0.9189'	'0.9694'	'0.1908'
z	'29.2251'	'30'	'29.9068'	'29.9136'	'0.2317'
η_{ϑ}	'0.0051'	'0.0419'	'0.0235'	'0.0078'	'0.2452'
a_L	'1'	'1.1079'	'1.0036'	'1.0011'	'0.1787'
b_L	'1.2942'	'1.8622'	'1.5782'	'1.5771'	'0.2693'
a_{μ}	'7.974'	'8.462'	'8.218'	'14.5406'	'0.0888'
b_{μ}	'8.1867'	'8.7869'	'8.4868'	'1.5909'	'0.0849'
μ	'0.0979'	'0.1427'	'0.1203'	'0.8879'	'0.0875'
a_H	'5.323'	'5.8842'	'5.6036'	'5.5353'	'0.0951'
b_H	'9.7574'	'10.4456'	'10.1015'	'14.5175'	'0.1225'
ν	'225.9295'	'249.0732'	'237.5013'	'0.3479'	'0.0855'
BP	'497.4001'	'497.5998'	'497.5'	'497.5'	'0.063'

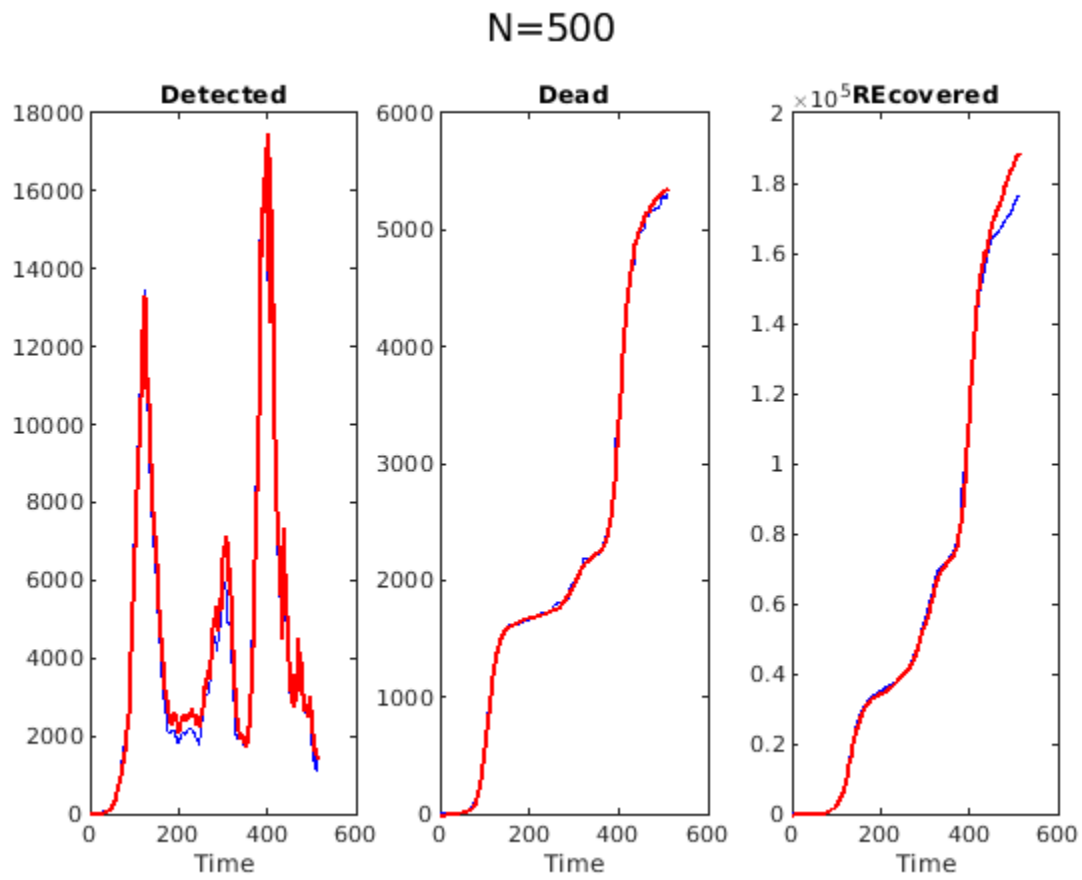
22.3. Identifiability analysis







22.4. Uncertainty analysis



Chapter 23. Extension number23

23.1. Basic information

The extension to be validated consists of the time series from the data512 to the 523. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

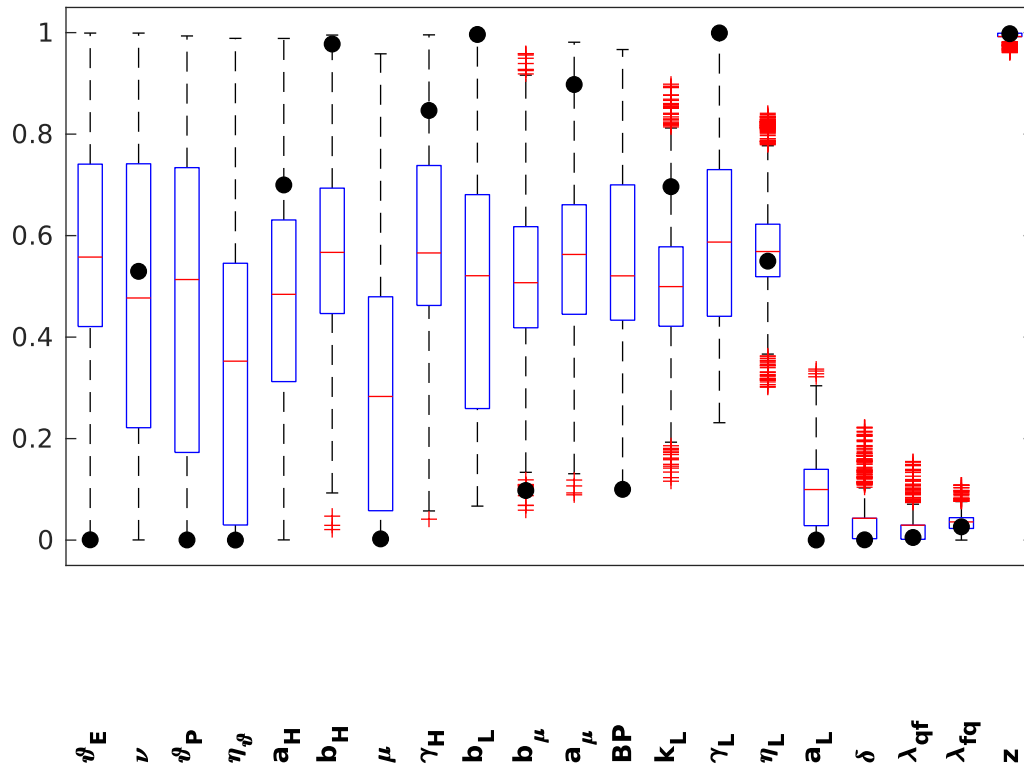
23.2. Estimated parameters with their intervals

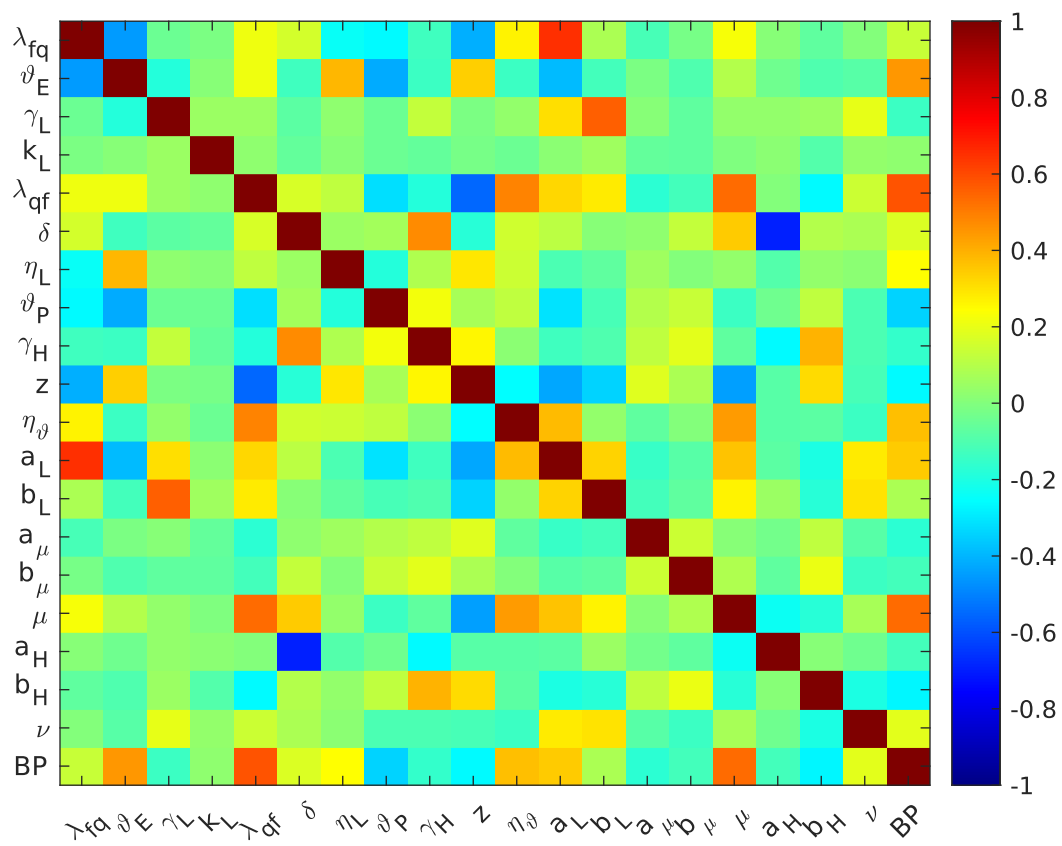
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

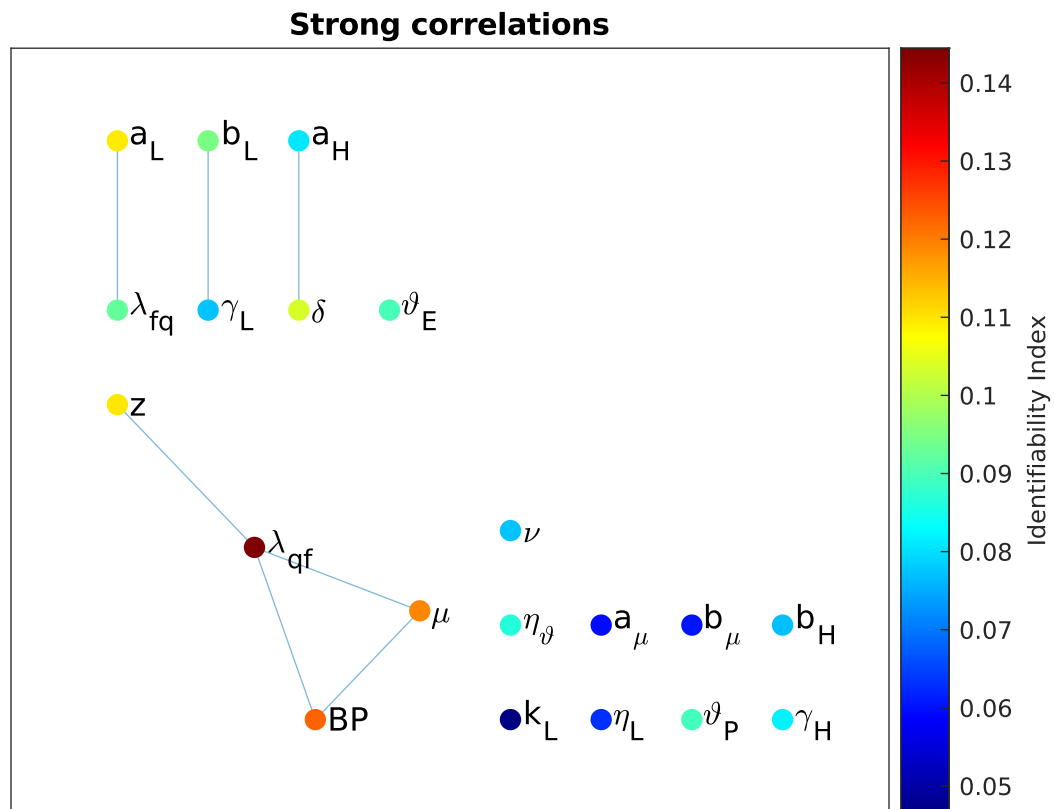
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0126'	'0.0331'	'0.0359'	'0.0262'	'0.0926'
ϑ_E	'0'	'0.0013'	'0.5577'	'0.0006'	'0.0901'
γ_L	'0.7551'	'1'	'0.5873'	'0.9994'	'0.0774'
k_L	'1.18'	'10'	'5.4957'	'7.2678'	'0.0466'
λ_{qf}	'0'	'0.0104'	'0.0294'	'0.0051'	'0.1444'
δ	'0'	'0.0002'	'0.0065'	'0.0001'	'0.1037'
η_L	'0'	'1'	'0.5686'	'0.5497'	'0.0631'
ϑ_P	'0'	'0.0006'	'0.5135'	'0.0003'	'0.0895'
γ_H	'0'	'1'	'0.5658'	'0.8466'	'0.0819'
z	'14.5009'	'30'	'29.766'	'29.9373'	'0.1098'
η_{ϑ}	'0'	'0.0002'	'0.3526'	'0.0001'	'0.0865'
a_L	'1'	'2.5791'	'2.3949'	'1.0025'	'0.1094'
b_L	'6.7995'	'15'	'8.2934'	'14.9492'	'0.0952'
a_{μ}	'1'	'15'	'8.8793'	'13.5685'	'0.0598'
b_{μ}	'1'	'15'	'8.101'	'2.3679'	'0.0607'
μ	'0'	'0.0054'	'0.2831'	'0.0024'	'0.1192'
a_H	'1'	'15'	'7.7801'	'10.798'	'0.081'
b_H	'1'	'15'	'8.9354'	'14.6857'	'0.0772'
ν	'231.2973'	'395.5099'	'238.5491'	'264.7988'	'0.0773'
BP	'498'	'501.072'	'505.8106'	'499.5'	'0.1225'

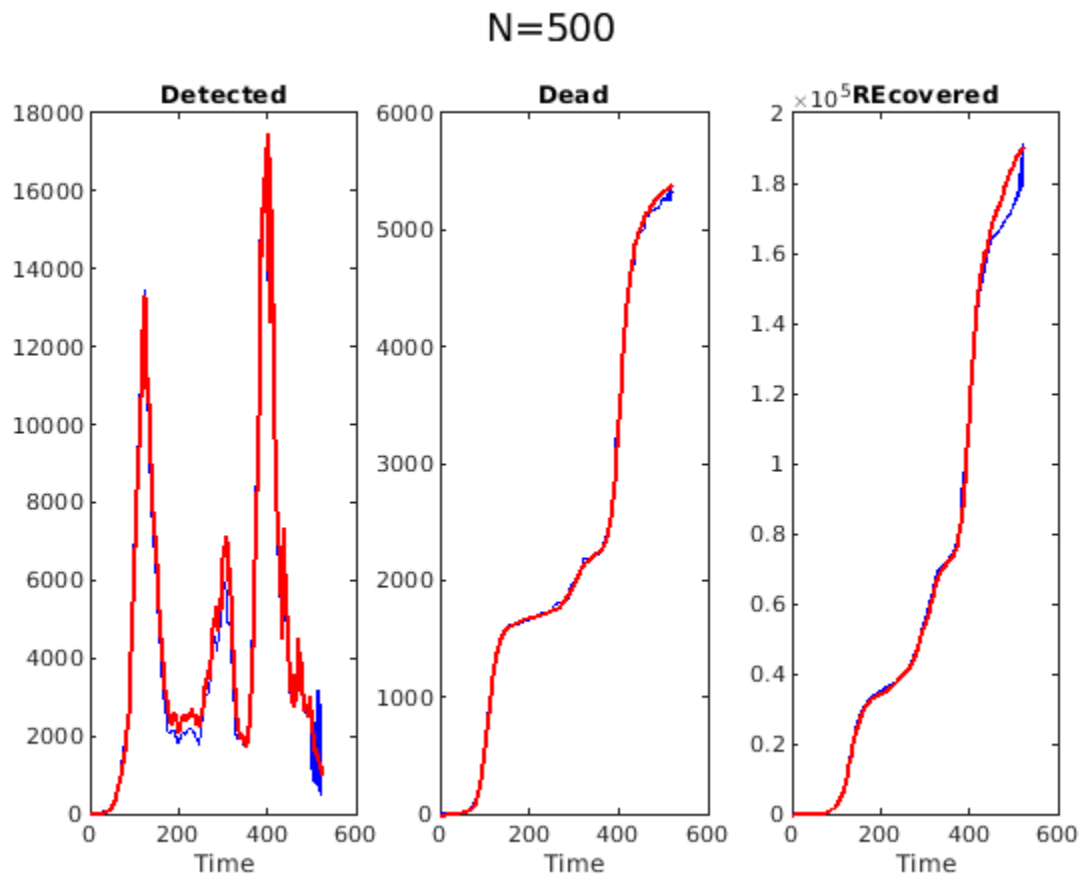
23.3. Identifiability analysis







23.4. Uncertainty analysis



Chapter 24. Extension number24

24.1. Basic information

The extension to be validated consists of the time series from the data523 to the 536. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

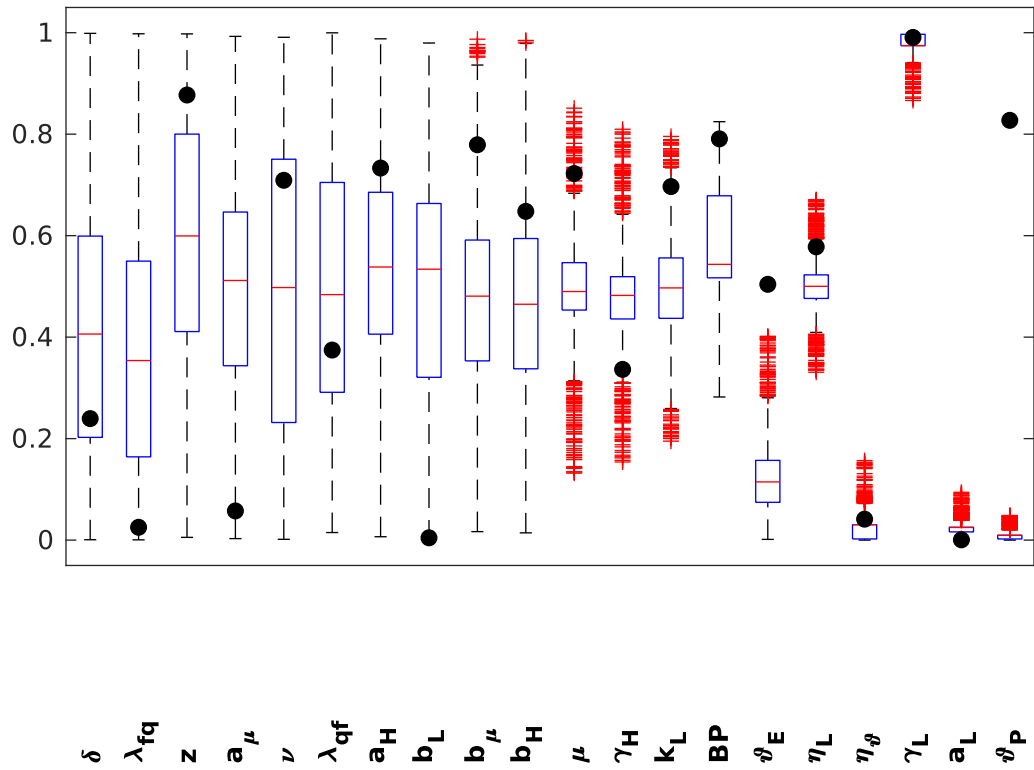
24.2. Estimated parameters with their intervals

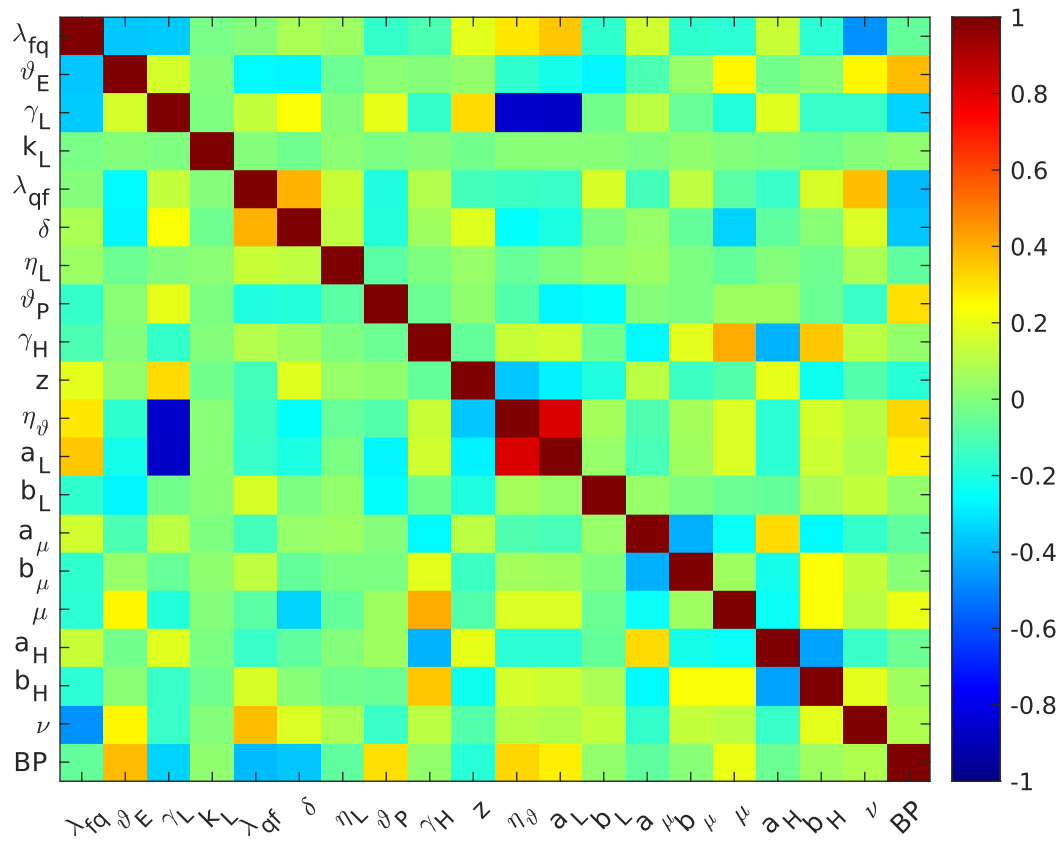
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

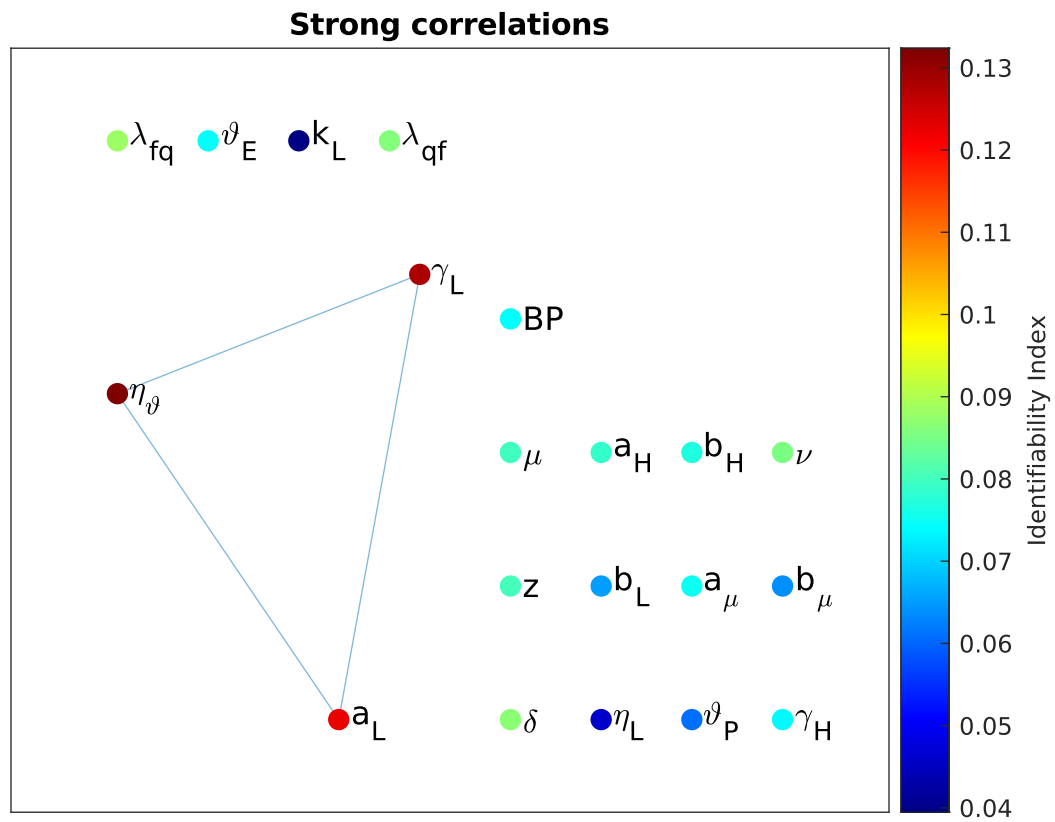
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0568'	'0.3538'	'0.0252'	'0.0881'
ϑ_E	'0'	'0.72'	'0.1147'	'0.5041'	'0.0744'
γ_L	'0.7195'	'1'	'0.9745'	'0.9907'	'0.1283'
k_L	'1'	'10'	'5.4732'	'7.2702'	'0.0395'
λ_{qf}	'0.068'	'0.7031'	'0.4838'	'0.3745'	'0.0862'
δ	'0'	'0.0808'	'0.0609'	'0.0359'	'0.0867'
η_L	'0'	'1'	'0.5001'	'0.578'	'0.0461'
ϑ_P	'0.4705'	'1'	'0.0095'	'0.8273'	'0.0612'
γ_H	'0'	'0.7571'	'0.4822'	'0.3365'	'0.0737'
z	'7.4947'	'26.5982'	'17.9835'	'26.3152'	'0.0804'
η_{ϑ}	'0'	'0.0929'	'0.0304'	'0.0413'	'0.1324'
a_L	'1'	'1.3648'	'1.3485'	'1.0082'	'0.1225'
b_L	'1'	'15'	'8.4747'	'1.0633'	'0.0653'
a_{μ}	'1'	'15'	'8.1633'	'1.805'	'0.0751'
b_{μ}	'1'	'15'	'7.731'	'11.9077'	'0.064'
μ	'0'	'1'	'0.4899'	'0.7224'	'0.08'
a_H	'1'	'15'	'8.535'	'11.2649'	'0.0787'
b_H	'1'	'15'	'7.5073'	'10.07'	'0.0771'
ν	'281.3773'	'500'	'248.8619'	'354.5518'	'0.0853'
BP	'512'	'523.2'	'519.6082'	'523.0704'	'0.0745'

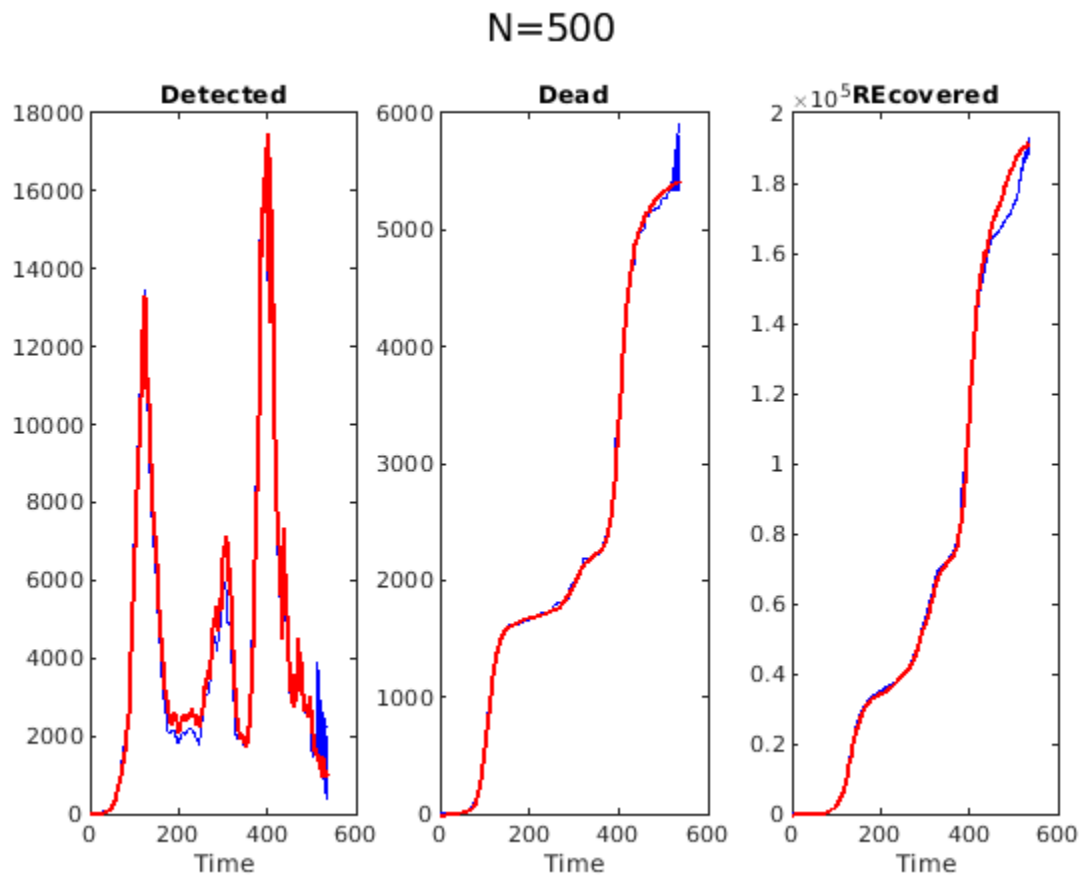
24.3. Identifiability analysis







24.4. Uncertainty analysis



Chapter 25. Extension number25

25.1. Basic information

The extension to be validated consists of the time series from the data536 to the 597. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

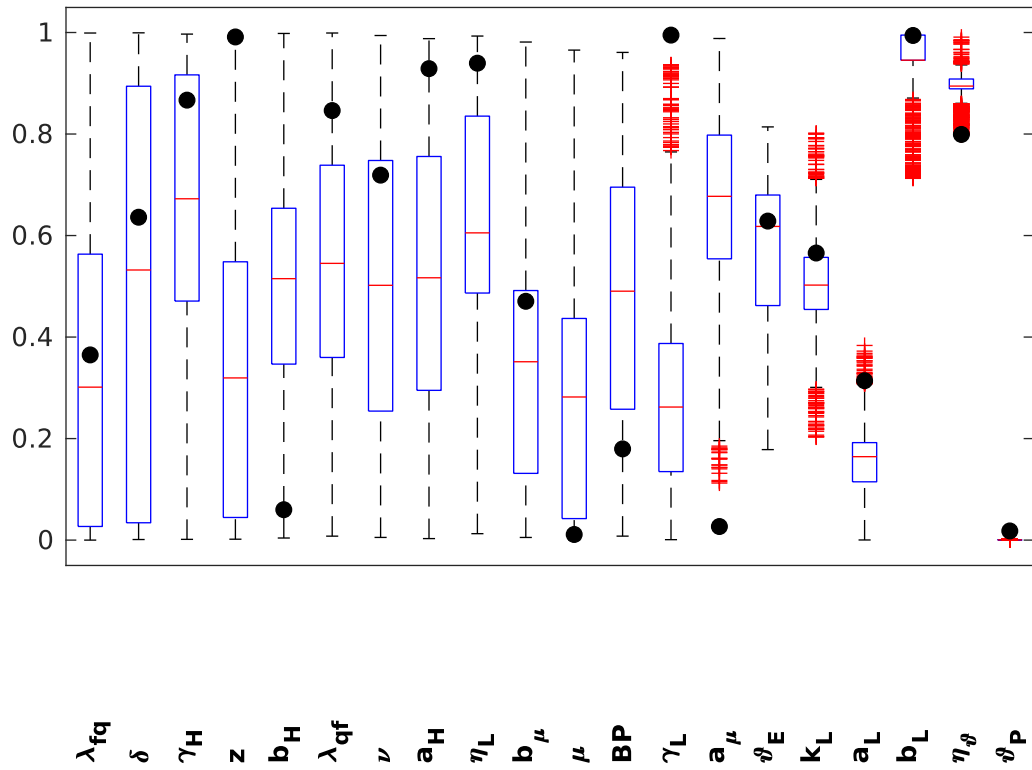
25.2. Estimated parameters with their intervals

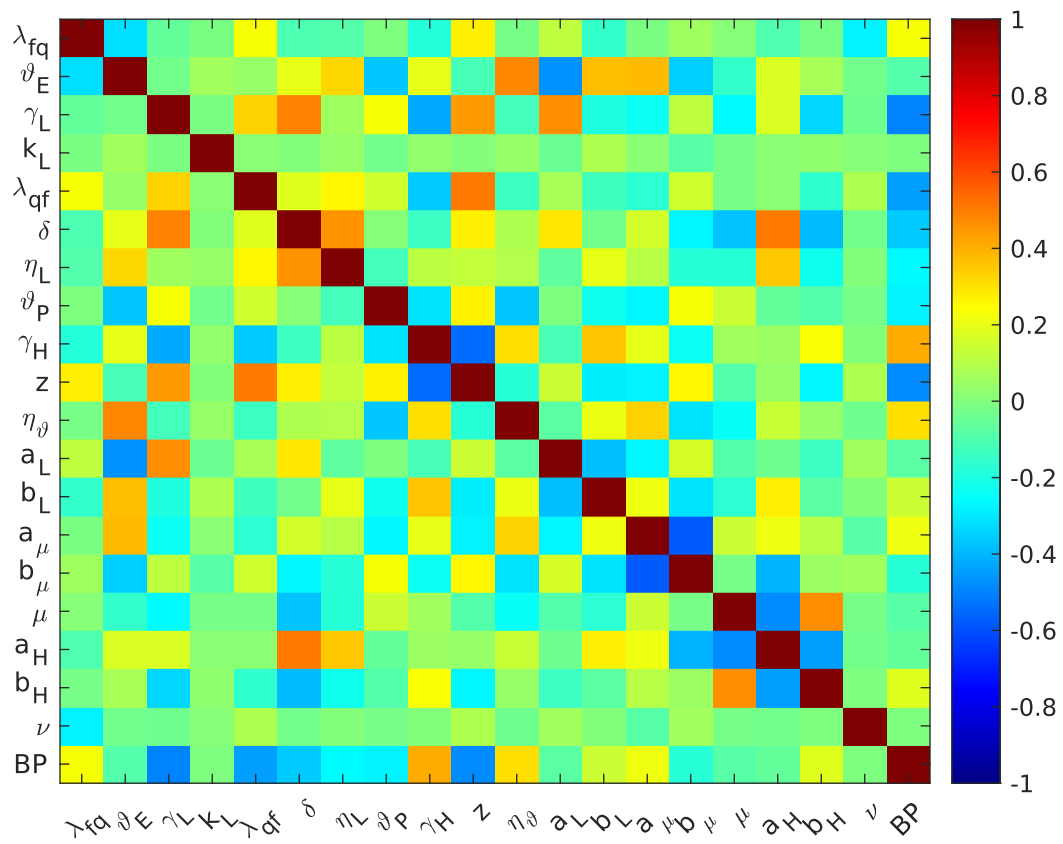
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

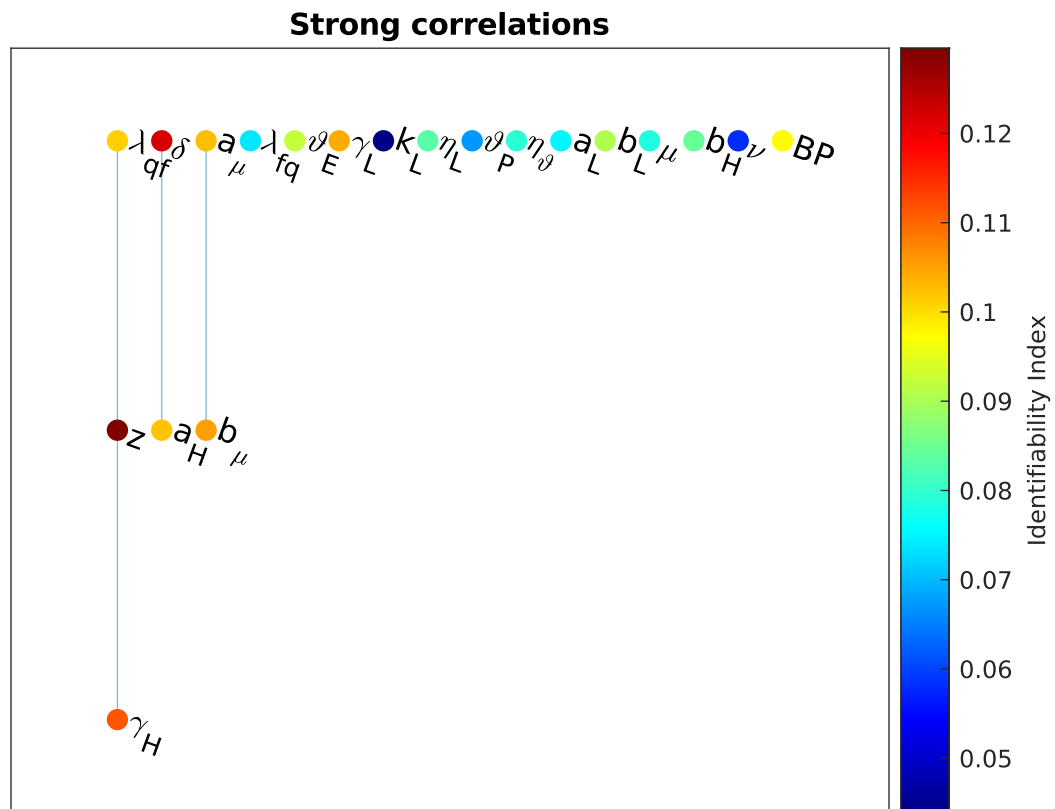
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.25'	'0.3732'	'0.3013'	'0.3648'	'0.0739'
\vartheta_E	'0.2948'	'0.6402'	'0.6178'	'0.6285'	'0.0921'
\gamma_L	'0.3166'	'1'	'0.2622'	'0.9949'	'0.1043'
k_L	'1.225'	'9.1444'	'5.5214'	'6.09'	'0.044'
\lambda_{qf}	'0.7369'	'1'	'0.5452'	'0.8462'	'0.1015'
\delta	'0.003'	'0.15'	'0.0798'	'0.0954'	'0.1221'
\eta_L	'0.2464'	'1'	'0.6053'	'0.9396'	'0.0831'
\vartheta_P	'0'	'0.0347'	'0.0004'	'0.018'	'0.0672'
\gamma_H	'0'	'1'	'0.6724'	'0.8668'	'0.1112'
z	'16.9856'	'30'	'9.585'	'29.737'	'0.1295'
\eta_{\vartheta}	'0.2443'	'0.9238'	'0.8945'	'0.7992'	'0.0796'
a_L	'3.2019'	'5.6449'	'3.3019'	'5.3961'	'0.0753'
b_L	'6.6263'	'15'	'14.233'	'14.9182'	'0.0905'
a_{\mu}	'1'	'15'	'10.4814'	'1.3745'	'0.1028'
b_{\mu}	'1.5544'	'15'	'5.919'	'7.5868'	'0.1052'
\mu	'0'	'0.0249'	'0.2819'	'0.0111'	'0.0786'
a_H	'1.623'	'15'	'8.2352'	'14.0034'	'0.1024'
b_H	'1.35'	'15'	'8.2108'	'1.8383'	'0.0846'
\nu	'270.9575'	'368.6431'	'250.9752'	'359.5001'	'0.0582'
BP	'529.8791'	'546.0672'	'554.3851'	'534.5'	'0.0976'

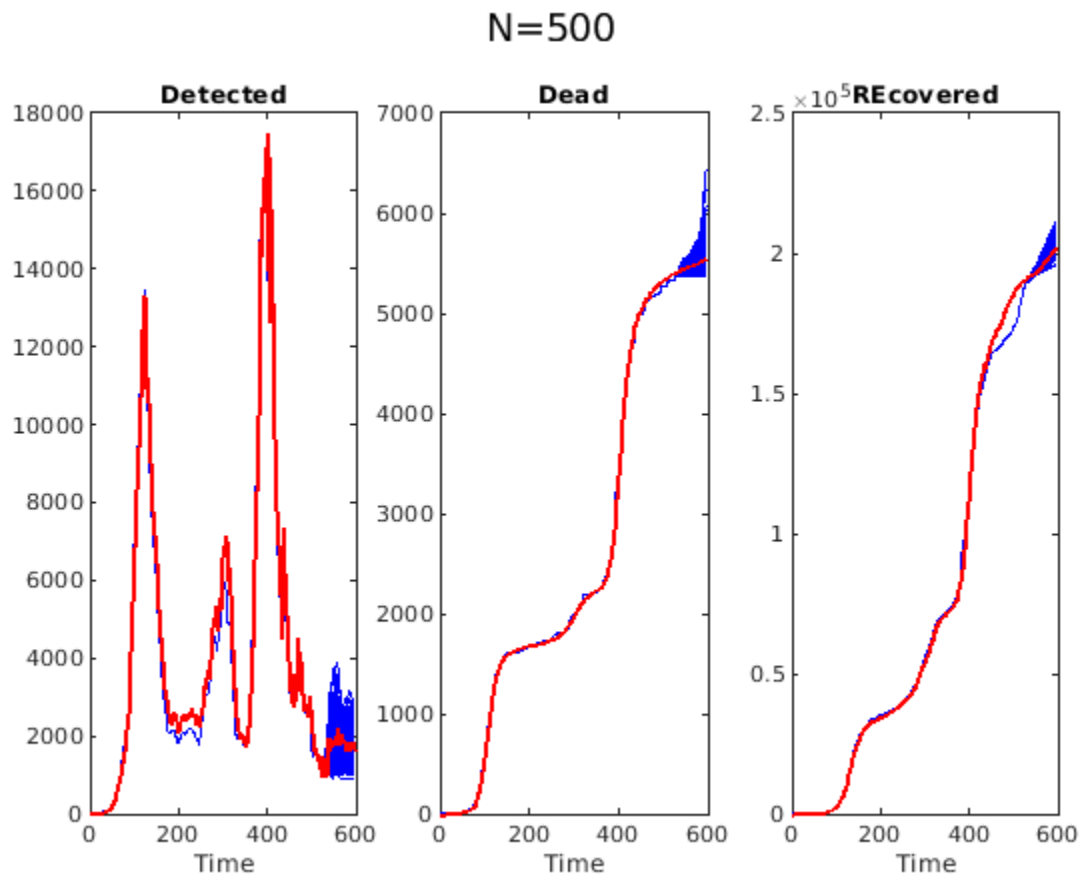
25.3. Identifiability analysis







25.4. Uncertainty analysis



Chapter 26. Extension number26

26.1. Basic information

The extension to be validated consists of the time series from the data597 to the 718. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

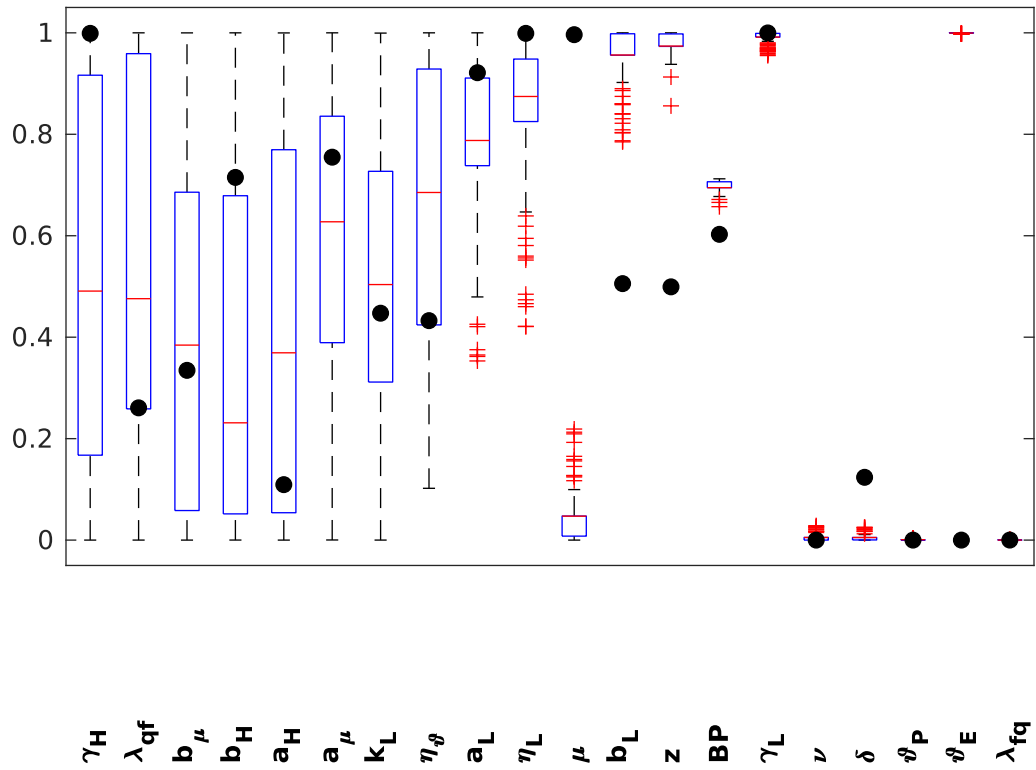
26.2. Estimated parameters with their intervals

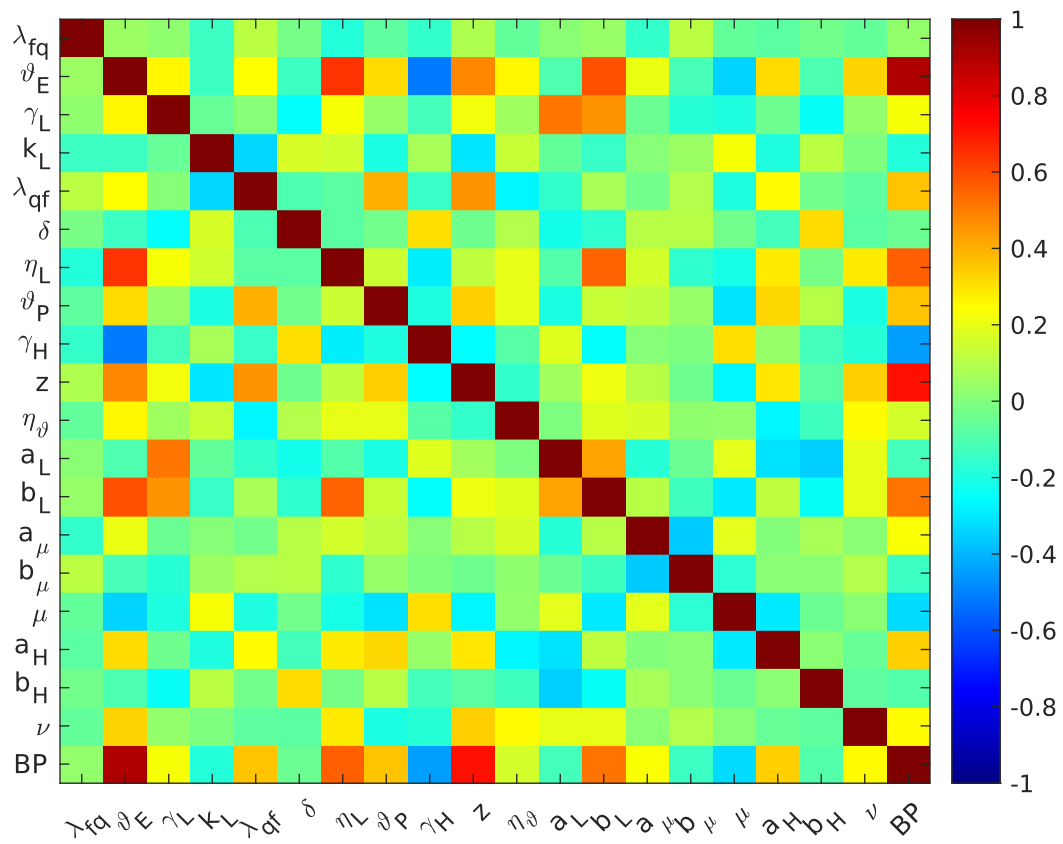
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

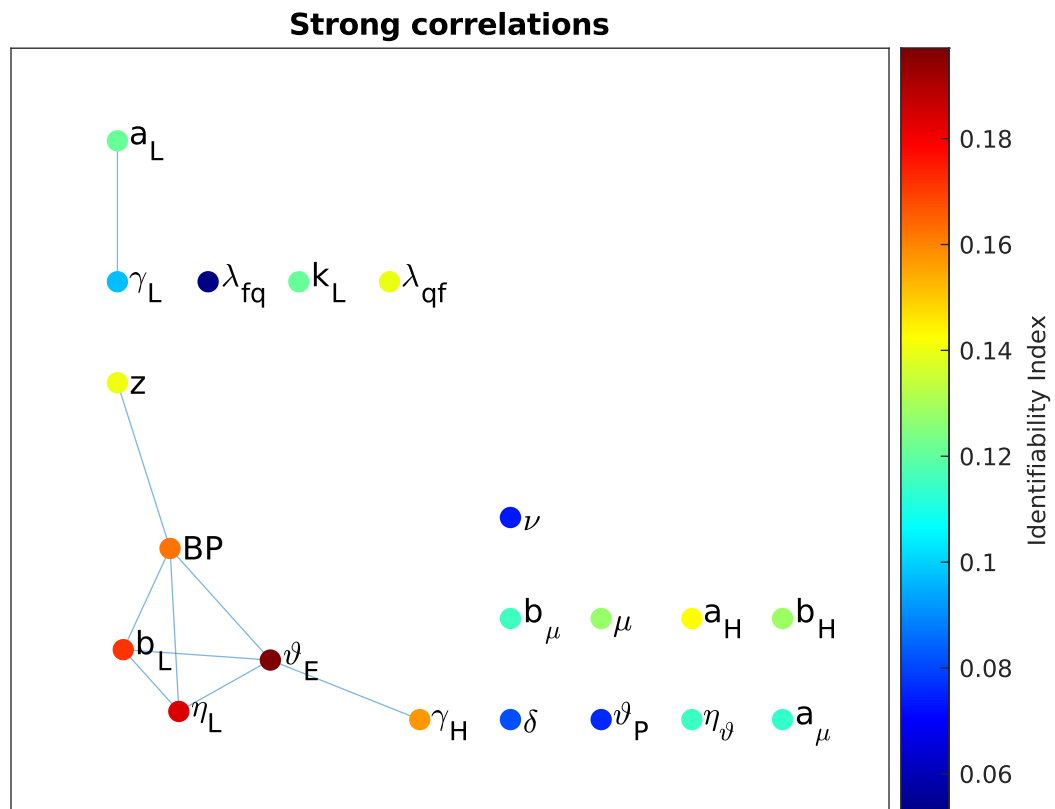
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0001'	'0.0001'	'0.0001'	'0.0528'
ϑ_E	'0'	'0'	'0.9995'	'0'	'0.1971'
γ_L	'0.8453'	'1'	'0.9916'	'0.9998'	'0.0974'
k_L	'2.6857'	'6.4088'	'5.5338'	'5.0255'	'0.121'
λ_{qf}	'0.0621'	'0.2865'	'0.4759'	'0.2607'	'0.1399'
δ	'0.0089'	'0.0197'	'0.0008'	'0.0186'	'0.0817'
η_L	'0.8594'	'1'	'0.8742'	'0.9989'	'0.1836'
ϑ_P	'0'	'0'	'0.0007'	'0'	'0.0761'
γ_H	'0.752'	'1'	'0.4909'	'0.999'	'0.1572'
z	'10.741'	'21.5532'	'29.1966'	'14.9776'	'0.1406'
η_{ϑ}	'0.4309'	'0.4524'	'0.6853'	'0.4326'	'0.115'
a_L	'12.765'	'14.0353'	'12.0243'	'13.8992'	'0.121'
b_L	'7.8439'	'10.1715'	'14.3822'	'8.0783'	'0.1715'
a_{μ}	'7.656'	'11.5839'	'9.785'	'11.568'	'0.1138'
b_{μ}	'3.8042'	'8.1158'	'6.3815'	'5.685'	'0.1158'
μ	'0.7652'	'1'	'0.0474'	'0.9964'	'0.1281'
a_H	'2.2525'	'5.4906'	'6.169'	'2.5304'	'0.1427'
b_H	'5.4747'	'11.0734'	'4.2368'	'11.0098'	'0.1285'
ν	'0.0002'	'0.0003'	'2.6116'	'0.0003'	'0.0739'
BP	'634.5'	'708'	'655.5'	'639.676'	'0.1623'

26.3. Identifiability analysis







26.4. Uncertainty analysis

