

Validation process forPOPAYAN

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 103. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

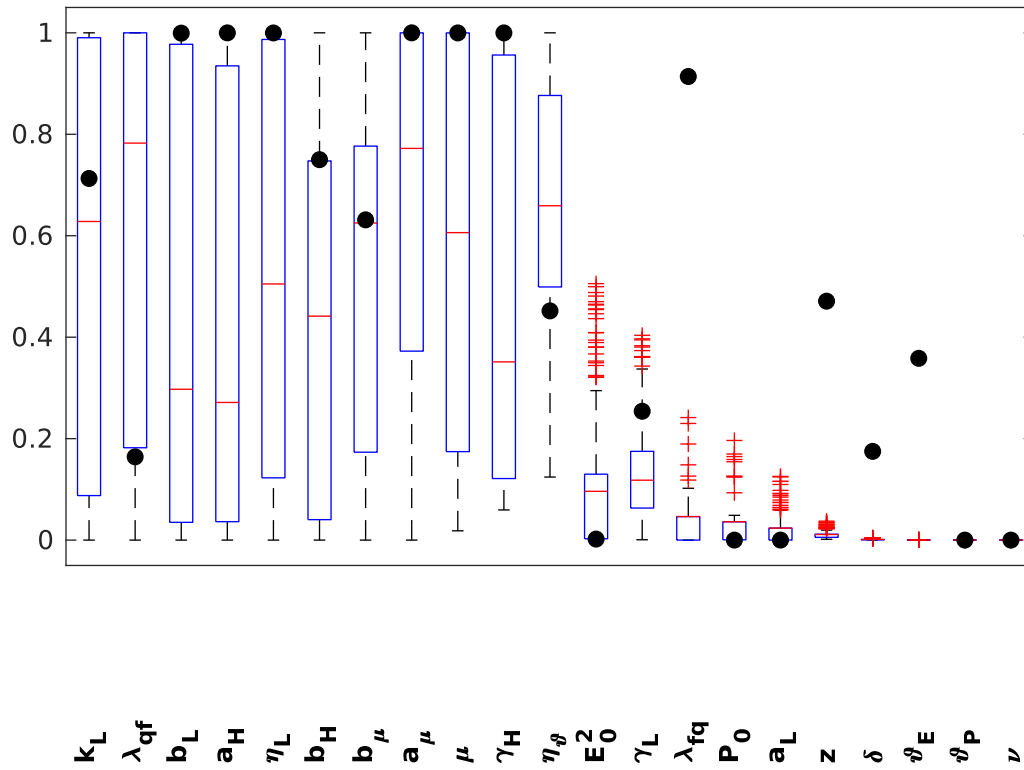
1.2. Estimated parameters with their intervals

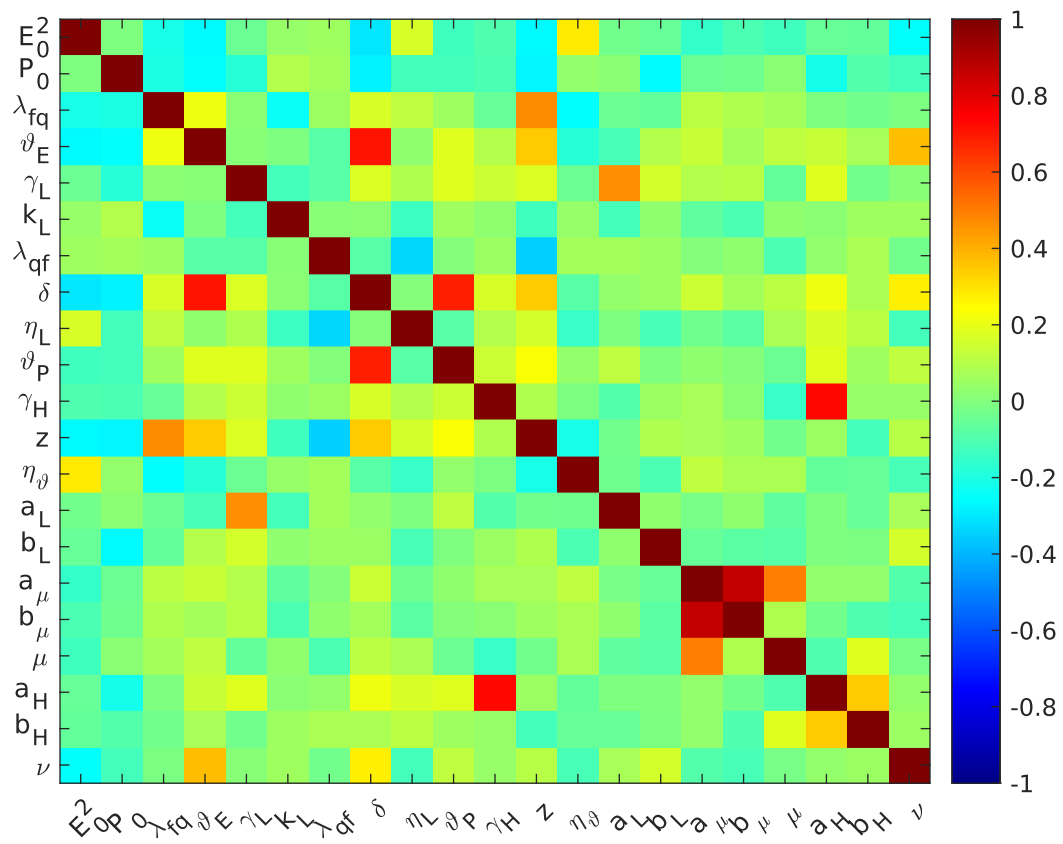
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

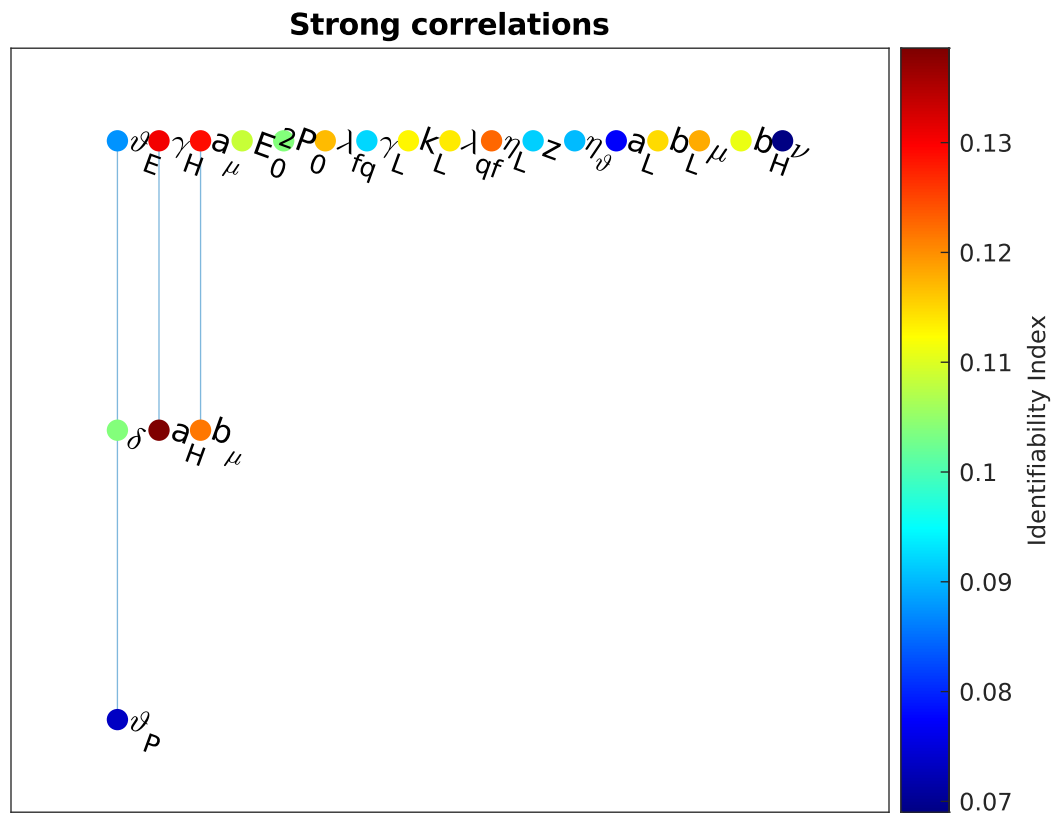
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
E^2_0	'3.6373'	'4.5792'	'192.3743'	'4.0495'	'0.1086'
P_0	'0'	'0'	'14.4406'	'0'	'0.1039'
\lambda_{fq}	'0.8851'	'0.9173'	'0.0463'	'0.9139'	'0.1169'
\vartheta_E	'0.2875'	'0.359'	'0.0001'	'0.3583'	'0.0877'
\gamma_L	'0.2314'	'0.2544'	'0.1181'	'0.254'	'0.0922'
k_L	'1.45'	'10'	'6.6529'	'7.416'	'0.113'
\lambda_{qf}	'0.1601'	'0.1658'	'0.7826'	'0.1641'	'0.1136'
\delta	'0.0148'	'0.0266'	'0.0002'	'0.0262'	'0.1038'
\eta_L	'0.9533'	'1'	'0.5049'	'0.9998'	'0.1226'
\vartheta_P	'0'	'0'	'0'	'0'	'0.0736'
\gamma_H	'0.7579'	'1'	'0.3513'	'0.9998'	'0.1305'
z	'13.607'	'14.6488'	'0.3298'	'14.1295'	'0.0917'
\eta_{\vartheta}	'0.2504'	'0.8417'	'0.6591'	'0.4518'	'0.0904'
a_L	'1'	'1.1063'	'1.3311'	'1.0009'	'0.0772'
b_L	'13.094'	'15'	'5.1634'	'14.9911'	'0.1149'
a_{\mu}	'14.5263'	'15'	'11.81'	'14.9995'	'0.1289'
b_{\mu}	'9.2908'	'10.1643'	'9.7521'	'9.8384'	'0.1215'
\mu	'0.7131'	'1'	'0.6061'	'0.9998'	'0.118'
a_H	'14.0937'	'15'	'4.7986'	'14.9986'	'0.1386'
b_H	'10.5374'	'11.5051'	'7.1811'	'11.4992'	'0.1111'
\nu	'0.0001'	'0.0016'	'0.0001'	'0.0008'	'0.069'

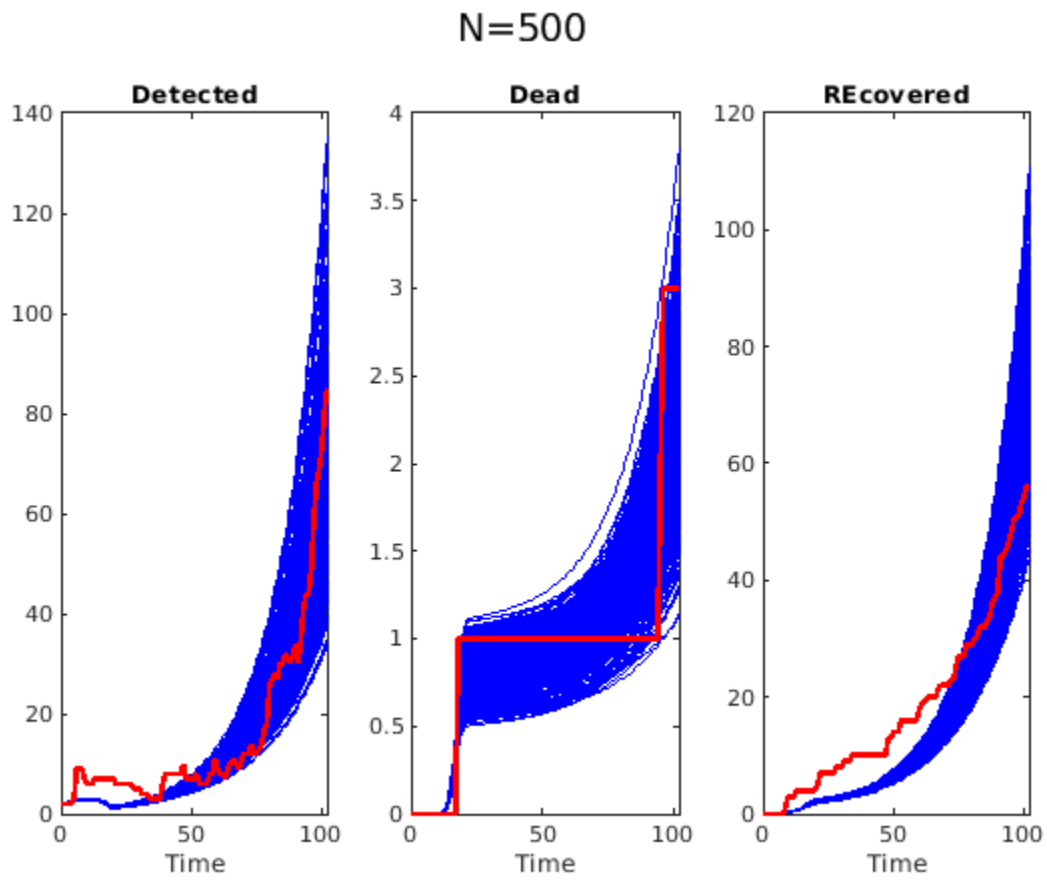
1.3. Identifiability analysis







1.4. Uncertainty analysis



Chapter 2. Extension number2

2.1. Basic information

The extension to be validated consists of the time series from the data103 to the 155. The status of the validation is: COMPLETED.

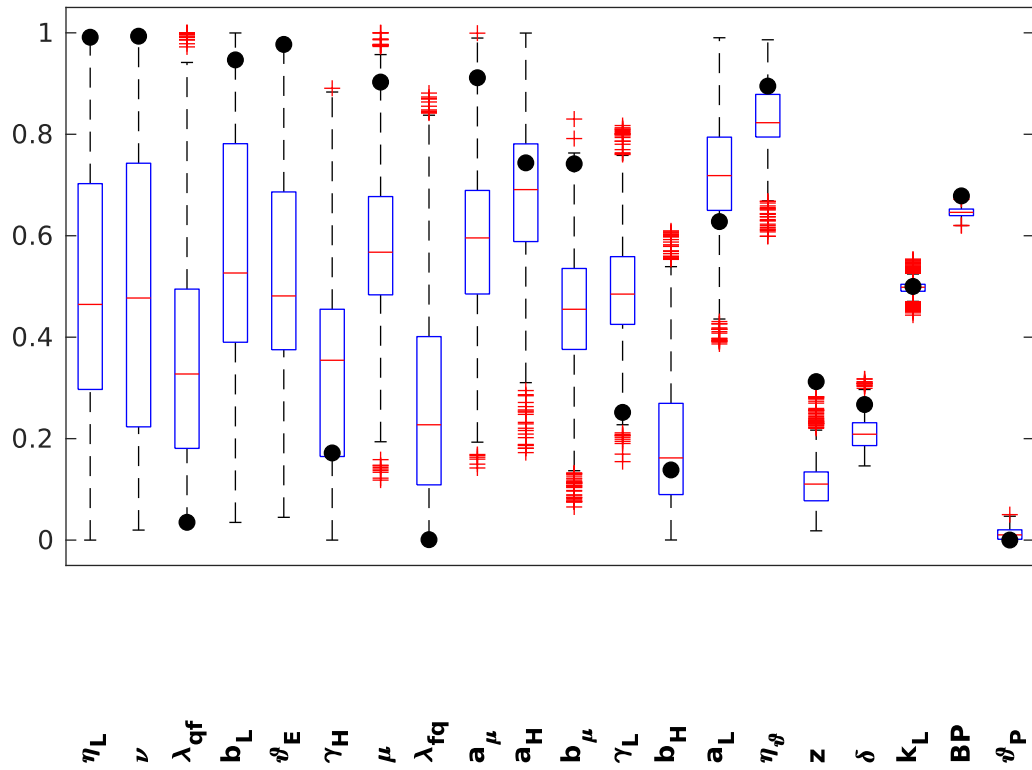
The number of estimations needed to perform the validation was1000.

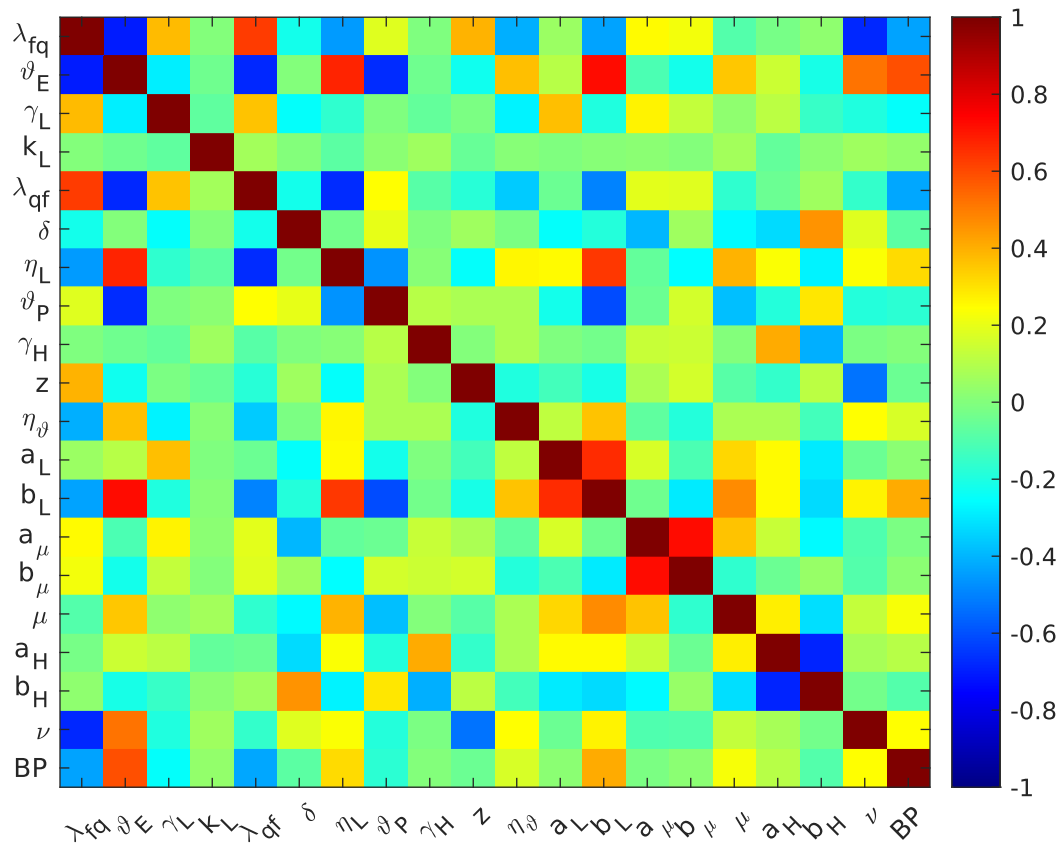
2.2. Estimated parameters with their intervals

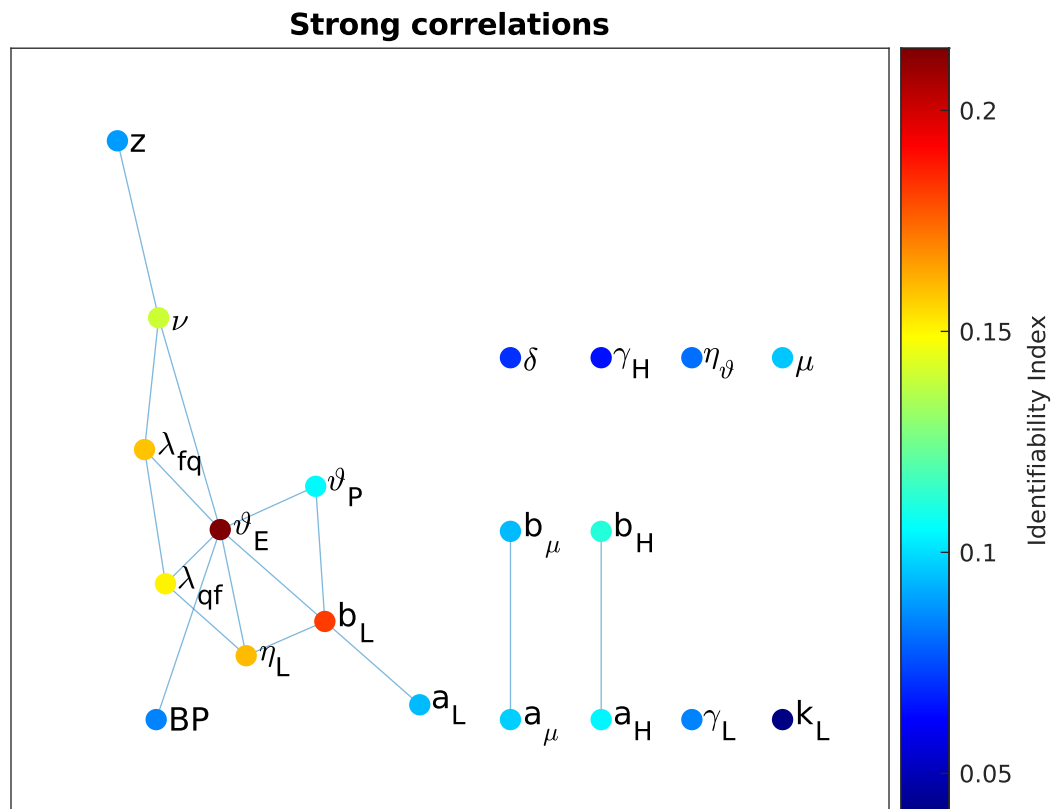
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.2005'	'0.2542'	'0.2273'	'0.0009'	'0.1591'
ϑ_E	'0.4626'	'0.5001'	'0.4813'	'0.9772'	'0.2141'
γ_L	'0.4694'	'0.5005'	'0.485'	'0.2518'	'0.0849'
k_L	'5.4164'	'5.5562'	'5.4863'	'5.5002'	'0.0412'
λ_{qf}	'0.3044'	'0.3505'	'0.3275'	'0.0351'	'0.1508'
δ	'0.0304'	'0.0322'	'0.0313'	'0.0401'	'0.0706'
η_L	'0.4379'	'0.4913'	'0.4646'	'0.9913'	'0.1605'
ϑ_P	'0.0091'	'0.0115'	'0.0103'	'0.0001'	'0.1048'
γ_H	'0.3339'	'0.3751'	'0.3545'	'0.1718'	'0.0654'
z	'2.8865'	'3.738'	'3.3123'	'9.3724'	'0.0885'
η_{ϑ}	'0.8105'	'0.8351'	'0.8228'	'0.895'	'0.0811'
a_L	'10.8587'	'11.2605'	'11.0596'	'9.7905'	'0.0942'
b_L	'8.0264'	'8.7167'	'8.3716'	'14.2533'	'0.1818'
a_{μ}	'9.1002'	'9.5791'	'9.3396'	'13.7605'	'0.0973'
b_{μ}	'7.1345'	'7.6068'	'7.3707'	'11.385'	'0.094'
μ	'0.5487'	'0.5864'	'0.5675'	'0.9029'	'0.0961'
a_H	'10.3714'	'10.975'	'10.6732'	'11.4117'	'0.104'
b_H	'2.9599'	'3.5765'	'3.2682'	'2.9362'	'0.1118'
ν	'224.46'	'252.7675'	'238.6137'	'496.6705'	'0.1403'
BP	'100.2118'	'100.7882'	'100.5'	'105.5'	'0.0849'

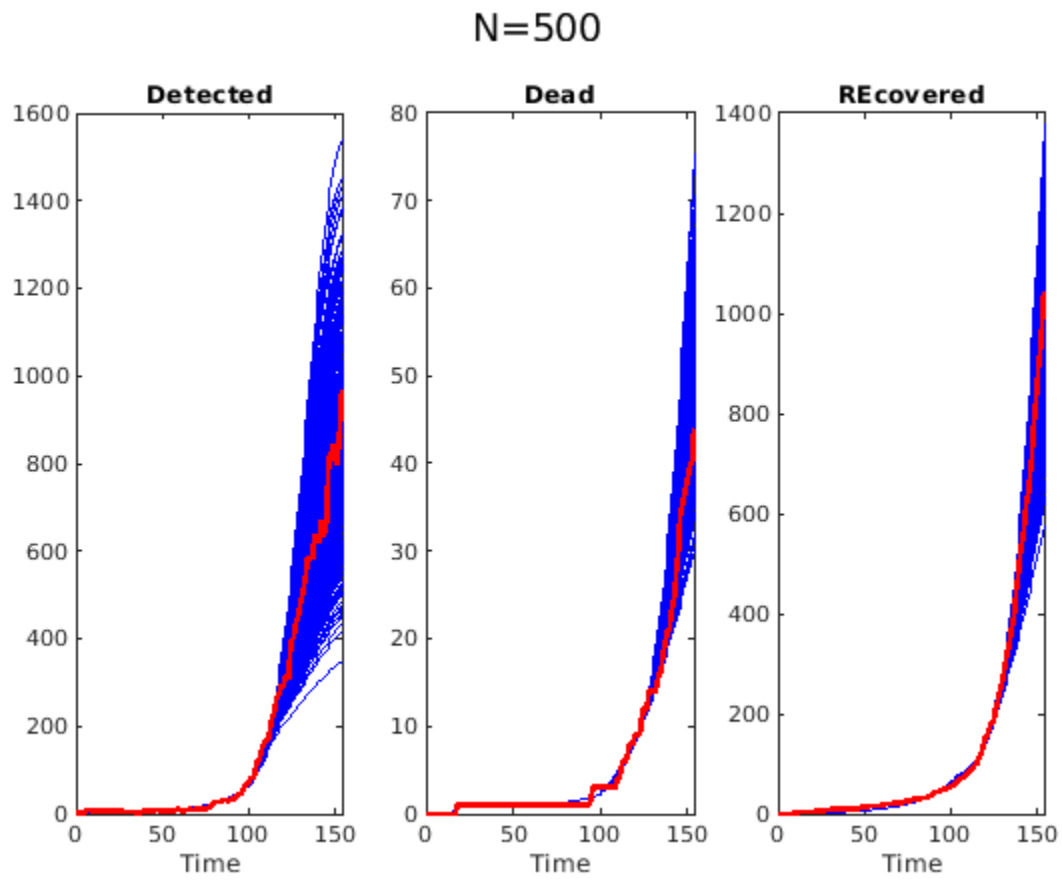
2.3. Identifiability analysys







2.4. Uncertainty analysys



Chapter 3. Extension number3

3.1. Basic information

The extension to be validated consists of the time series from the data155 to the 176. The status of the validation is: COMPLETED.

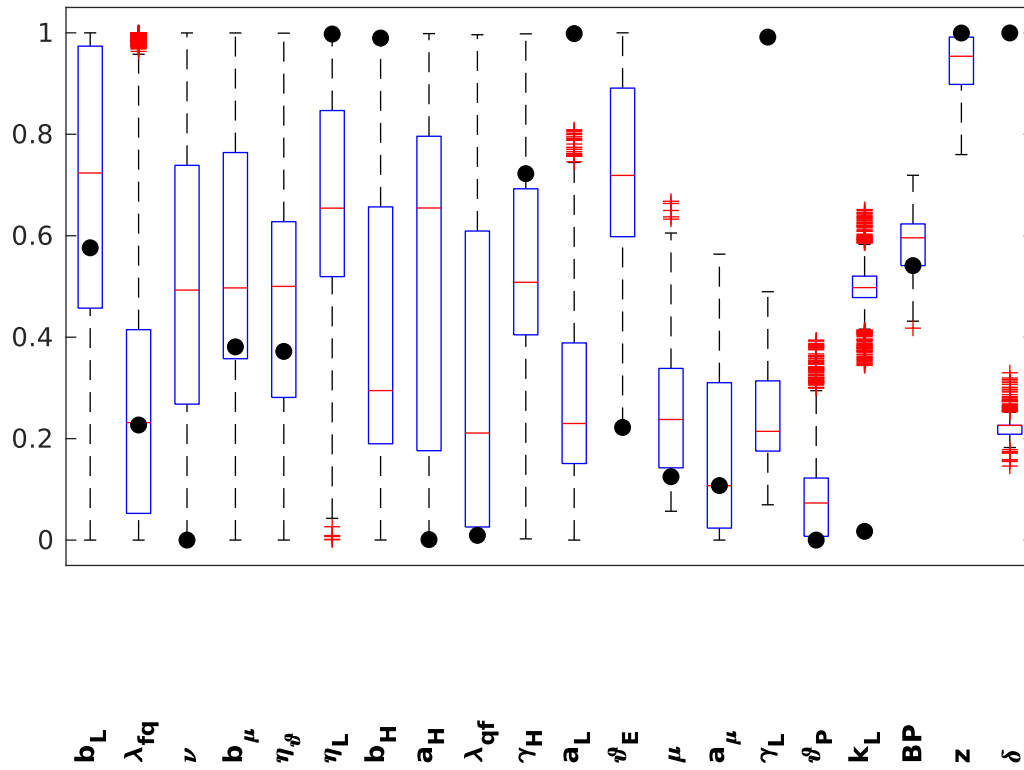
The number of estimations needed to perform the validation was1000.

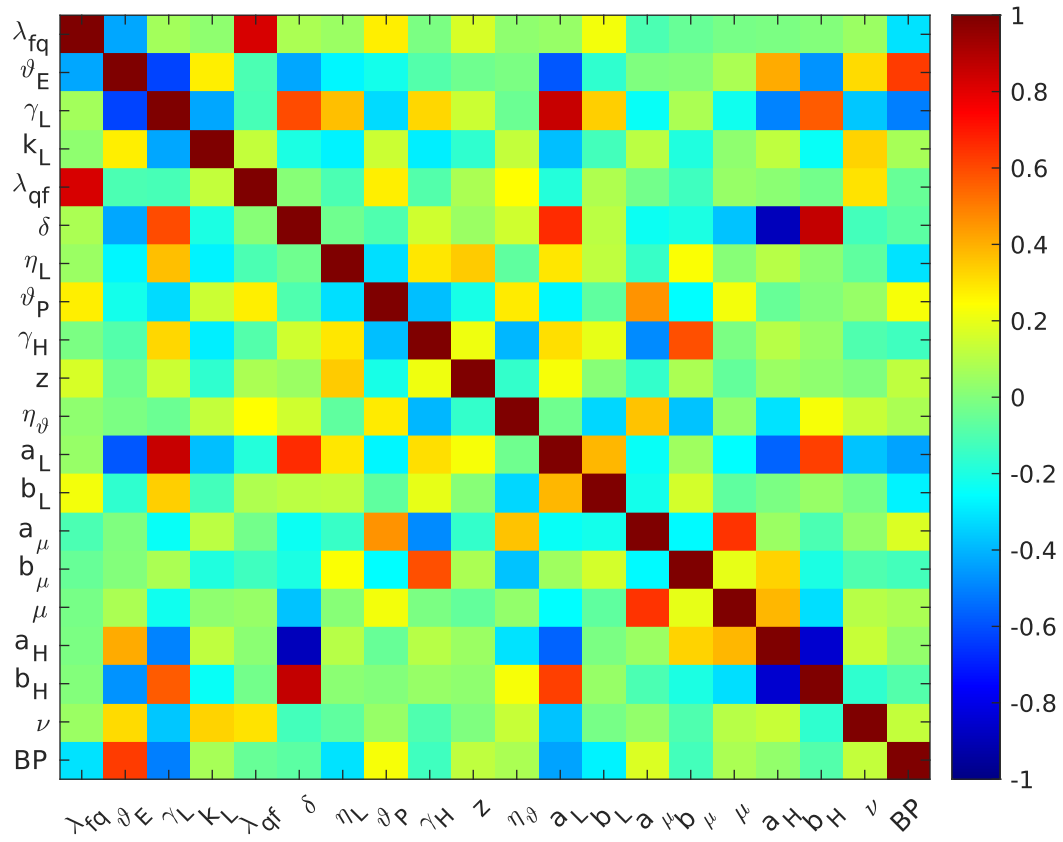
3.2. Estimated parameters with their intervals

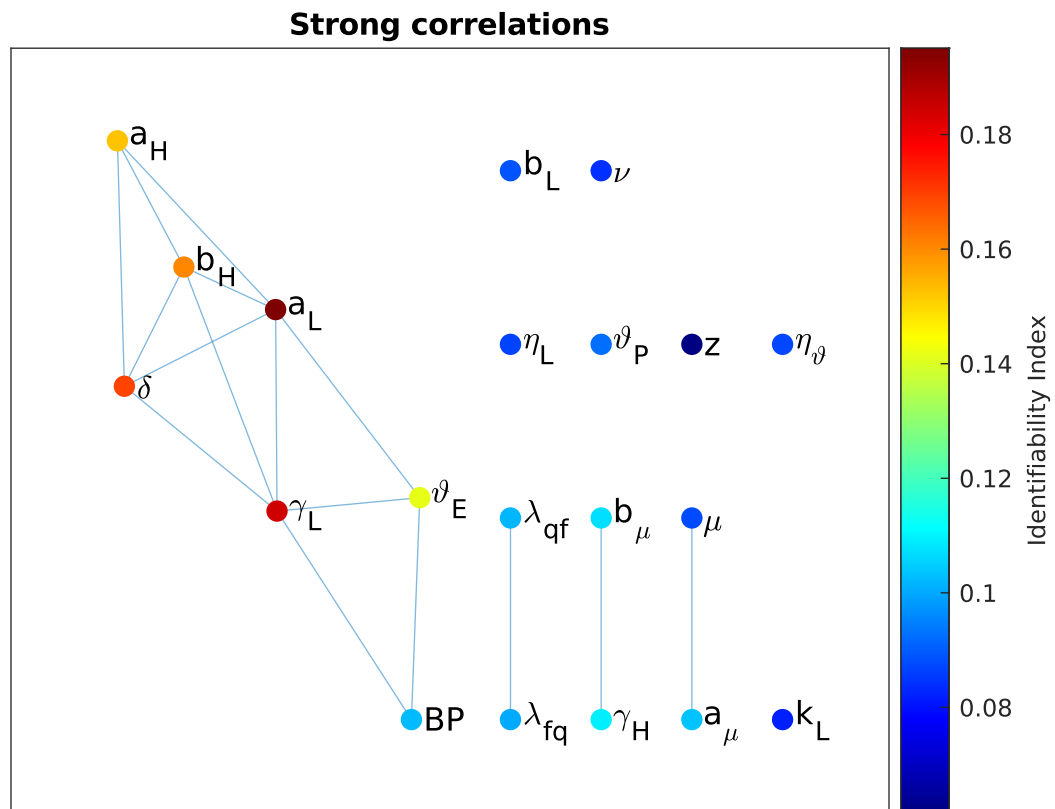
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.2034'	'0.2597'	'0.2315'	'0.2269'	'0.1005'
ϑ_E	'0.7038'	'0.734'	'0.7189'	'0.2221'	'0.1416'
γ_L	'0.2014'	'0.2274'	'0.2144'	'0.9916'	'0.1842'
k_L	'5.372'	'5.5871'	'5.4795'	'1.1558'	'0.0825'
λ_{qf}	'0.182'	'0.2402'	'0.2111'	'0.0094'	'0.1021'
δ	'0.0297'	'0.0381'	'0.0339'	'0.15'	'0.1694'
η_L	'0.6356'	'0.6732'	'0.6544'	'0.9976'	'0.0869'
ϑ_P	'0.0568'	'0.0895'	'0.0731'	'0.0001'	'0.0929'
γ_H	'0.489'	'0.5274'	'0.5082'	'0.7224'	'0.1091'
z	'28.3741'	'28.8555'	'28.6148'	'29.9887'	'0.0617'
η_{ϑ}	'0.4803'	'0.52'	'0.5002'	'0.372'	'0.0874'
a_L	'3.8956'	'4.5413'	'4.2185'	'14.9784'	'0.1951'
b_L	'10.7541'	'11.5102'	'11.1321'	'9.0671'	'0.089'
a_{μ}	'2.2821'	'2.7175'	'2.4998'	'2.5047'	'0.1036'
b_{μ}	'7.6145'	'8.305'	'7.9597'	'6.3329'	'0.1074'
μ	'0.2266'	'0.2489'	'0.2378'	'0.125'	'0.0882'
a_H	'9.7674'	'10.5639'	'10.1657'	'1.0137'	'0.1525'
b_H	'4.7789'	'5.473'	'5.126'	'14.8561'	'0.1604'
ν	'234.6495'	'258.2455'	'246.4475'	'0.0127'	'0.0845'
BP	'146.1726'	'146.8274'	'146.5'	'142.5'	'0.1028'

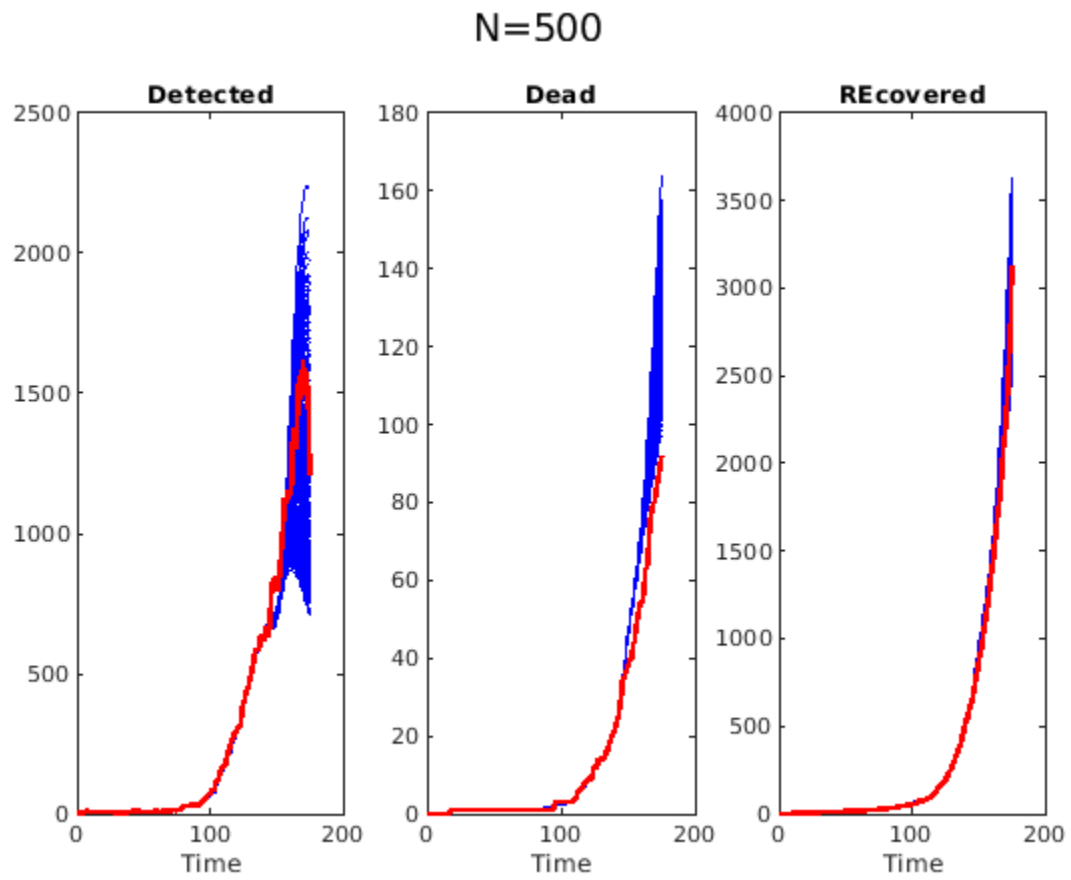
3.3. Identifiability analysis







3.4. Uncertainty analysys



Chapter 4. Extension number4

4.1. Basic information

The extension to be validated consists of the time series from the data176 to the 204. The status of the validation is: COMPLETED.

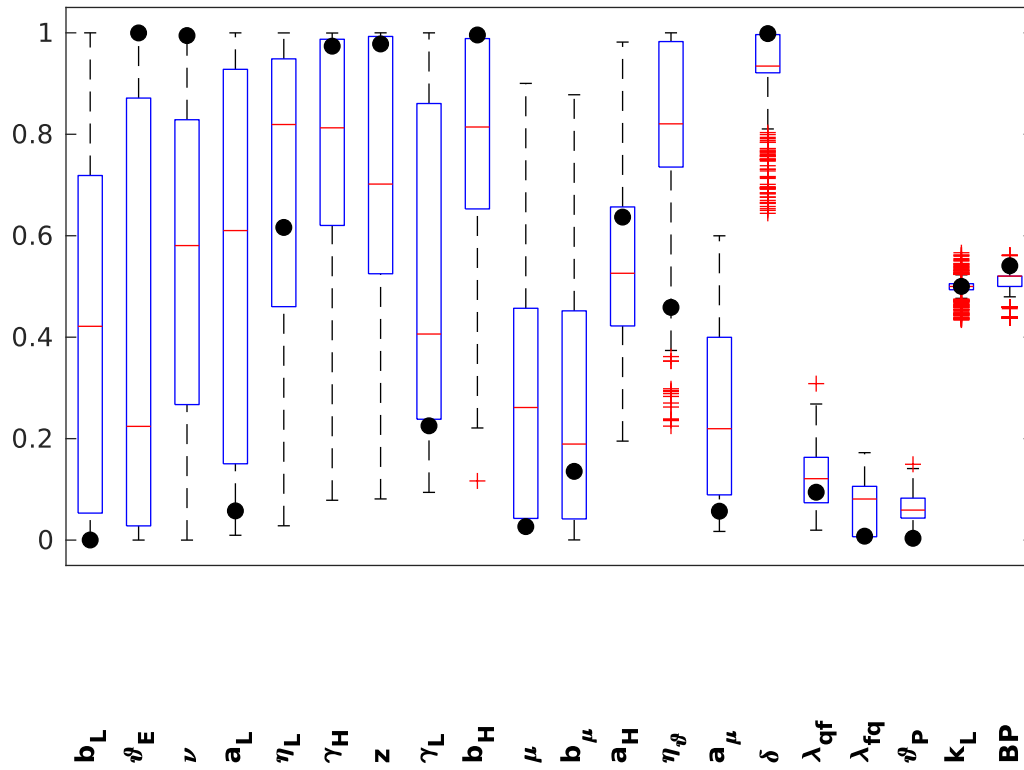
The number of estimations needed to perform the validation was1000.

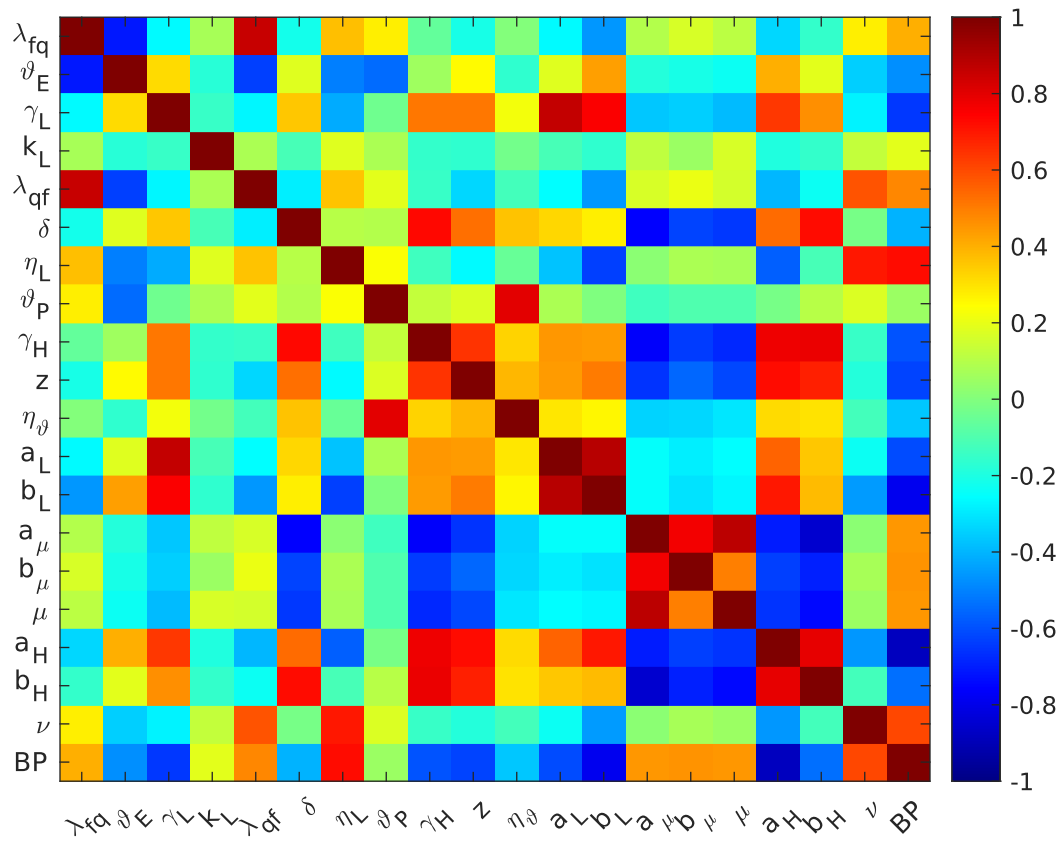
4.2. Estimated parameters with their intervals

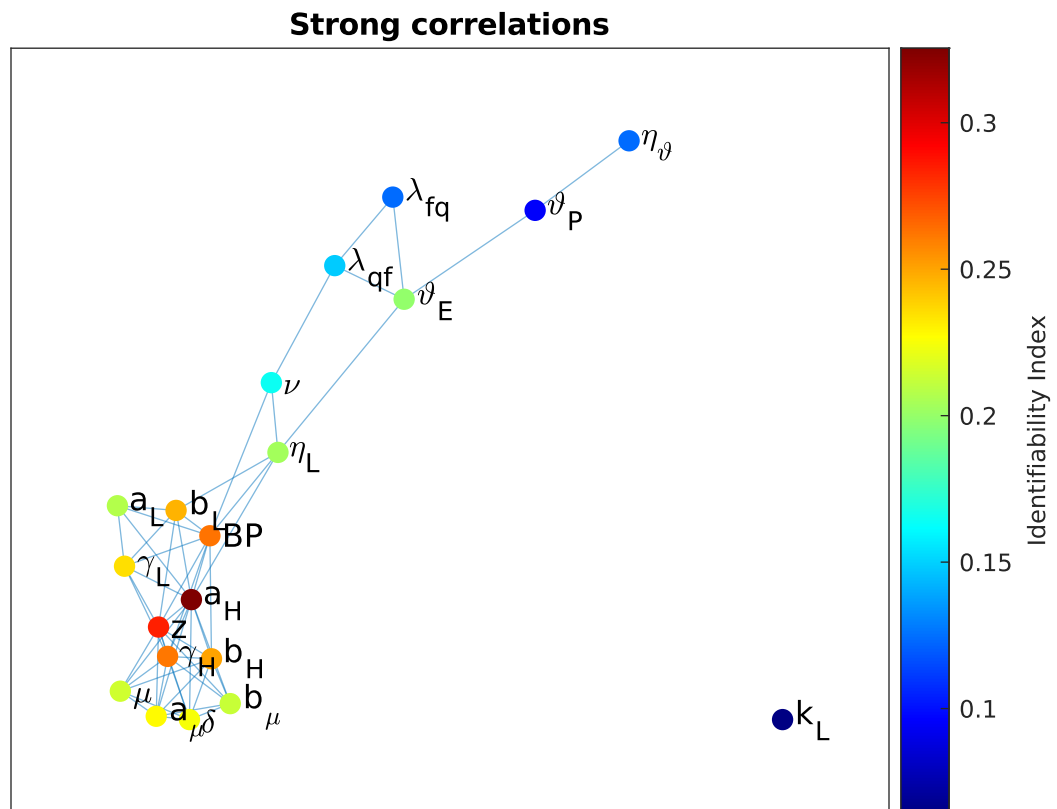
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0733'	'0.0889'	'0.0811'	'0.0077'	'0.1238'
ϑ_E	'0.1772'	'0.2712'	'0.2242'	'0.9998'	'0.1991'
γ_L	'0.3682'	'0.4443'	'0.4062'	'0.2253'	'0.2354'
k_L	'5.4212'	'5.5787'	'5.4999'	'5.5015'	'0.0646'
λ_{qf}	'0.1128'	'0.1294'	'0.1211'	'0.0944'	'0.1486'
δ	'0.1369'	'0.1434'	'0.1402'	'0.1498'	'0.2253'
η_L	'0.7761'	'0.8603'	'0.8182'	'0.6164'	'0.2034'
ϑ_P	'0.0554'	'0.0629'	'0.0592'	'0.0035'	'0.0954'
γ_H	'0.7904'	'0.8351'	'0.8127'	'0.9737'	'0.2616'
z	'20.1875'	'21.9227'	'21.0551'	'29.3418'	'0.2842'
η_{ϑ}	'0.7974'	'0.8431'	'0.8203'	'0.4588'	'0.124'
a_L	'8.9274'	'10.1577'	'9.5426'	'1.8068'	'0.2073'
b_L	'6.315'	'7.4857'	'6.9004'	'1.0026'	'0.2468'
a_{μ}	'3.8125'	'4.3357'	'4.0741'	'1.7976'	'0.2282'
b_{μ}	'3.2981'	'4.0032'	'3.6506'	'2.897'	'0.2128'
μ	'0.237'	'0.2858'	'0.2614'	'0.0266'	'0.2151'
a_H	'8.0524'	'8.6756'	'8.364'	'9.9144'	'0.3254'
b_H	'12.1085'	'12.6932'	'12.4009'	'14.9406'	'0.2504'
ν	'270.3341'	'310.2671'	'290.3006'	'497.2876'	'0.1645'
BP	'180.3133'	'180.6867'	'180.5'	'181.5'	'0.2624'

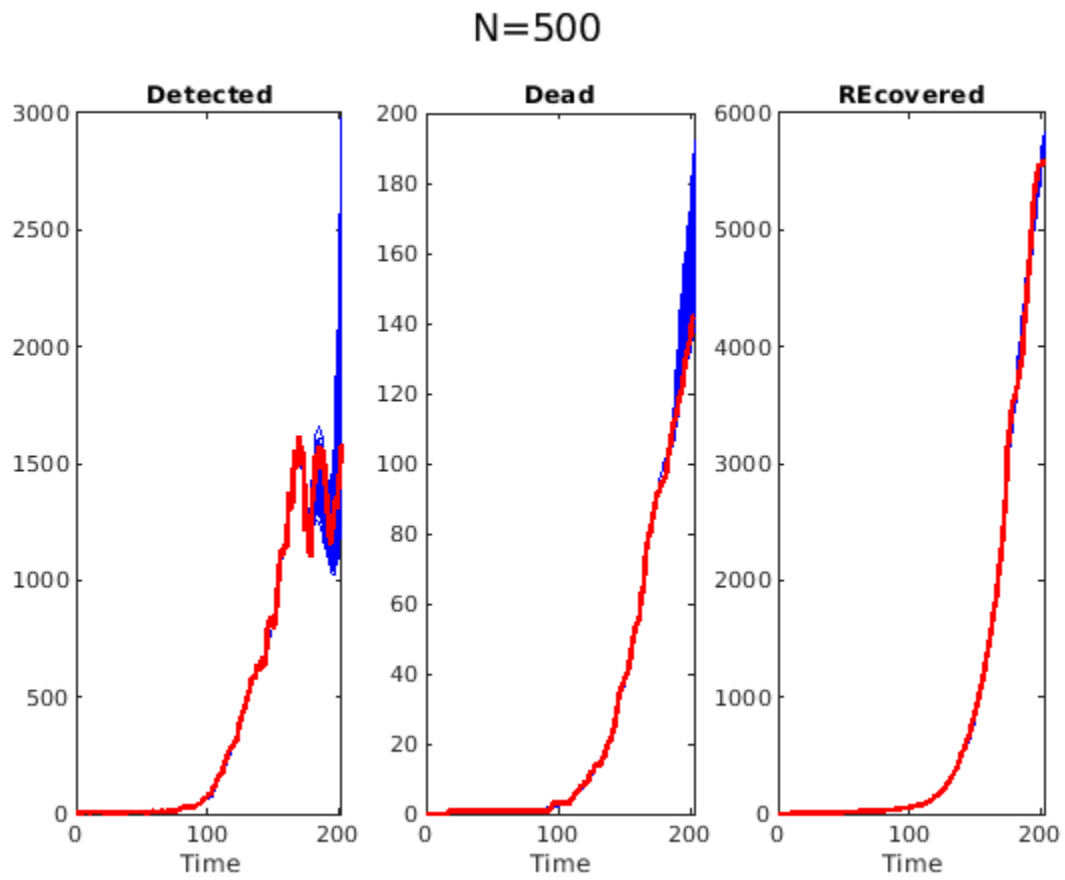
4.3. Identifiability analysis







4.4. Uncertainty analysys



Chapter 5. Extension number5

5.1. Basic information

The extension to be validated consists of the time series from the data204 to the 265. The status of the validation is: COMPLETED.

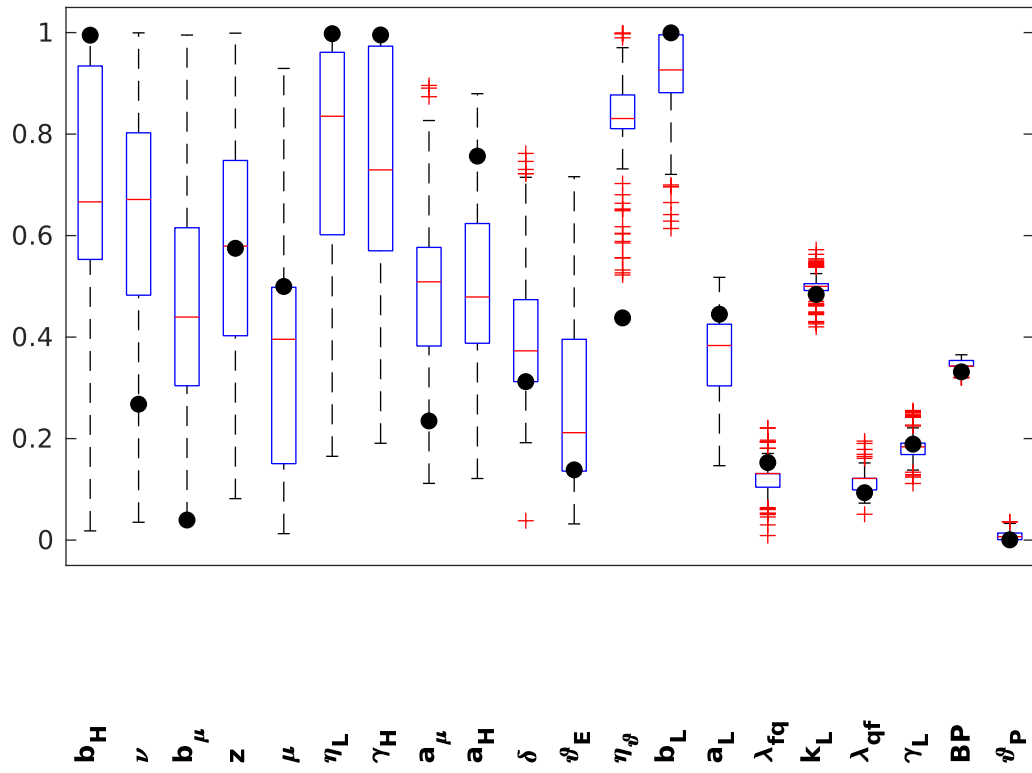
The number of estimations needed to perform the validation was1000.

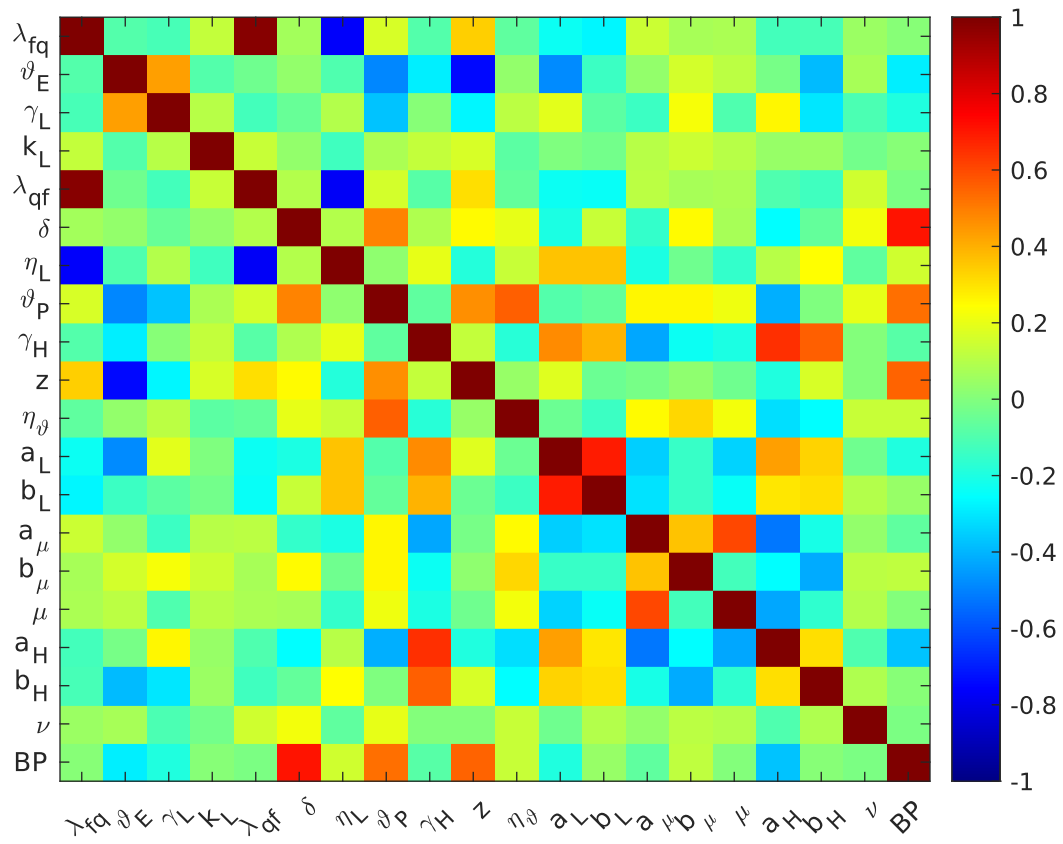
5.2. Estimated parameters with their intervals

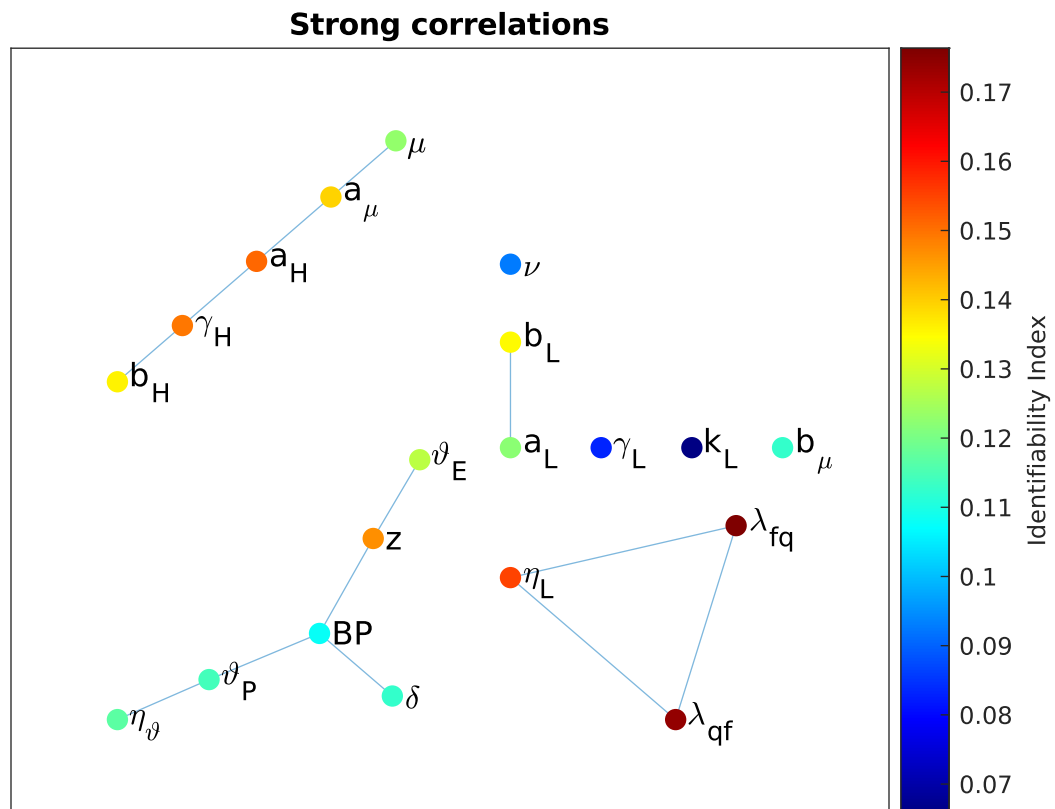
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0537'	'0.2085'	'0.1311'	'0.1528'	'0.1763'
ϑ_E	'0.1748'	'0.2535'	'0.2141'	'0.1384'	'0.1272'
γ_L	'0.1664'	'0.2012'	'0.1838'	'0.1891'	'0.0833'
k_L	'5.3112'	'5.6886'	'5.4999'	'5.3564'	'0.0659'
λ_{qf}	'0.0463'	'0.1969'	'0.1216'	'0.0934'	'0.1738'
δ	'0.0512'	'0.0608'	'0.056'	'0.0468'	'0.1128'
η_L	'0.7816'	'0.8876'	'0.8346'	'0.9979'	'0.1552'
ϑ_P	'0.0033'	'0.0101'	'0.0067'	'0.0005'	'0.1146'
γ_H	'0.6833'	'0.7757'	'0.7295'	'0.9953'	'0.1495'
z	'16.0244'	'18.7374'	'17.3809'	'17.2497'	'0.1468'
η_{ϑ}	'0.7921'	'0.8688'	'0.8305'	'0.4378'	'0.1169'
a_L	'6.0472'	'6.6627'	'6.355'	'7.231'	'0.1222'
b_L	'13.2897'	'14.6134'	'13.9516'	'14.993'	'0.135'
a_{μ}	'7.6242'	'8.6248'	'8.1245'	'4.2871'	'0.1395'
b_{μ}	'6.5389'	'7.7671'	'7.153'	'1.5541'	'0.1126'
μ	'0.3522'	'0.4392'	'0.3957'	'0.4997'	'0.1233'
a_H	'7.2057'	'8.2228'	'7.7143'	'11.5926'	'0.1511'
b_H	'9.6693'	'10.9905'	'10.3299'	'14.9282'	'0.1359'
ν	'311.7181'	'359.4354'	'335.5767'	'133.9045'	'0.093'
BP	'206.319'	'206.681'	'206.5'	'205.5068'	'0.108'

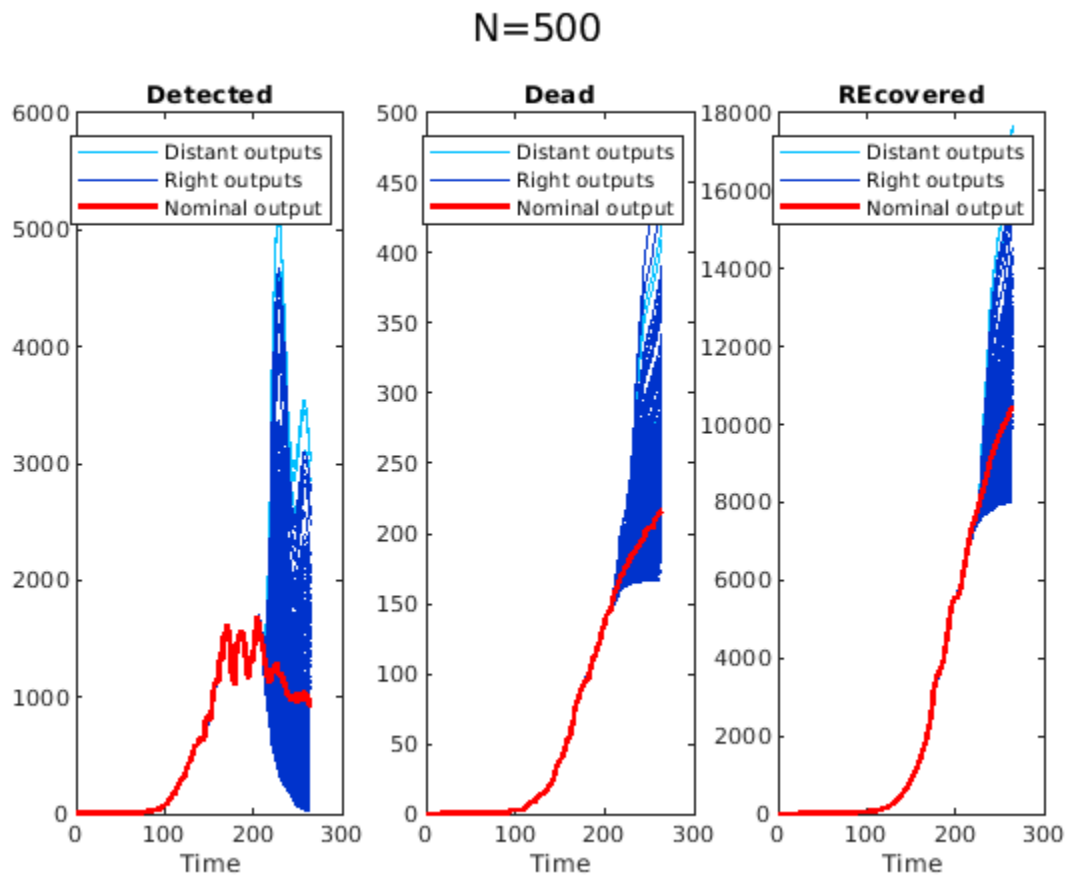
5.3. Identifiability analysis







5.4. Uncertainty analysys



Chapter 6. Extension number6

6.1. Basic information

The extension to be validated consists of the time series from the data265 to the 294. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

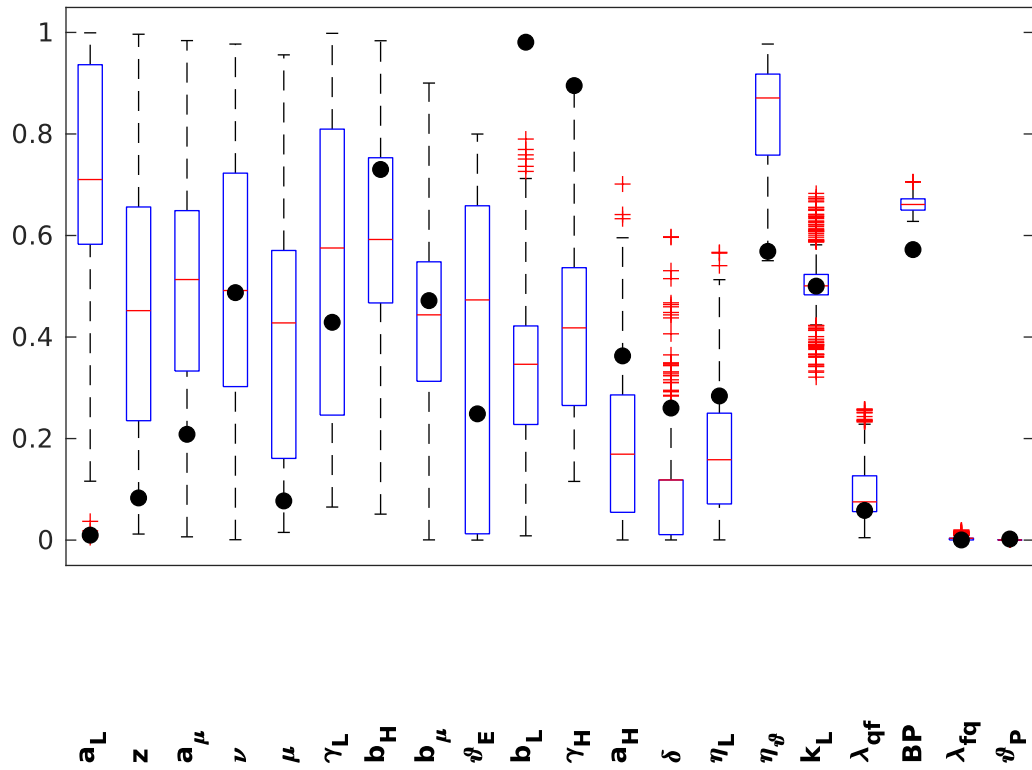
6.2. Estimated parameters with their intervals

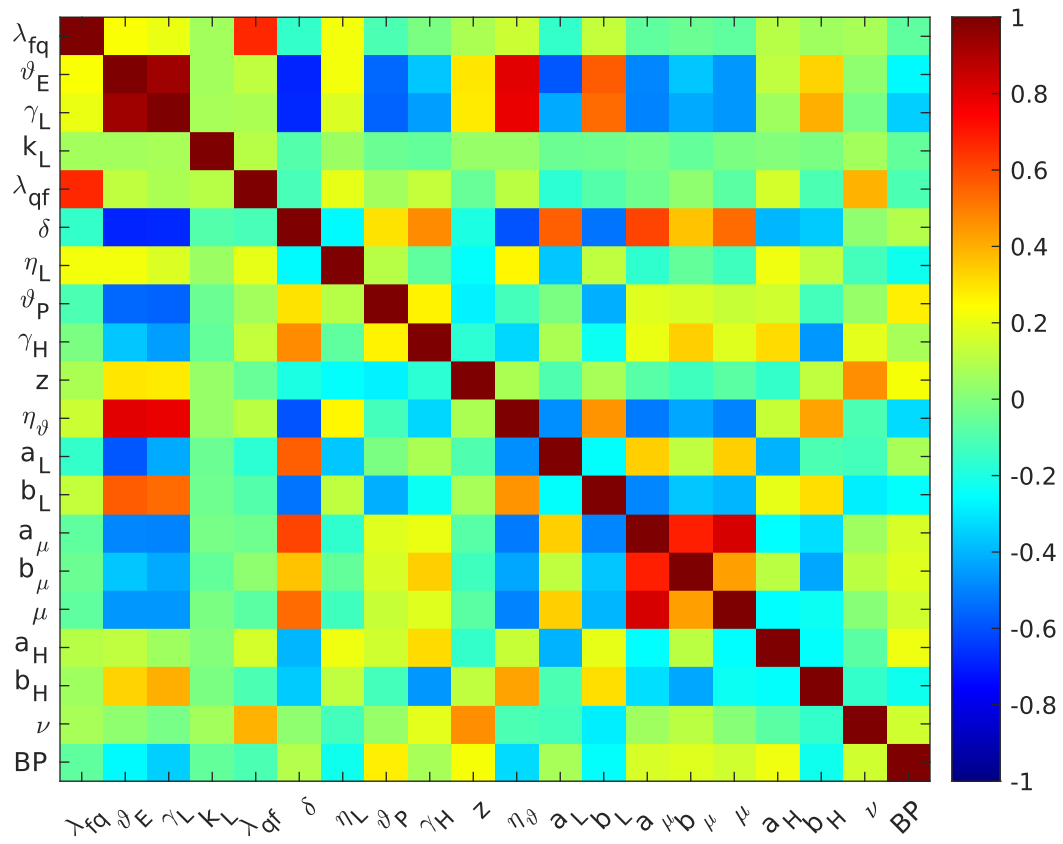
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

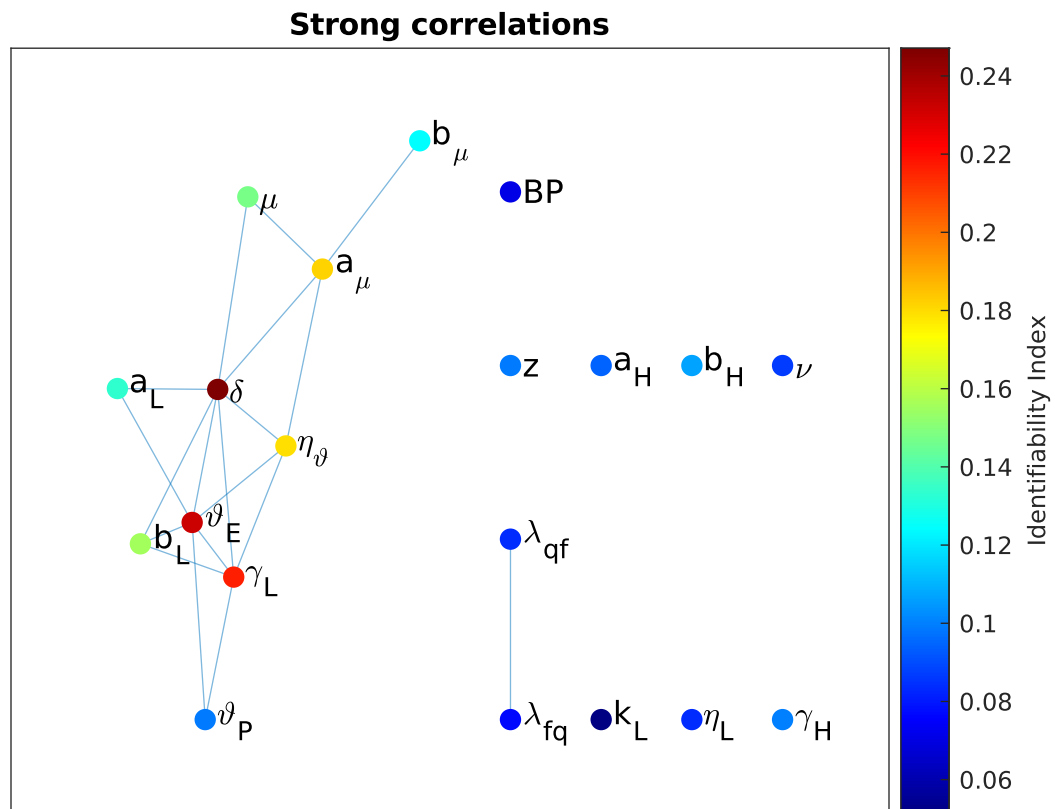
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.0001'	'0.0022'	'0.0037'	'0.0003'	'0.0769'
\vartheta_E	'0.2095'	'0.4991'	'0.4731'	'0.2487'	'0.232'
\gamma_L	'0.3119'	'0.4307'	'0.5754'	'0.429'	'0.216'
k_L	'1.8251'	'9.673'	'5.5072'	'5.5025'	'0.0517'
\lambda_{qf}	'0.0565'	'0.076'	'0.0753'	'0.0585'	'0.0839'
\delta	'0.0014'	'0.0624'	'0.0178'	'0.039'	'0.2471'
\eta_L	'0.2662'	'0.4638'	'0.1583'	'0.284'	'0.0845'
\vartheta_P	'0.0007'	'0.0045'	'0.0003'	'0.0021'	'0.0991'
\gamma_H	'0.0423'	'0.95'	'0.418'	'0.8953'	'0.1004'
z	'2.2027'	'2.9555'	'13.5597'	'2.4922'	'0.0992'
\eta_{\vartheta}	'0.4581'	'0.6271'	'0.8709'	'0.5688'	'0.1795'
a_L	'1.1294'	'1.6442'	'10.9434'	'1.1372'	'0.1336'
b_L	'10.17'	'15'	'5.8487'	'14.7306'	'0.1559'
a_{\mu}	'2.7951'	'15'	'8.1855'	'3.9175'	'0.1819'
b_{\mu}	'1'	'15'	'7.2118'	'7.6042'	'0.1249'
\mu	'0.0027'	'0.1185'	'0.4278'	'0.0772'	'0.1475'
a_H	'1'	'13.9024'	'3.3695'	'6.0802'	'0.0948'
b_H	'3.5309'	'15'	'9.2903'	'11.2209'	'0.1067'
\nu	'195.6354'	'295.068'	'245.8057'	'243.7264'	'0.0874'
BP	'255.4024'	'261.2916'	'263.5'	'255.5'	'0.0713'

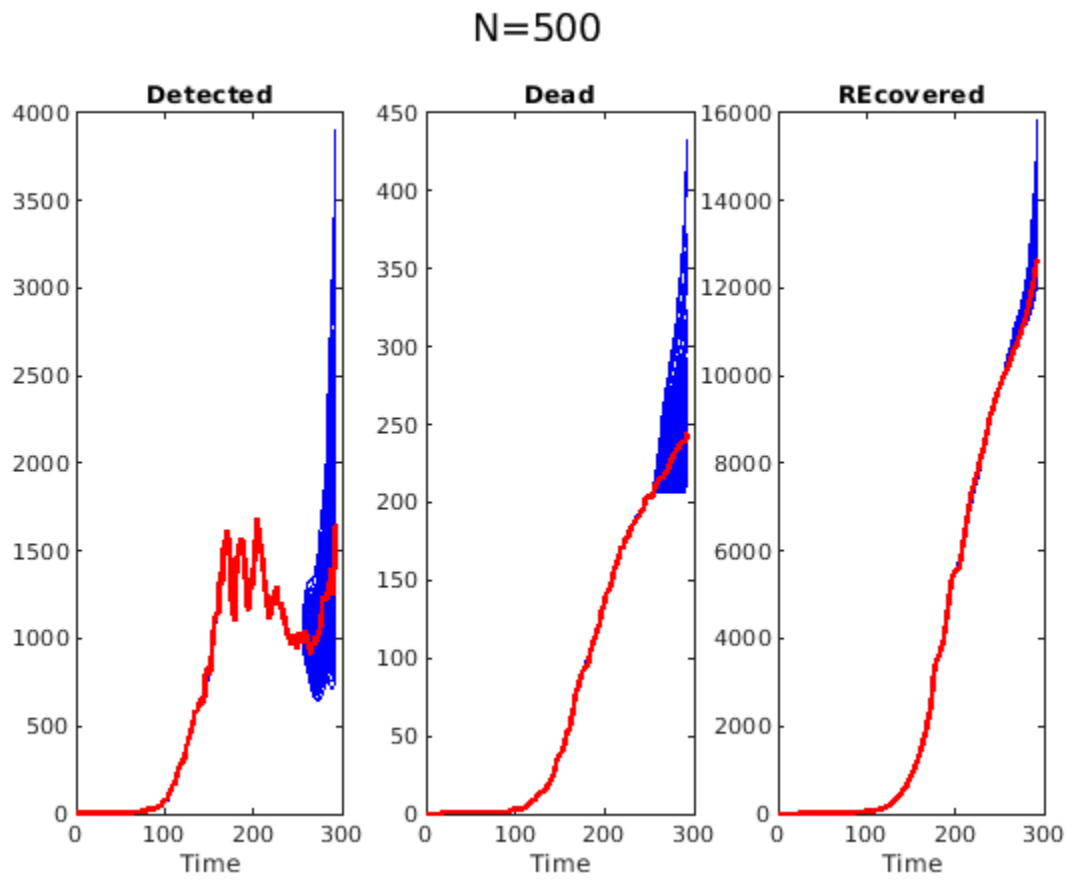
6.3. Identifiability analysys







6.4. Uncertainty analysys



Chapter 7. Extension number7

7.1. Basic information

The extension to be validated consists of the time series from the data294 to the 326. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

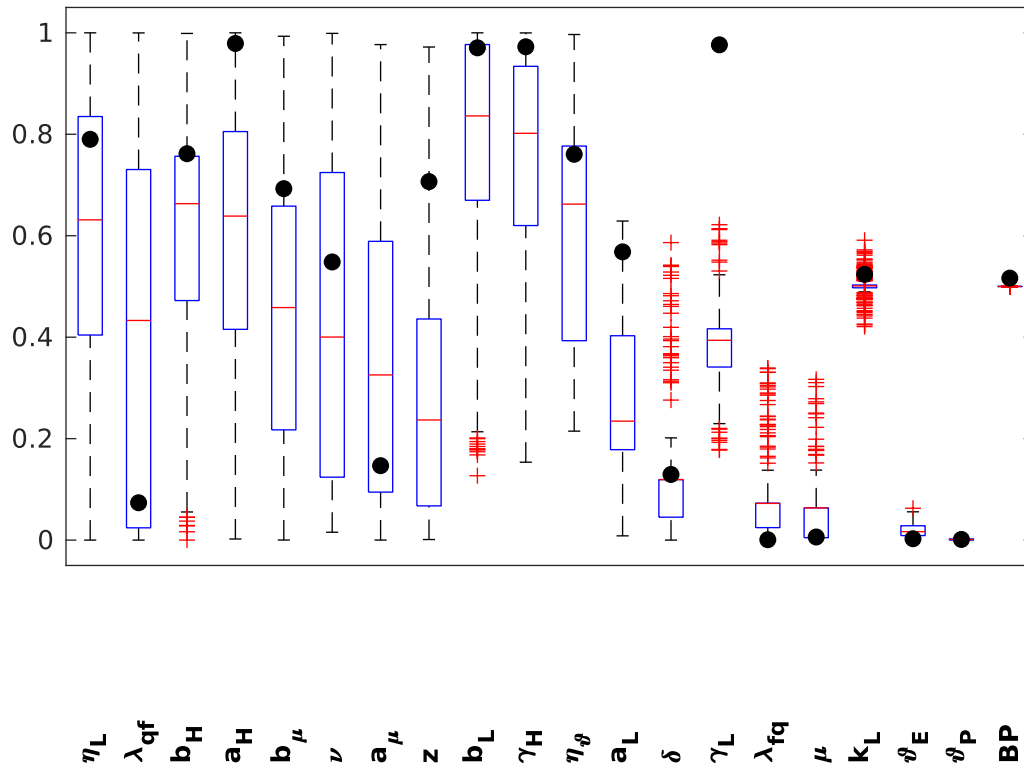
7.2. Estimated parameters with their intervals

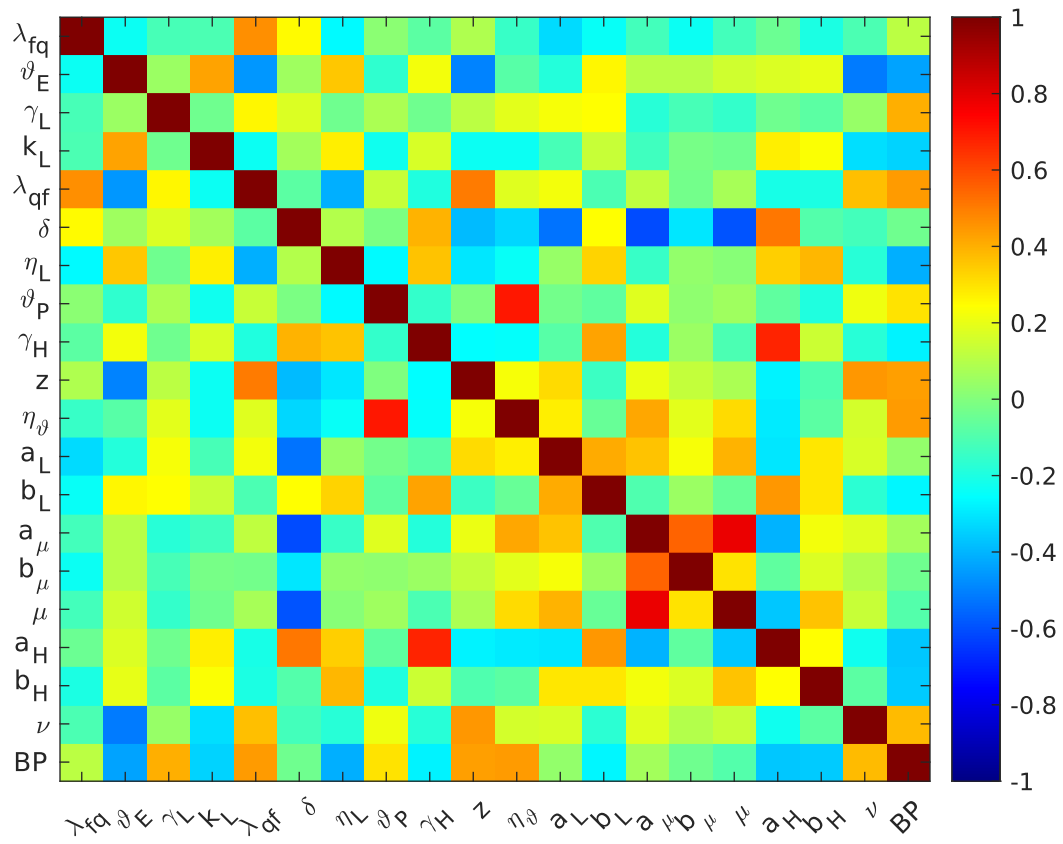
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

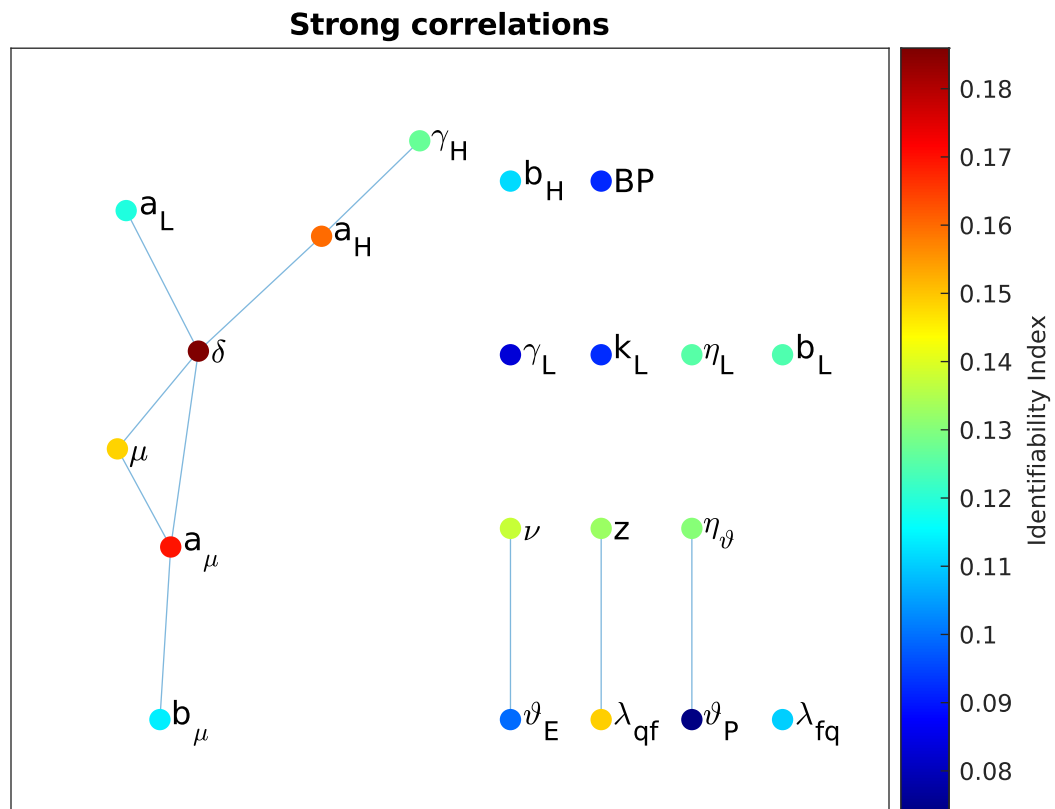
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0015'	'0.0723'	'0.0007'	'0.1103'
ϑ_E	'0.0005'	'0.0056'	'0.0167'	'0.0027'	'0.0995'
γ_L	'0.4006'	'1'	'0.3939'	'0.9763'	'0.0832'
k_L	'1.225'	'10'	'5.5102'	'5.7148'	'0.0926'
λ_{qf}	'0.0164'	'0.1498'	'0.433'	'0.0736'	'0.149'
δ	'0.0107'	'0.0325'	'0.0179'	'0.0194'	'0.1859'
η_L	'0.0975'	'1'	'0.6313'	'0.7901'	'0.1255'
ϑ_P	'0.0007'	'0.0024'	'0.0011'	'0.0013'	'0.0739'
γ_H	'0.1997'	'1'	'0.8019'	'0.9725'	'0.1272'
z	'6.7342'	'27.8673'	'7.1051'	'21.2014'	'0.1329'
η_{ϑ}	'0.7601'	'0.9151'	'0.6623'	'0.7606'	'0.1305'
a_L	'7.4639'	'11.0566'	'4.2826'	'8.9549'	'0.1192'
b_L	'8.7447'	'15'	'12.7068'	'14.5861'	'0.1243'
a_{μ}	'1'	'13.236'	'5.5587'	'3.0538'	'0.1693'
b_{μ}	'1.28'	'14.314'	'7.4175'	'10.6992'	'0.1139'
μ	'0.0002'	'0.0124'	'0.0635'	'0.0061'	'0.1486'
a_H	'4.9822'	'15'	'9.9423'	'14.7062'	'0.1598'
b_H	'3.2747'	'12.6318'	'10.2841'	'11.6638'	'0.1116'
ν	'247.3093'	'451.7264'	'200.1309'	'274.1383'	'0.1376'
BP	'293.5286'	'299.1591'	'295.5'	'296.5'	'0.092'

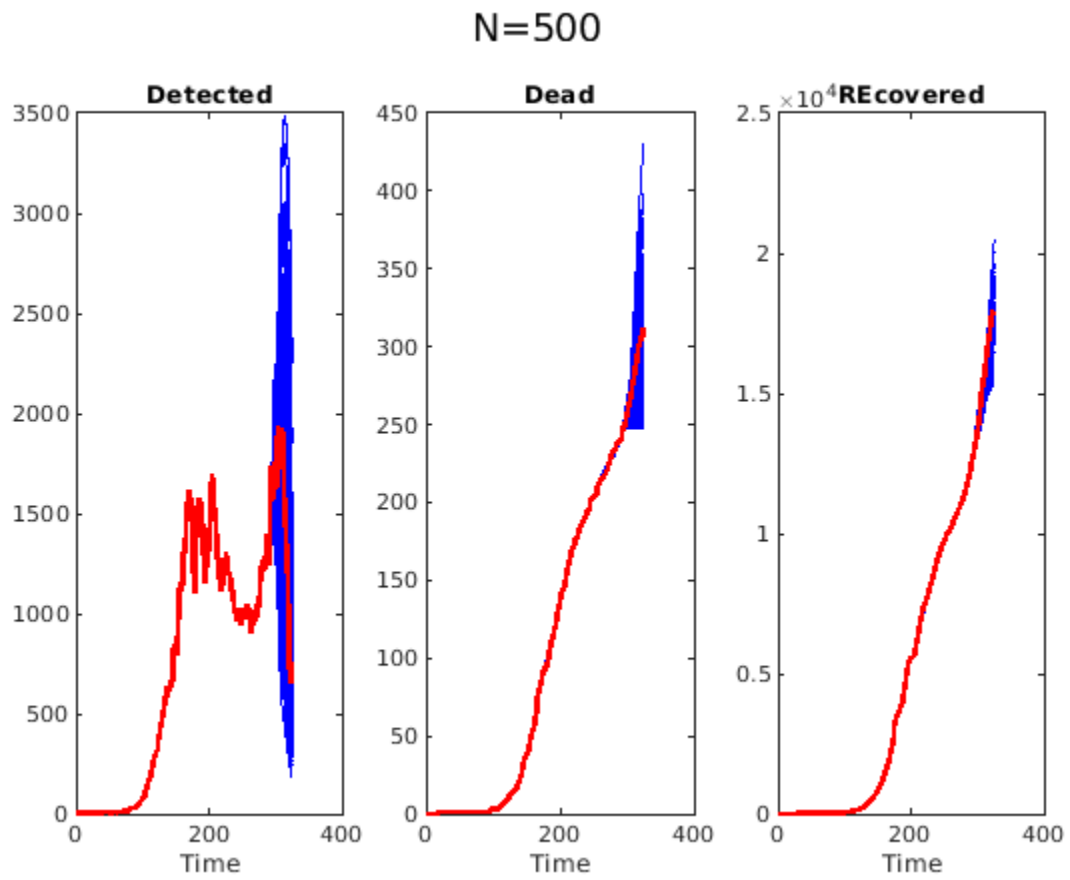
7.3. Identifiability analysis







7.4. Uncertainty analysis



Chapter 8. Extension number8

8.1. Basic information

The extension to be validated consists of the time series from the data326 to the 348. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

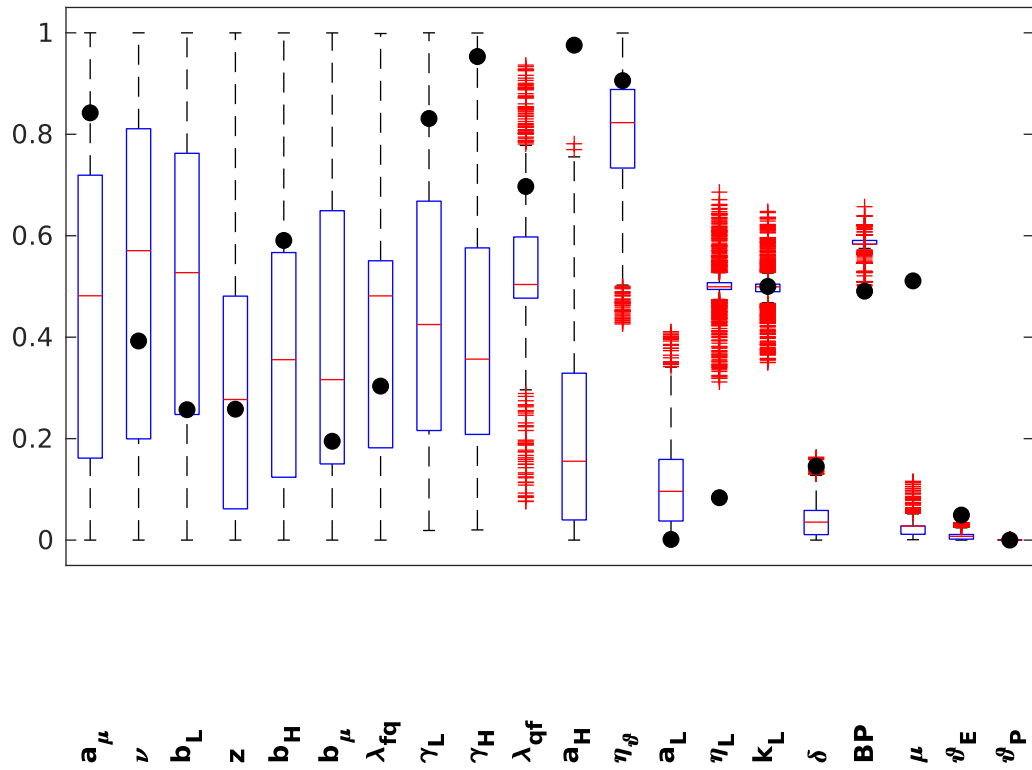
8.2. Estimated parameters with their intervals

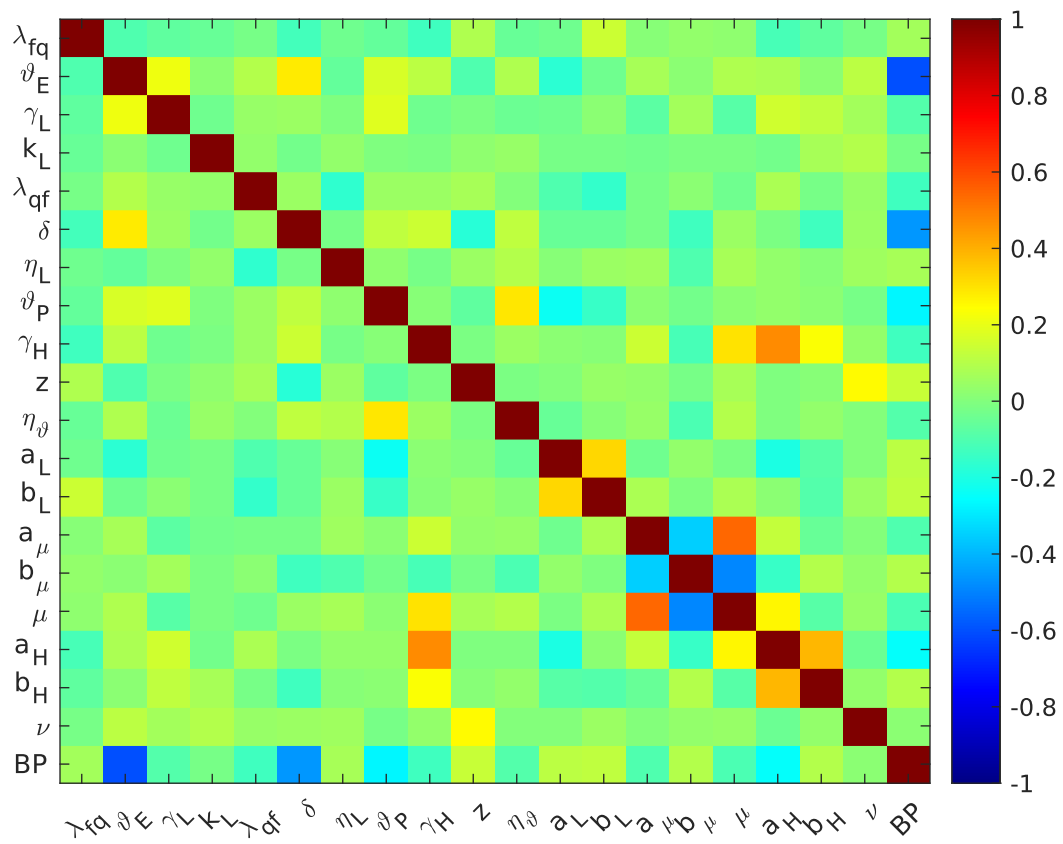
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

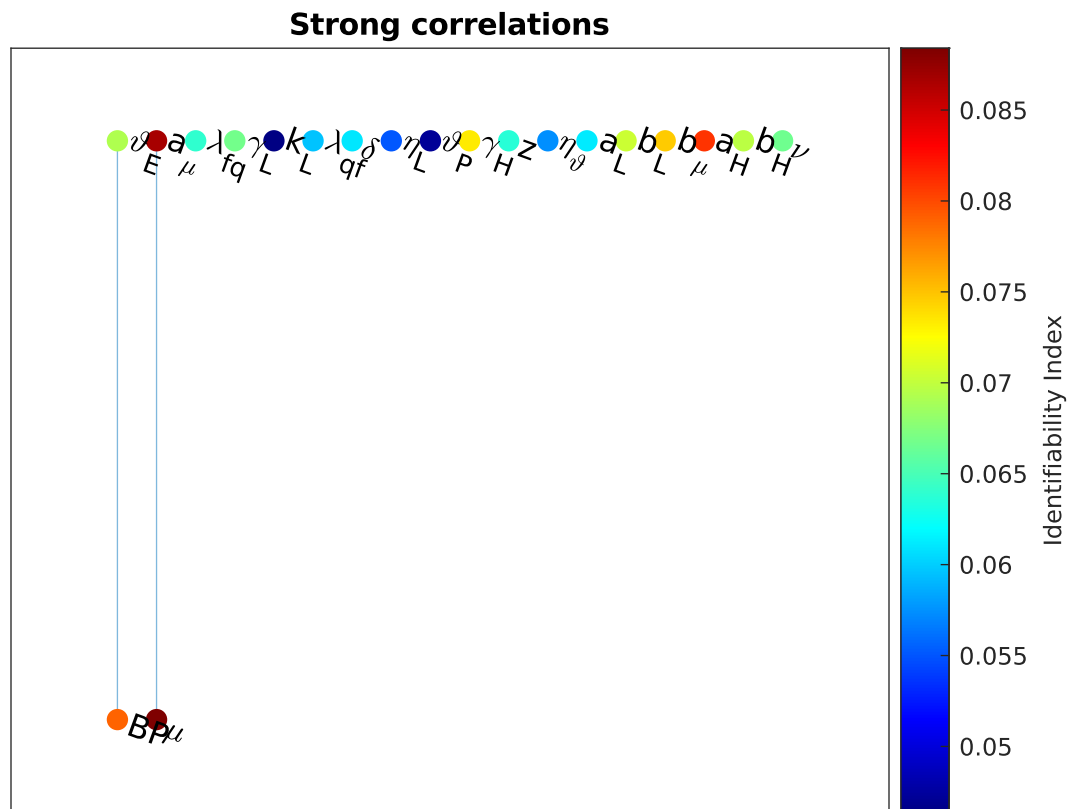
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1852'	'0.8102'	'0.4814'	'0.3036'	'0.064'
ϑ_E	'0.0314'	'0.1069'	'0.0073'	'0.0493'	'0.0694'
γ_L	'0.4341'	'1'	'0.425'	'0.8311'	'0.0668'
k_L	'1'	'10'	'5.4936'	'5.5003'	'0.0464'
λ_{qf}	'0.0589'	'0.8219'	'0.5039'	'0.6971'	'0.0595'
δ	'0.0218'	'0.0384'	'0.0053'	'0.0219'	'0.0611'
η_L	'0'	'0.1625'	'0.4993'	'0.0836'	'0.0551'
ϑ_P	'0'	'0'	'0.0002'	'0'	'0.0473'
γ_H	'0.312'	'0.9725'	'0.3568'	'0.9533'	'0.0734'
z	'0'	'16.0546'	'8.3142'	'7.7424'	'0.0637'
η_{ϑ}	'0.5213'	'1'	'0.8229'	'0.9057'	'0.0575'
a_L	'1.0115'	'1.5727'	'2.3458'	'1.0181'	'0.0612'
b_L	'2.595'	'7.3932'	'8.3811'	'4.599'	'0.0704'
a_{μ}	'9.4451'	'15'	'7.7428'	'12.7911'	'0.0867'
b_{μ}	'1.2728'	'3.7867'	'5.4287'	'3.7277'	'0.0747'
μ	'0.0156'	'0.7471'	'0.0278'	'0.511'	'0.0884'
a_H	'10.5597'	'14.7726'	'3.1764'	'14.6587'	'0.081'
b_H	'6.2275'	'10.9615'	'5.9793'	'9.2694'	'0.0698'
ν	'195.1473'	'441.9972'	'285.2852'	'196.2454'	'0.0666'
BP	'318.6218'	'320.5863'	'325.5'	'320.4999'	'0.079'

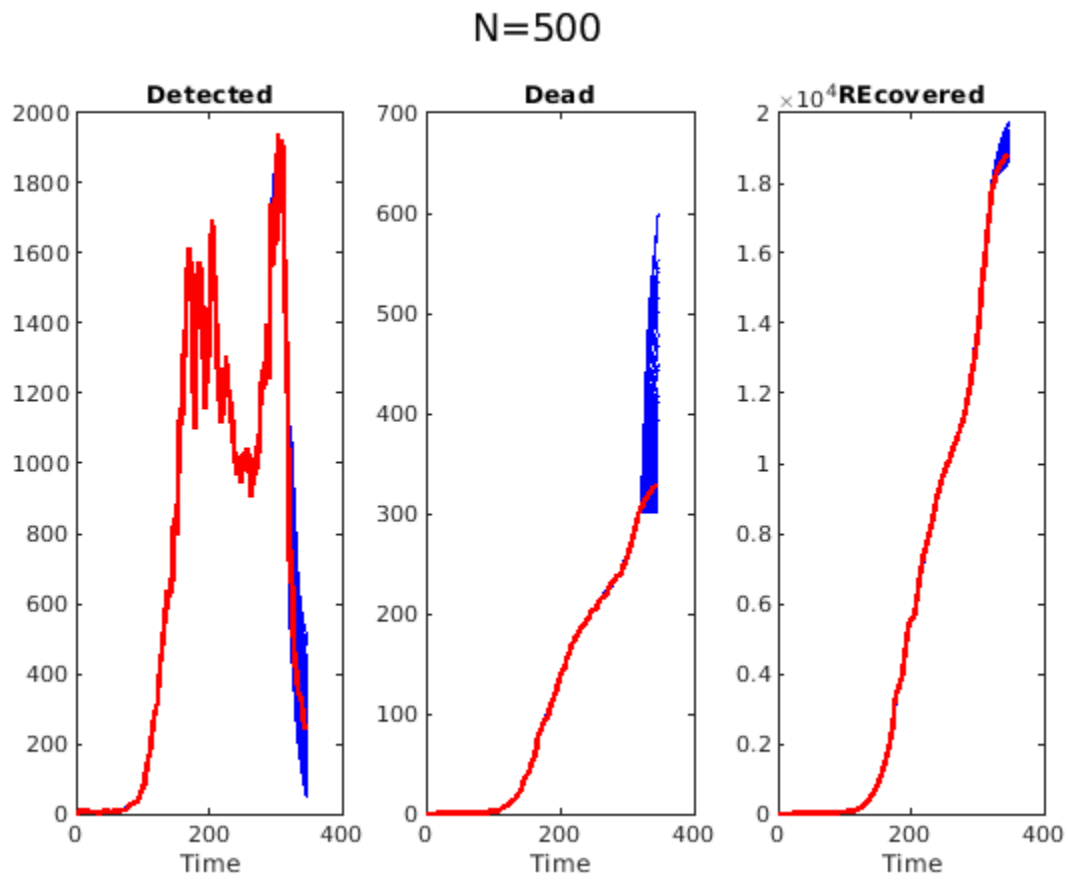
8.3. Identifiability analysys







8.4. Uncertainty analysis



Chapter 9. Extension number9

9.1. Basic information

The extension to be validated consists of the time series from the data348 to the 431. The status of the validation is: COMPLETED.

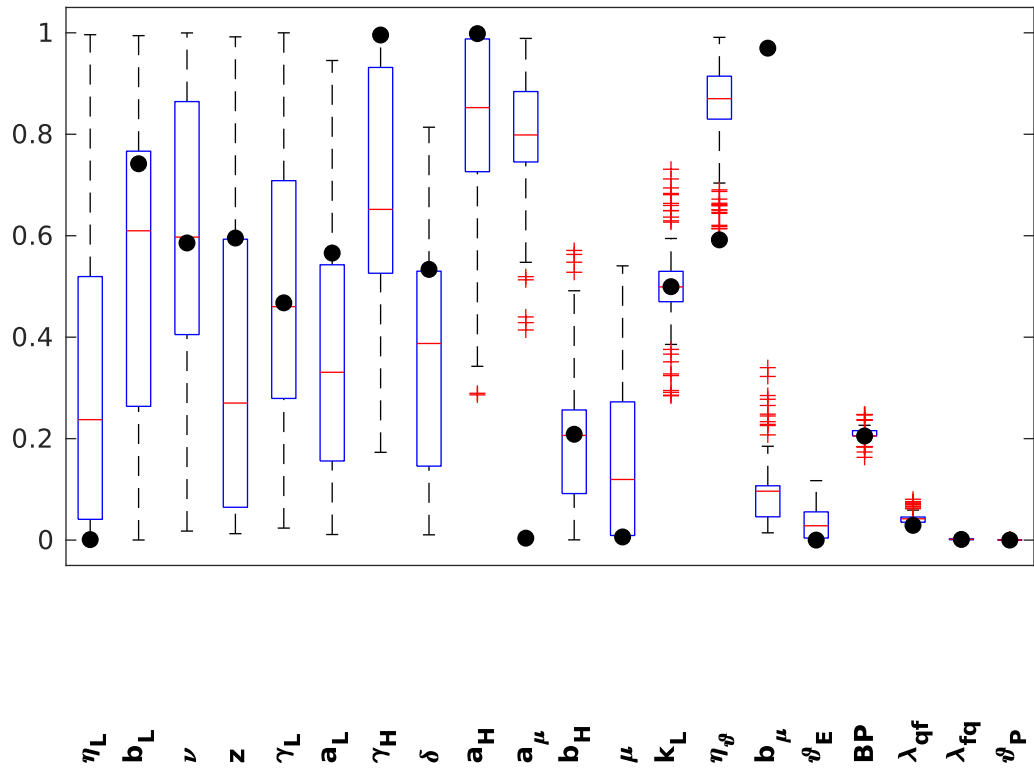
The number of estimations needed to perform the validation was1000.

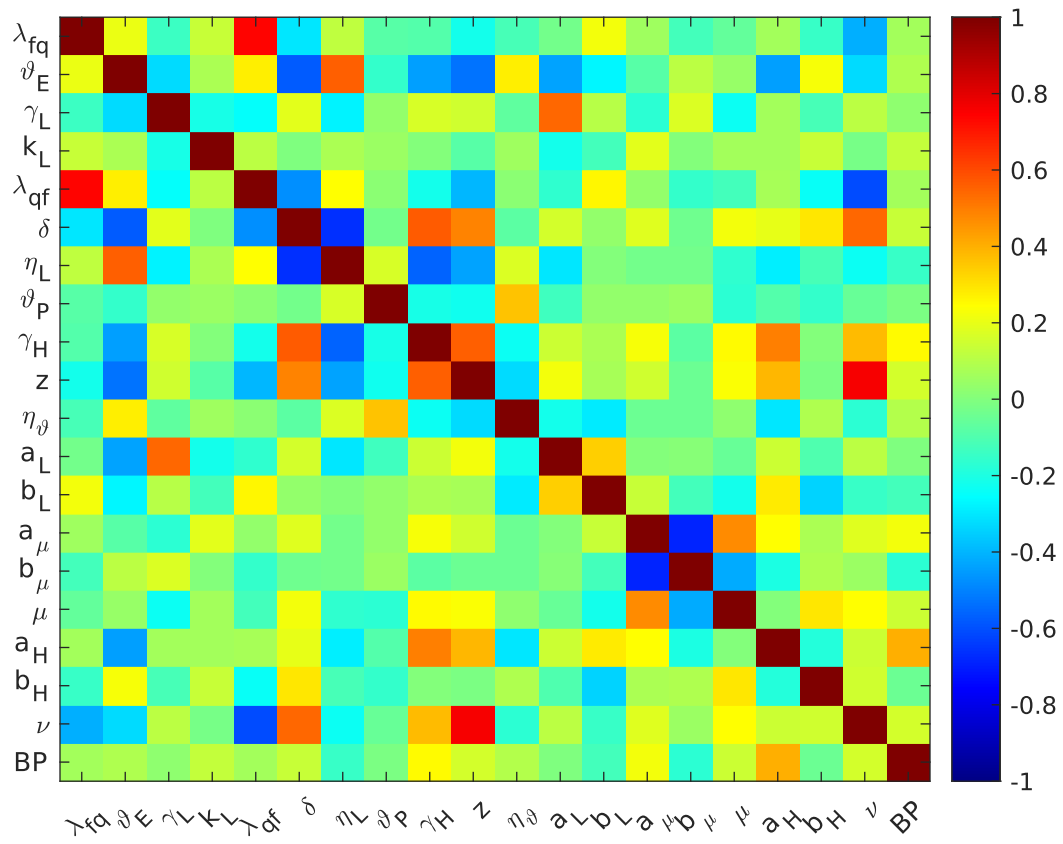
9.2. Estimated parameters with their intervals

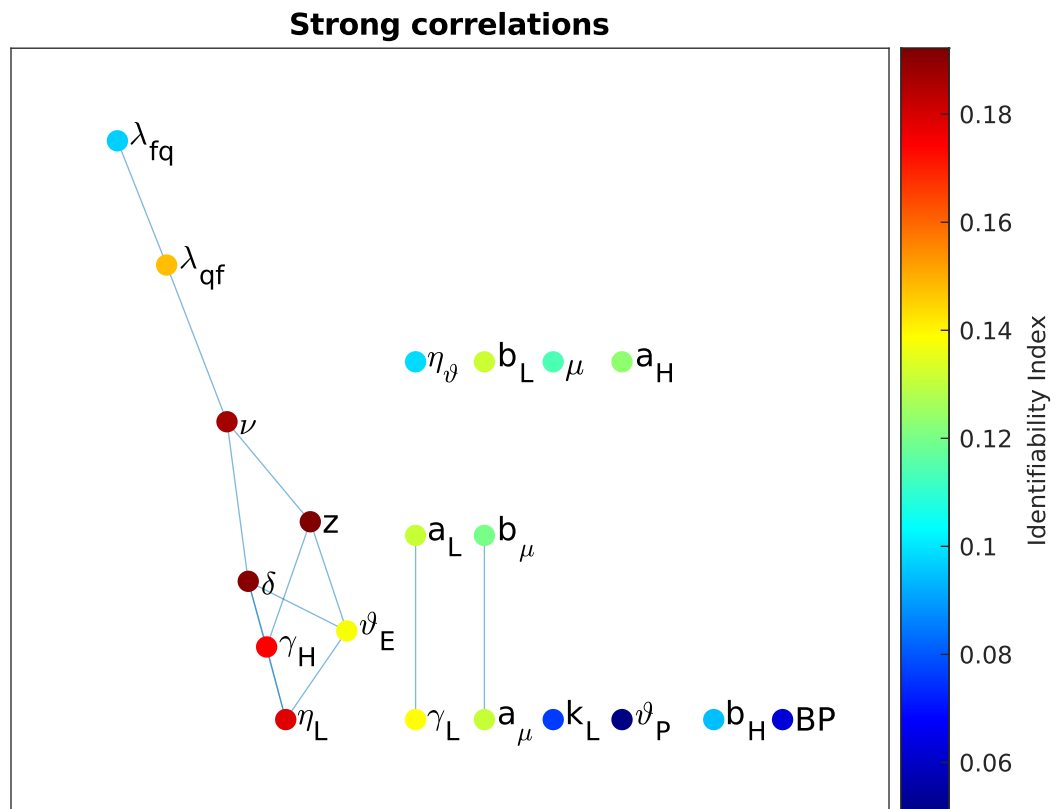
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.036'	'0.0016'	'0.0013'	'0.0968'
ϑ_E	'0.0208'	'0.0356'	'0.0282'	'0'	'0.1381'
γ_L	'0.4007'	'0.5198'	'0.4602'	'0.4677'	'0.1389'
k_L	'5.2269'	'5.7569'	'5.4919'	'5.4957'	'0.0766'
λ_{qf}	'0.0003'	'0.0837'	'0.042'	'0.0291'	'0.1475'
δ	'0.0504'	'0.0658'	'0.0581'	'0.08'	'0.1908'
η_L	'0.1785'	'0.2964'	'0.2374'	'0.001'	'0.1785'
ϑ_P	'0'	'0.0004'	'0.0002'	'0'	'0.0508'
γ_H	'0.6021'	'0.7017'	'0.6519'	'0.9957'	'0.1742'
z	'6.2539'	'9.956'	'8.1049'	'17.8636'	'0.1922'
η_{ϑ}	'0.8335'	'0.9067'	'0.8701'	'0.5918'	'0.0988'
a_L	'4.8997'	'6.3631'	'5.6314'	'8.9218'	'0.1311'
b_L	'8.6033'	'10.4693'	'9.5363'	'11.386'	'0.1318'
a_{μ}	'11.4321'	'12.9301'	'12.1811'	'1.0538'	'0.1313'
b_{μ}	'1.6417'	'3.0587'	'2.3502'	'14.5765'	'0.1202'
μ	'0.0733'	'0.1657'	'0.1195'	'0.0062'	'0.1142'
a_H	'12.2685'	'13.6027'	'12.9356'	'14.9773'	'0.1236'
b_H	'3.4033'	'4.3738'	'3.8886'	'3.9211'	'0.0948'
ν	'266.3737'	'330.8797'	'298.6267'	'292.8653'	'0.1868'
BP	'344.8061'	'346.1939'	'345.5'	'345.4983'	'0.0629'

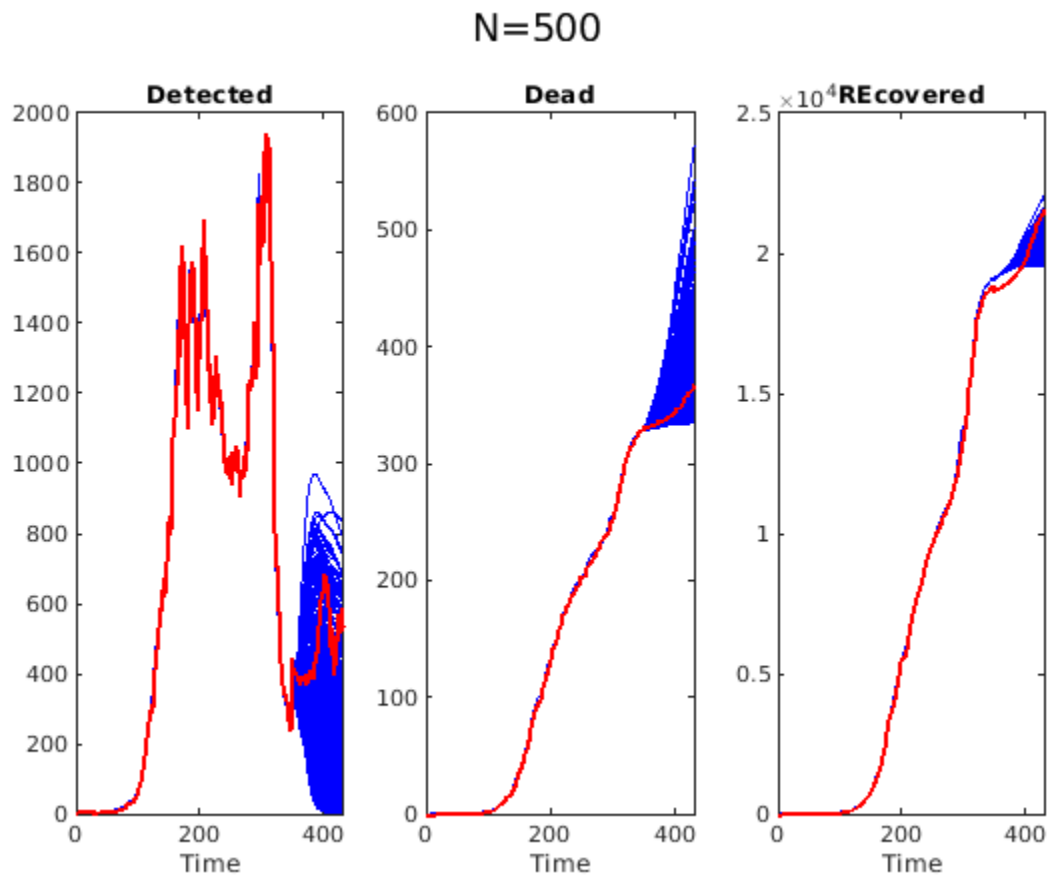
9.3. Identifiability analysis







9.4. Uncertainty analysis



Chapter 10. Extension number10

10.1. Basic information

The extension to be validated consists of the time series from the data431 to the 452. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

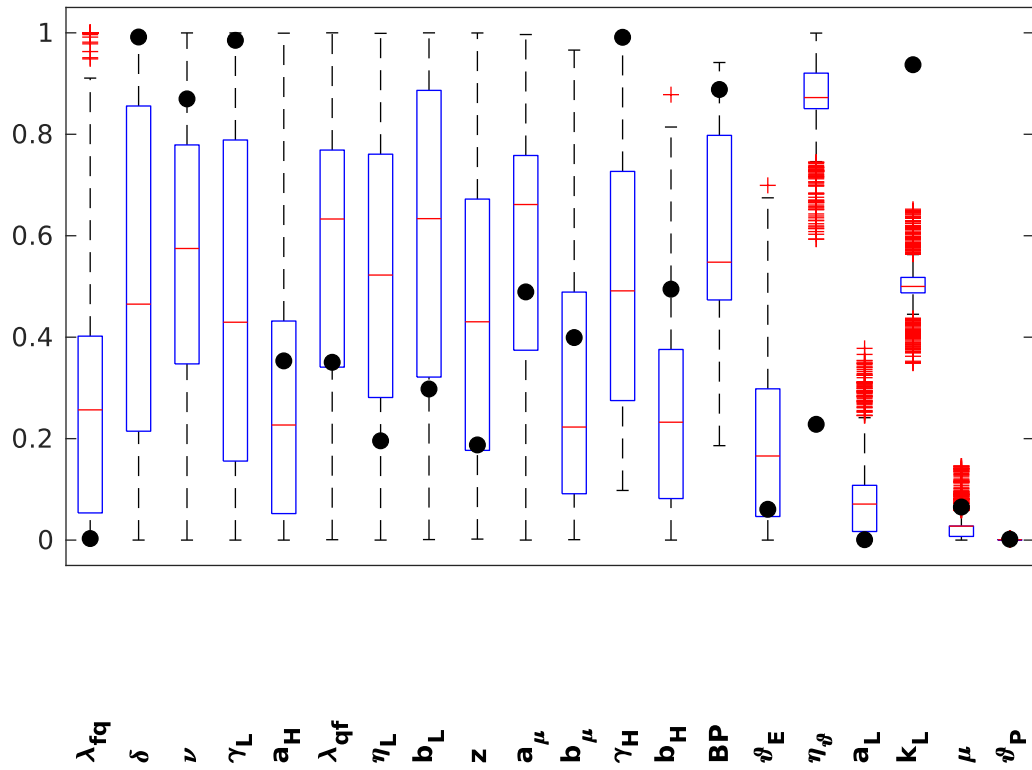
10.2. Estimated parameters with their intervals

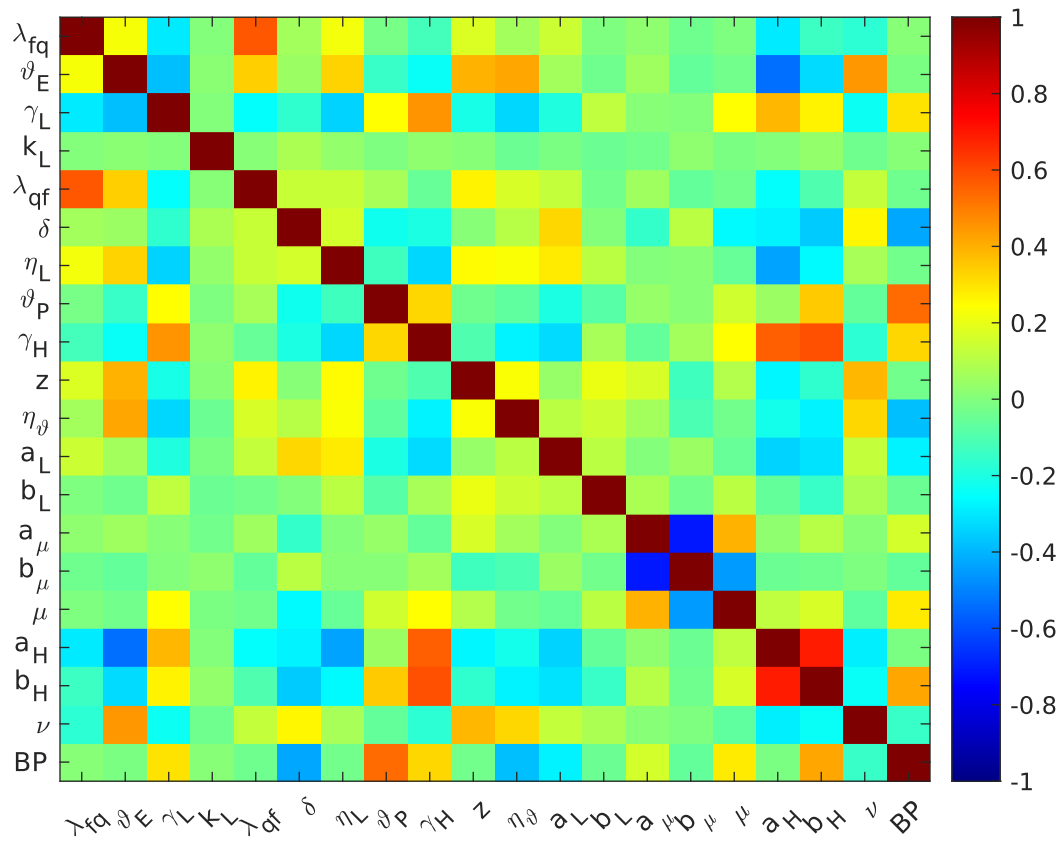
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

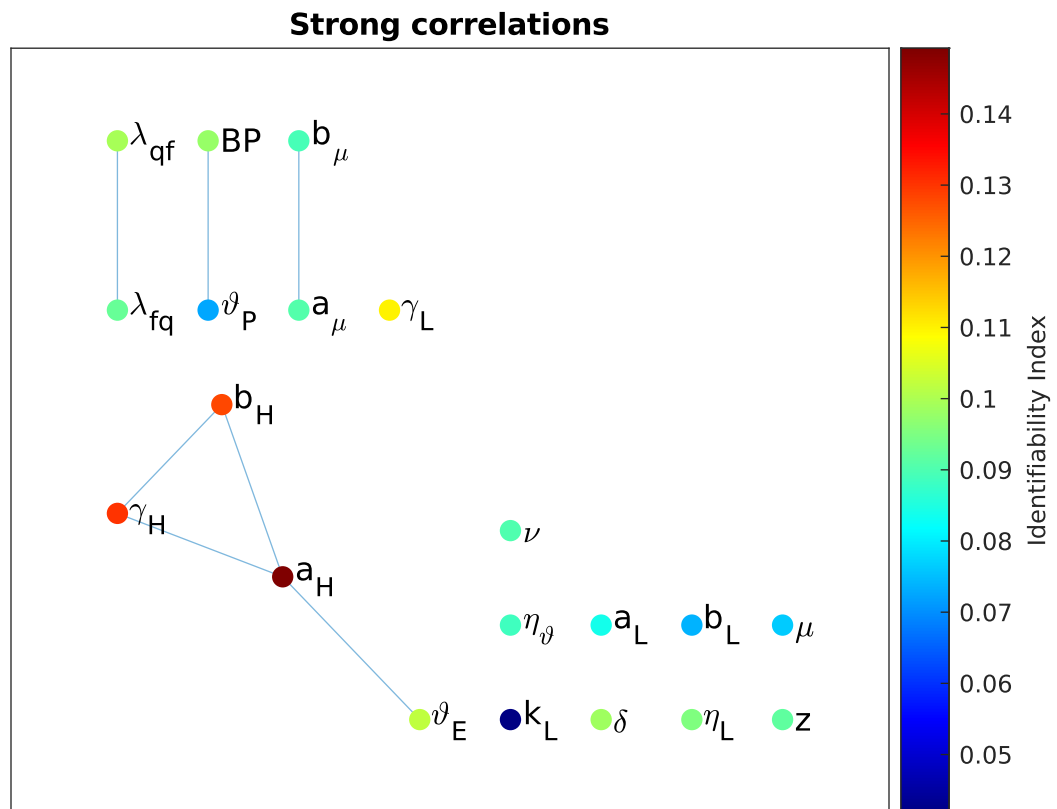
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0065'	'0.2567'	'0.0031'	'0.0927'
ϑ_E	'0.0025'	'0.1247'	'0.1658'	'0.0608'	'0.1022'
γ_L	'0.7501'	'1'	'0.4295'	'0.9852'	'0.1102'
k_L	'1.45'	'10'	'5.5004'	'9.4342'	'0.0419'
λ_{qf}	'0.0622'	'0.7098'	'0.633'	'0.3505'	'0.0997'
δ	'0.072'	'0.15'	'0.0698'	'0.1488'	'0.0985'
η_L	'0.0176'	'0.3964'	'0.5225'	'0.1957'	'0.0952'
ϑ_P	'0.0016'	'0.0405'	'0.0006'	'0.0018'	'0.0727'
γ_H	'0.2083'	'1'	'0.4913'	'0.9912'	'0.1303'
z	'3.9965'	'6.2714'	'12.9107'	'5.6288'	'0.092'
η_{ϑ}	'0.1483'	'0.4484'	'0.8724'	'0.2283'	'0.0888'
a_L	'1.0113'	'1.5626'	'1.9944'	'1.0116'	'0.084'
b_L	'1.4588'	'5.1838'	'9.8718'	'5.1707'	'0.0741'
a_{μ}	'6.639'	'15'	'10.2615'	'7.8499'	'0.0909'
b_{μ}	'1'	'12.97'	'4.1204'	'6.5897'	'0.0897'
μ	'0'	'0.0997'	'0.0277'	'0.0652'	'0.0764'
a_H	'4.7107'	'10.6883'	'4.1764'	'5.946'	'0.1492'
b_H	'4.2304'	'13.8629'	'4.2537'	'7.926'	'0.128'
ν	'330.781'	'467.1535'	'287.4261'	'434.8875'	'0.0905'
BP	'426.4903'	'433.2271'	'399.5'	'431.5'	'0.0977'

10.3. Identifiability analysis

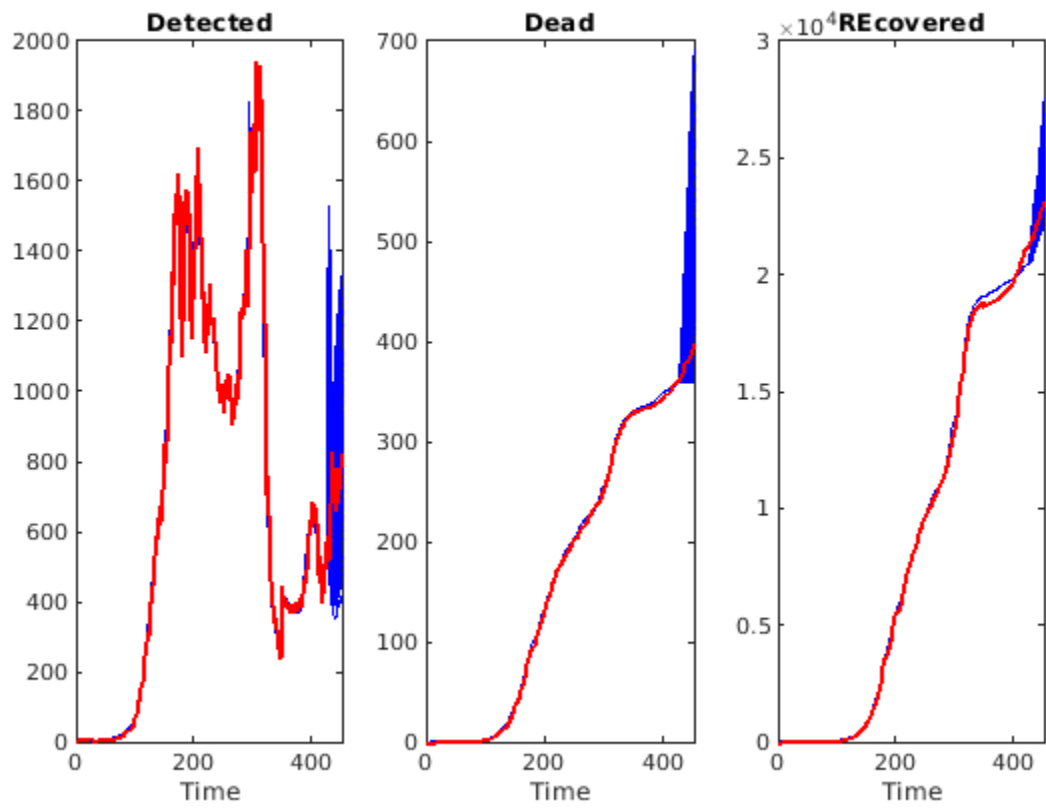






10.4. Uncertainty analysys

N=500



Chapter 11. Extension number11

11.1. Basic information

The extension to be validated consists of the time series from the data452 to the 473. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

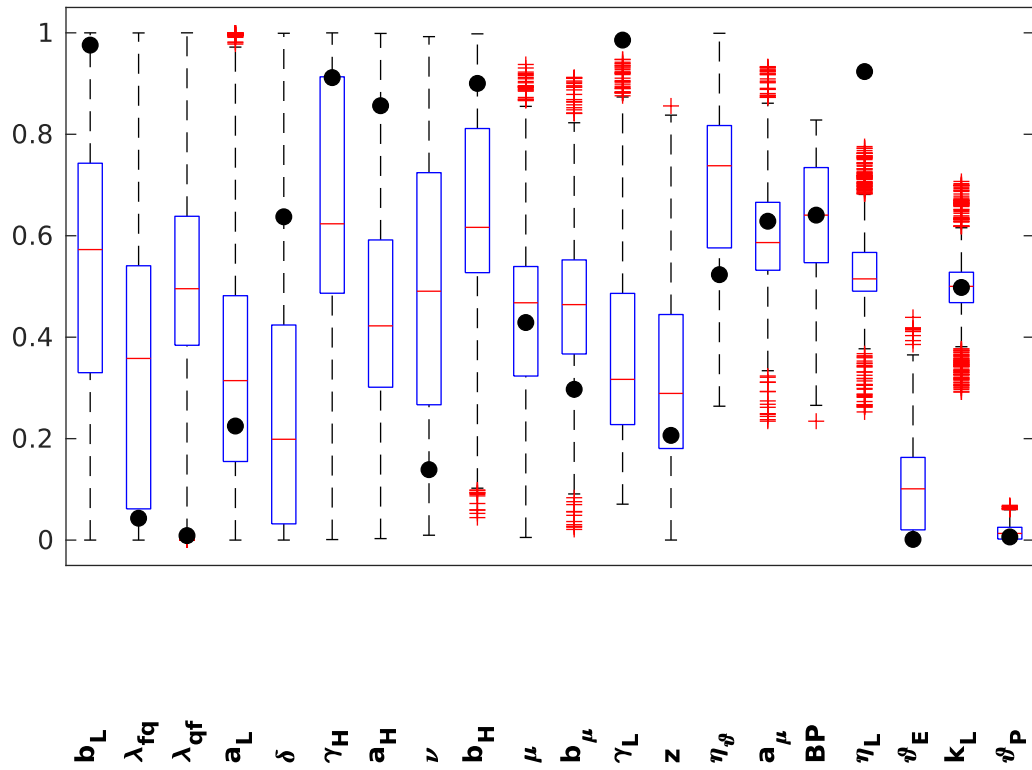
11.2. Estimated parameters with their intervals

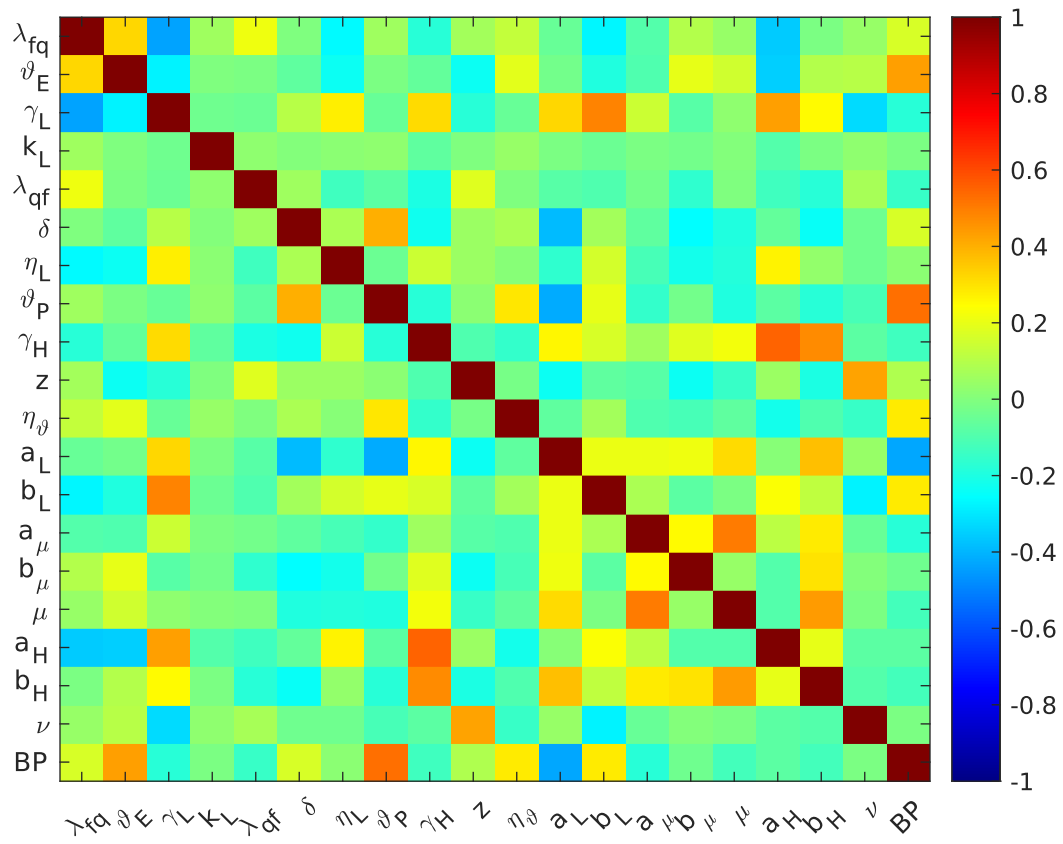
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

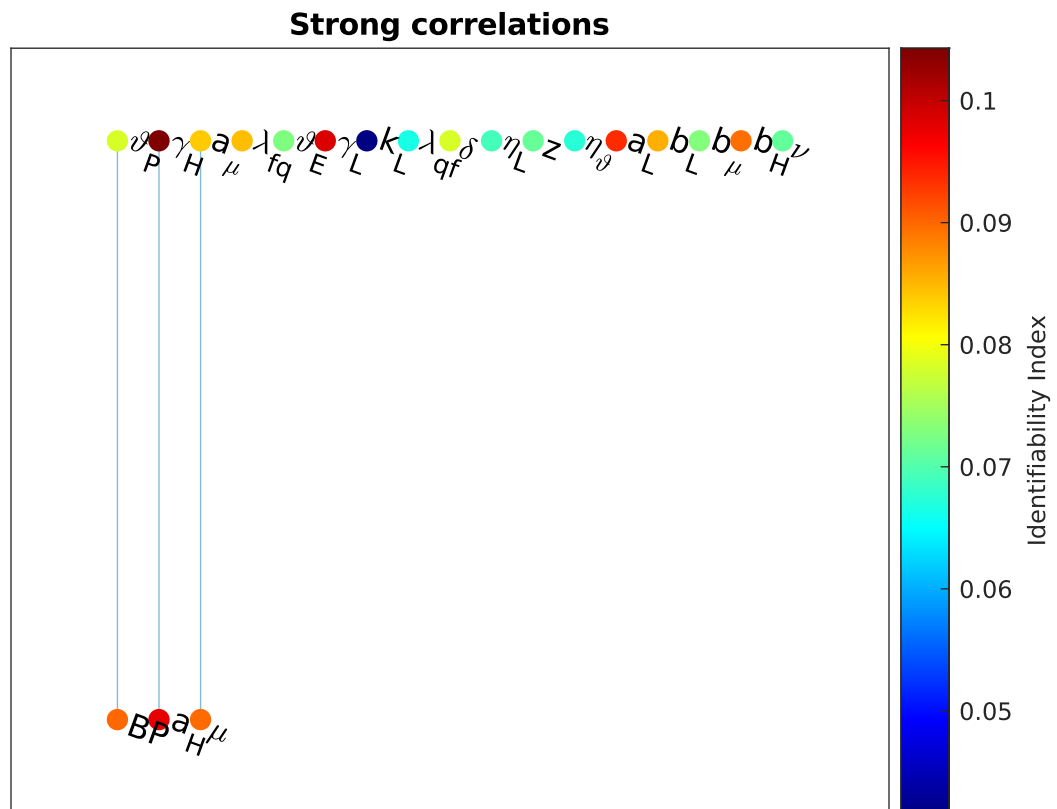
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0393'	'0.0773'	'0.3581'	'0.0431'	'0.0847'
ϑ_E	'0.0001'	'0.0029'	'0.1011'	'0.0014'	'0.0729'
γ_L	'0.385'	'1'	'0.3168'	'0.9857'	'0.0985'
k_L	'1.5293'	'10'	'5.5019'	'5.4822'	'0.0417'
λ_{qf}	'0.0004'	'0.0199'	'0.4956'	'0.0089'	'0.0665'
δ	'0.0925'	'0.1445'	'0.0298'	'0.0956'	'0.0781'
η_L	'0.0917'	'1'	'0.5149'	'0.9236'	'0.0693'
ϑ_P	'0.0012'	'0.011'	'0.0131'	'0.0062'	'0.0782'
γ_H	'0.148'	'0.9161'	'0.6235'	'0.9117'	'0.1043'
z	'5.4194'	'10.6418'	'8.6745'	'6.1929'	'0.0714'
η_{ϑ}	'0.4759'	'0.8917'	'0.738'	'0.5233'	'0.0676'
a_L	'1.1041'	'4.7679'	'5.4015'	'4.1482'	'0.0936'
b_L	'7.6648'	'15'	'9.0181'	'14.6612'	'0.0856'
a_{μ}	'9.3091'	'15'	'9.2115'	'9.8004'	'0.0839'
b_{μ}	'1'	'5.22'	'7.499'	'5.1613'	'0.0731'
μ	'0.0165'	'0.7927'	'0.4678'	'0.4289'	'0.0897'
a_H	'9.3539'	'15'	'6.9126'	'12.989'	'0.0979'
b_H	'5.7538'	'13.7449'	'9.6312'	'13.6041'	'0.0896'
ν	'57.7766'	'119.9225'	'245.3166'	'69.4376'	'0.0712'
BP	'450.0369'	'454.4091'	'451.4998'	'451.5'	'0.0899'

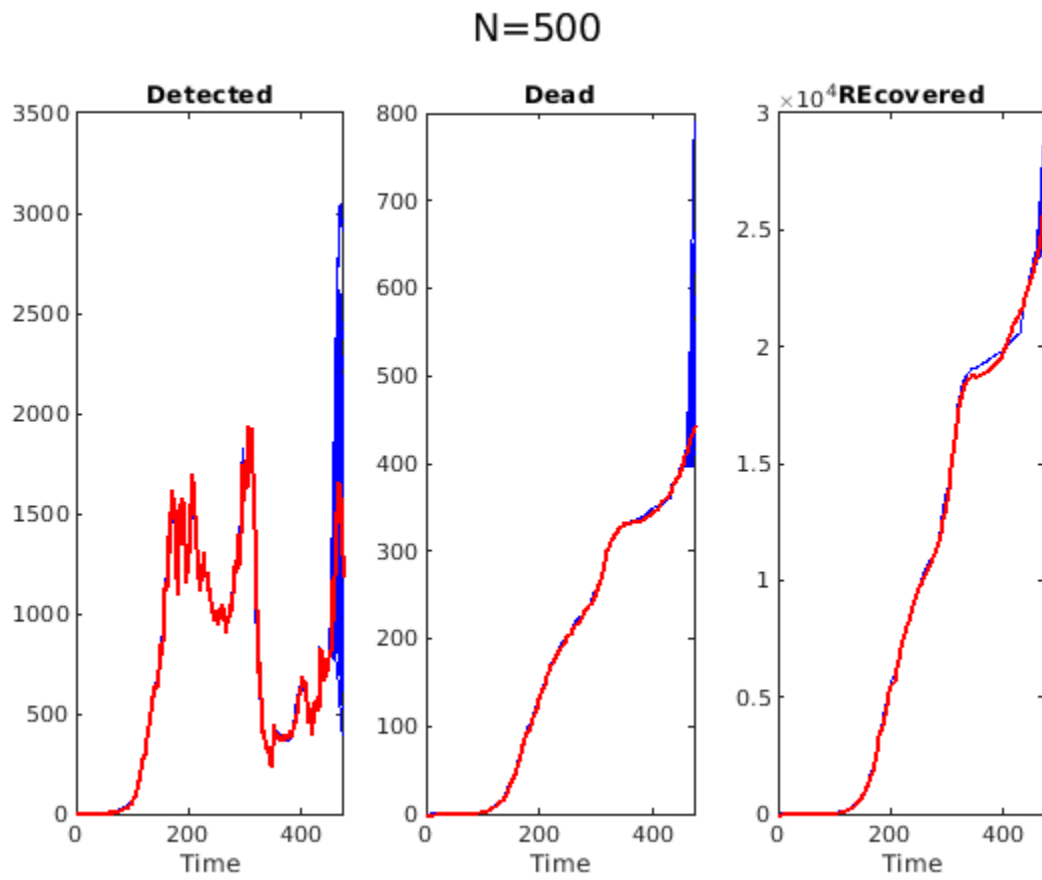
11.3. Identifiability analysis







11.4. Uncertainty analysys



Chapter 12. Extension number12

12.1. Basic information

The extension to be validated consists of the time series from the data473 to the 495. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

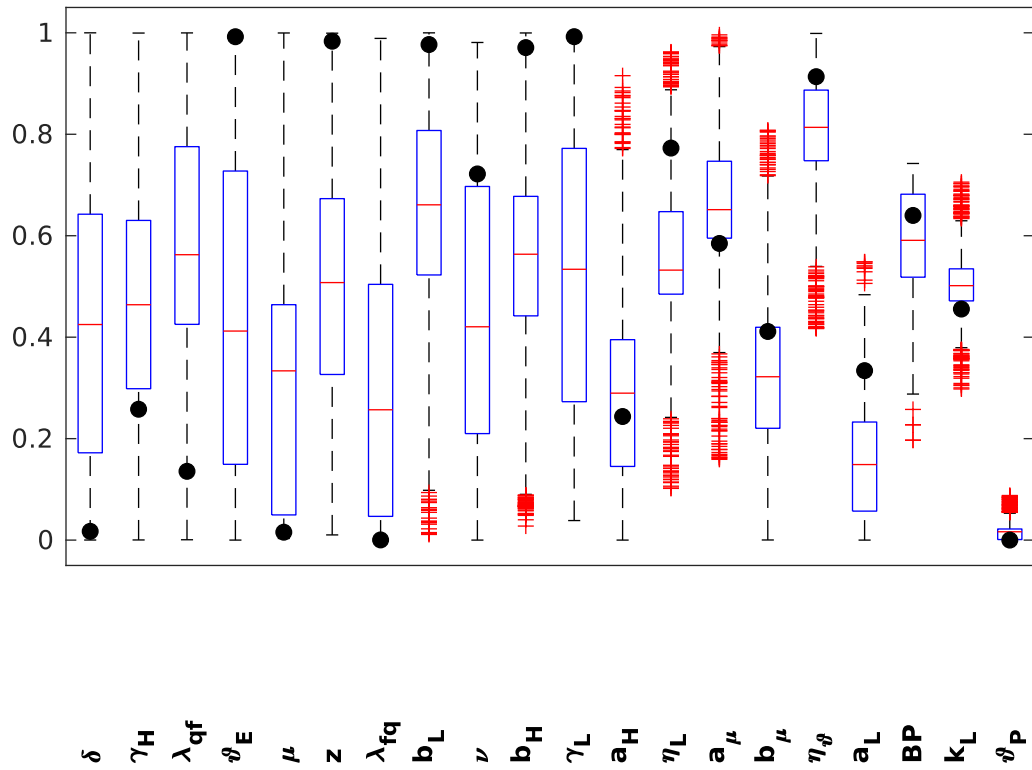
12.2. Estimated parameters with their intervals

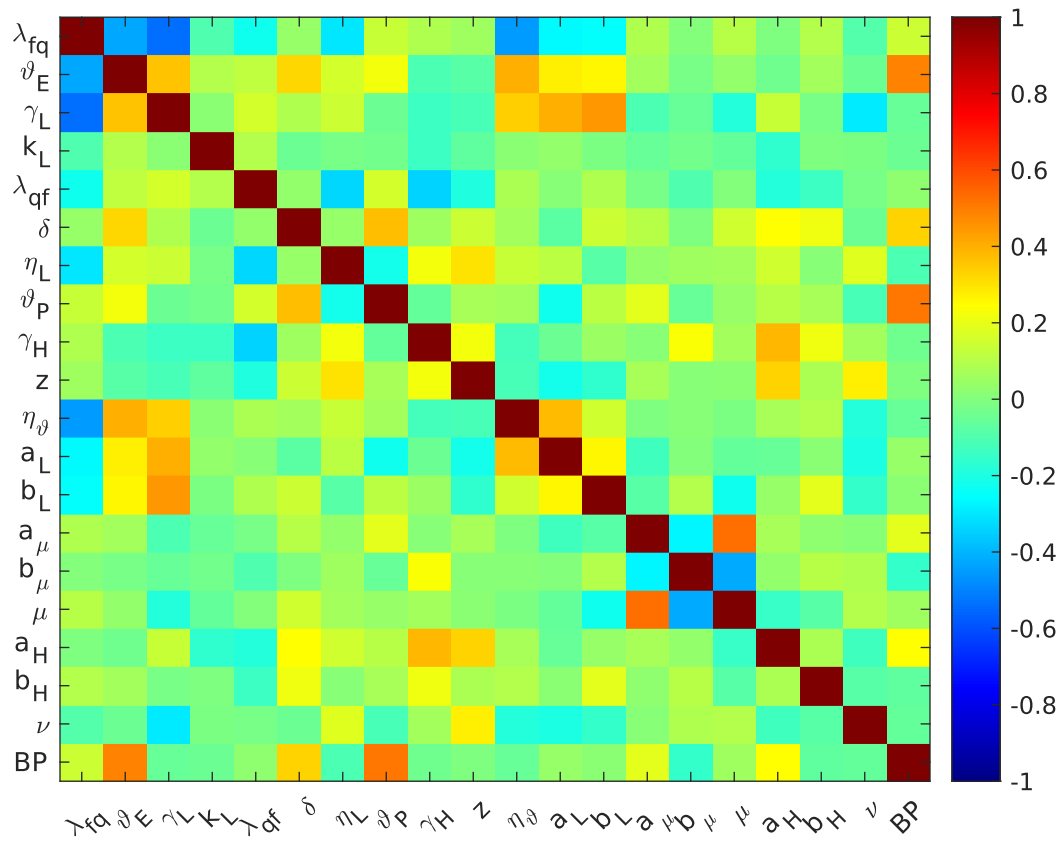
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

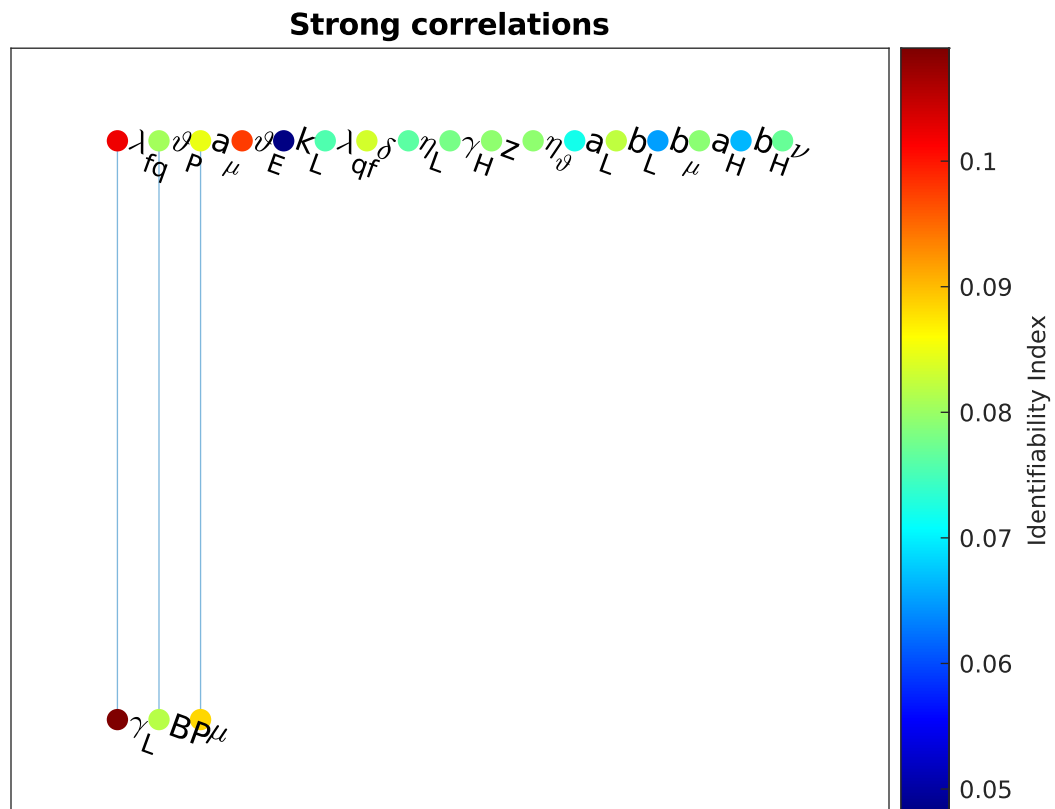
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0008'	'0.2569'	'0.0003'	'0.1022'
ϑ_E	'0.9252'	'1'	'0.4121'	'0.9923'	'0.0978'
γ_L	'0.4689'	'1'	'0.5339'	'0.9924'	'0.109'
k_L	'1'	'10'	'5.514'	'5.0991'	'0.0482'
λ_{qf}	'0'	'0.166'	'0.5626'	'0.1356'	'0.0757'
δ	'0'	'0.0058'	'0.0637'	'0.0026'	'0.0836'
η_L	'0'	'1'	'0.5322'	'0.7728'	'0.0764'
ϑ_P	'0'	'0.0001'	'0.0164'	'0.0001'	'0.0807'
γ_H	'0'	'0.5572'	'0.464'	'0.2579'	'0.0781'
z	'0.6'	'30'	'15.2288'	'29.5024'	'0.0793'
η_{ϑ}	'0.3142'	'1'	'0.8136'	'0.9135'	'0.0794'
a_L	'4.9237'	'7.9292'	'3.0847'	'5.6768'	'0.0721'
b_L	'8.7324'	'15'	'10.2529'	'14.6763'	'0.0823'
a_{μ}	'1'	'15'	'10.1195'	'9.1866'	'0.0848'
b_{μ}	'1'	'15'	'5.5083'	'6.7576'	'0.0653'
μ	'0'	'0.035'	'0.3336'	'0.0156'	'0.0883'
a_H	'1'	'15'	'5.0552'	'4.4107'	'0.0792'
b_H	'1'	'15'	'8.8893'	'14.5915'	'0.0665'
ν	'275.6979'	'500'	'210.2568'	'360.8935'	'0.077'
BP	'473.0005'	'475.4912'	'471.5'	'473.1198'	'0.0817'

12.3. Identifiability analysis

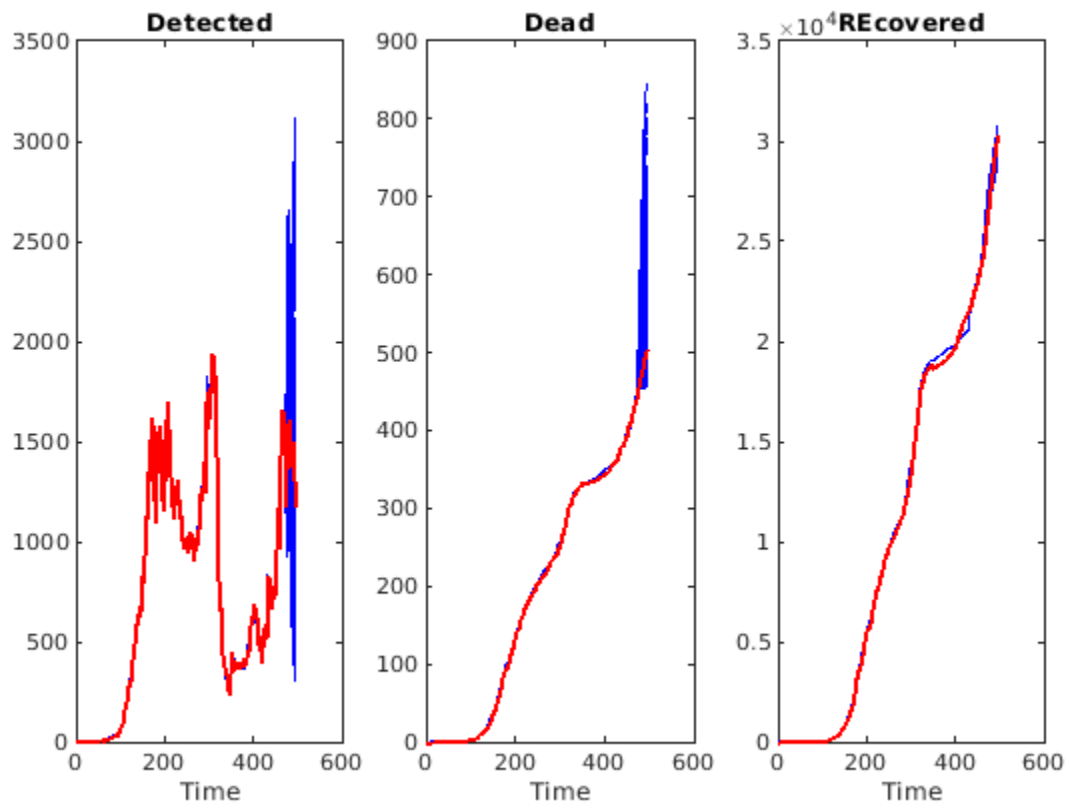






12.4. Uncertainty analysis

N=500



Chapter 13. Extension number13

13.1. Basic information

The extension to be validated consists of the time series from the data495 to the 553. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

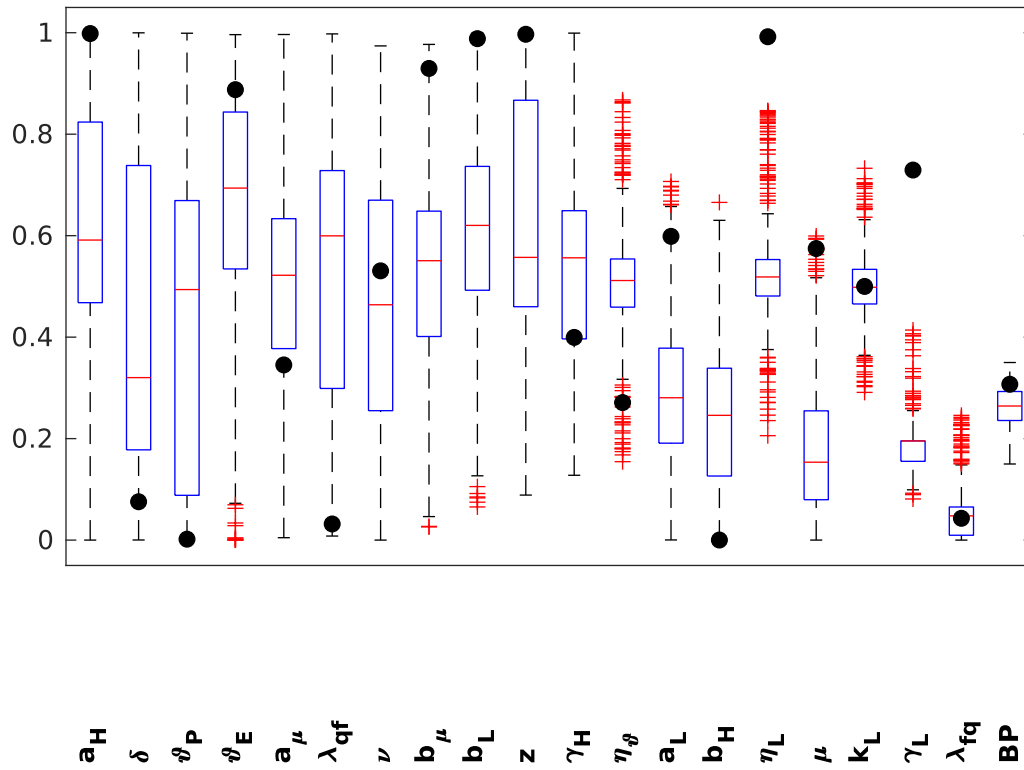
13.2. Estimated parameters with their intervals

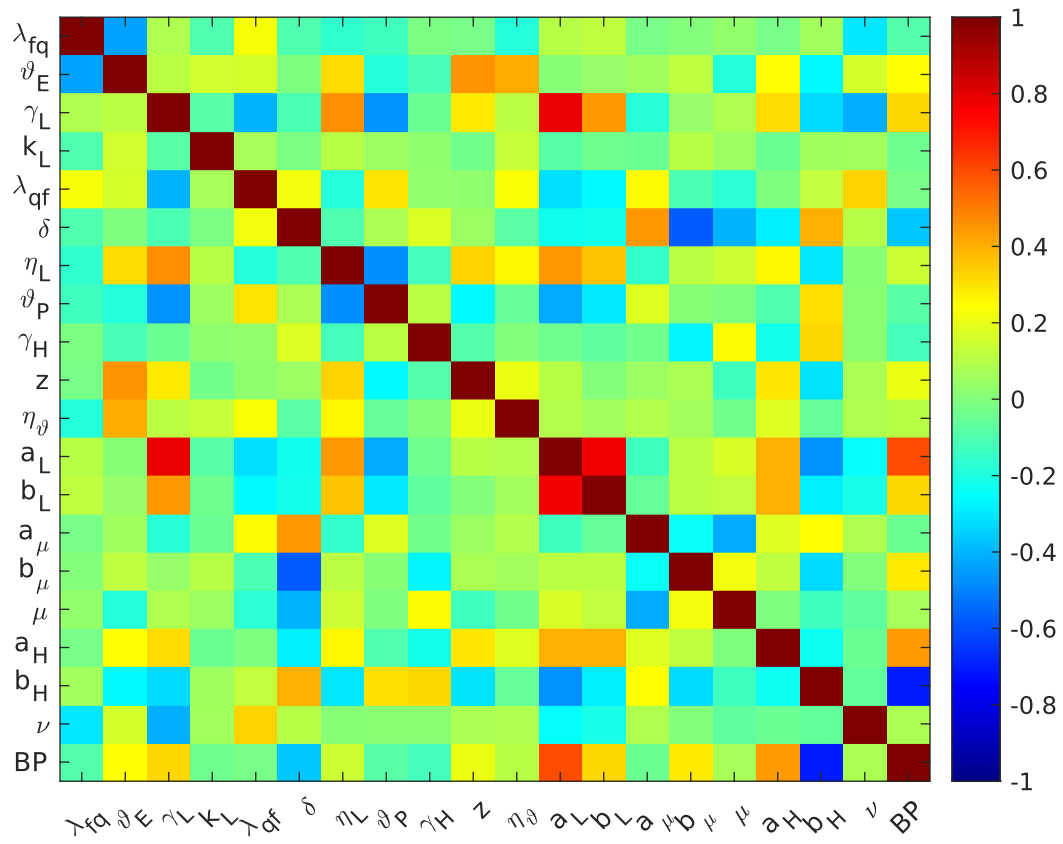
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

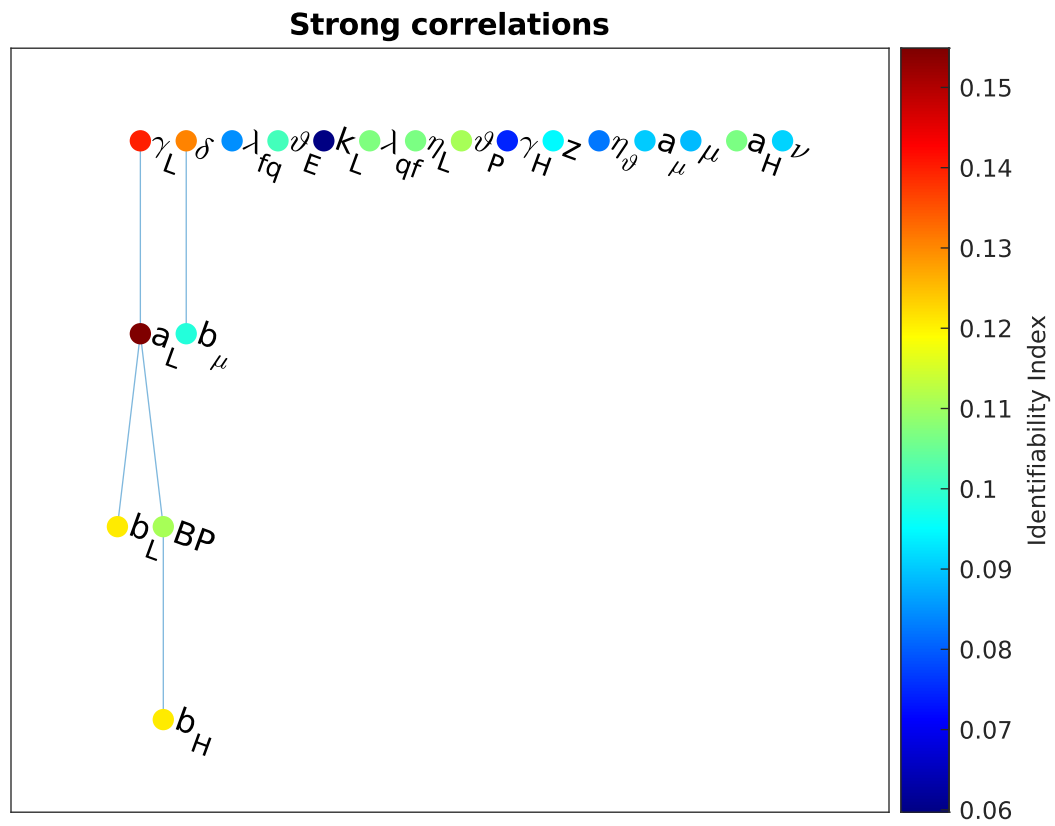
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.0321'	'0.0604'	'0.0481'	'0.0429'	'0.0847'
\vartheta_E	'0.7162'	'0.9039'	'0.6938'	'0.8878'	'0.1015'
\gamma_L	'0.1791'	'0.9036'	'0.1955'	'0.7293'	'0.1398'
k_L	'1.3421'	'9.64'	'5.485'	'5.4994'	'0.0597'
\lambda_{qf}	'0.0107'	'0.0715'	'0.5996'	'0.0318'	'0.1072'
\delta	'0'	'0.0223'	'0.048'	'0.0113'	'0.1307'
\eta_L	'0.1951'	'1'	'0.5186'	'0.9921'	'0.1069'
\vartheta_P	'0.0001'	'0.0041'	'0.4938'	'0.0018'	'0.1108'
\gamma_H	'0.04'	'0.8989'	'0.5563'	'0.3995'	'0.0748'
z	'13.2518'	'30'	'16.7157'	'29.9074'	'0.0947'
\eta_{\vartheta}	'0.0411'	'0.5592'	'0.5116'	'0.271'	'0.0825'
a_L	'7.8246'	'12.2322'	'4.9308'	'9.3812'	'0.1549'
b_L	'9.5554'	'15'	'9.6761'	'14.8355'	'0.1208'
a_{\mu}	'1'	'14.3'	'8.3075'	'5.8333'	'0.0905'
b_{\mu}	'3.504'	'15'	'8.7071'	'14.0144'	'0.0984'
\mu	'0.02'	'1'	'0.1536'	'0.5746'	'0.0888'
a_H	'1'	'15'	'9.279'	'14.977'	'0.1068'
b_H	'1'	'13.635'	'4.4423'	'1.002'	'0.1209'
\nu	'226.061'	'462.21'	'231.898'	'265.3418'	'0.0911'
BP	'494.4956'	'497.1675'	'491.5'	'494.4999'	'0.1107'

13.3. Identifiability analysis

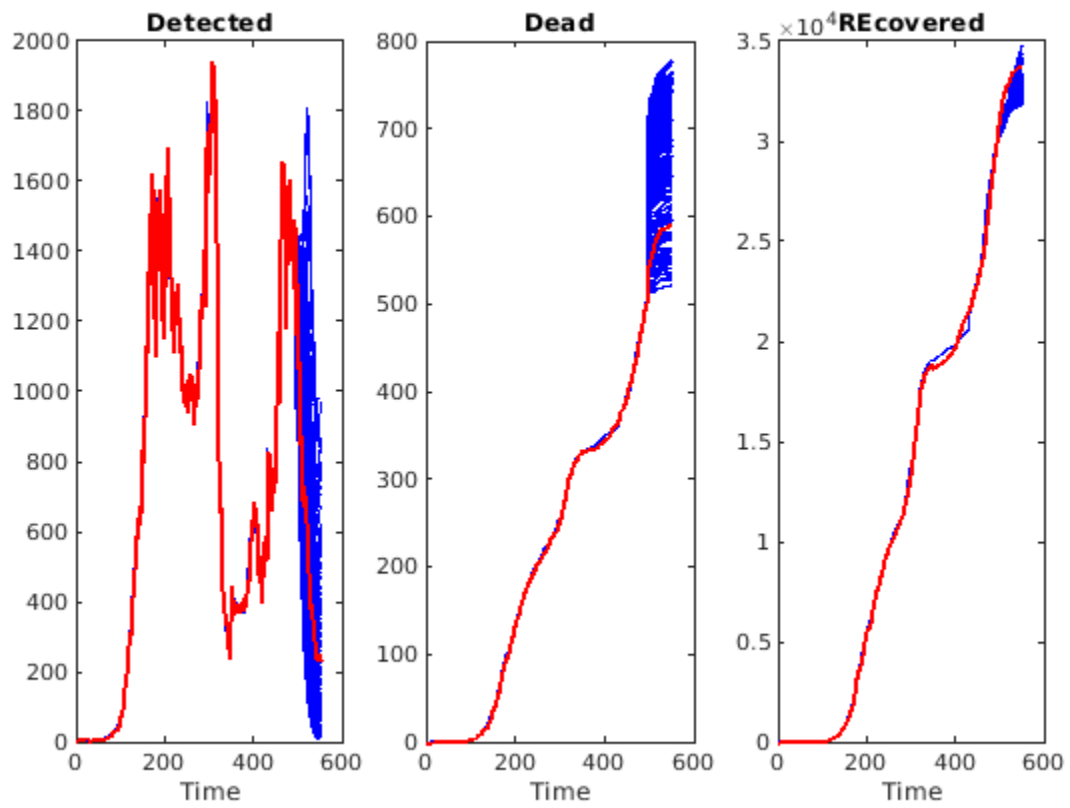






13.4. Uncertainty analysis

N=500



Chapter 14. Extension number14

14.1. Basic information

The extension to be validated consists of the time series from the data553 to the 715. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was4000.

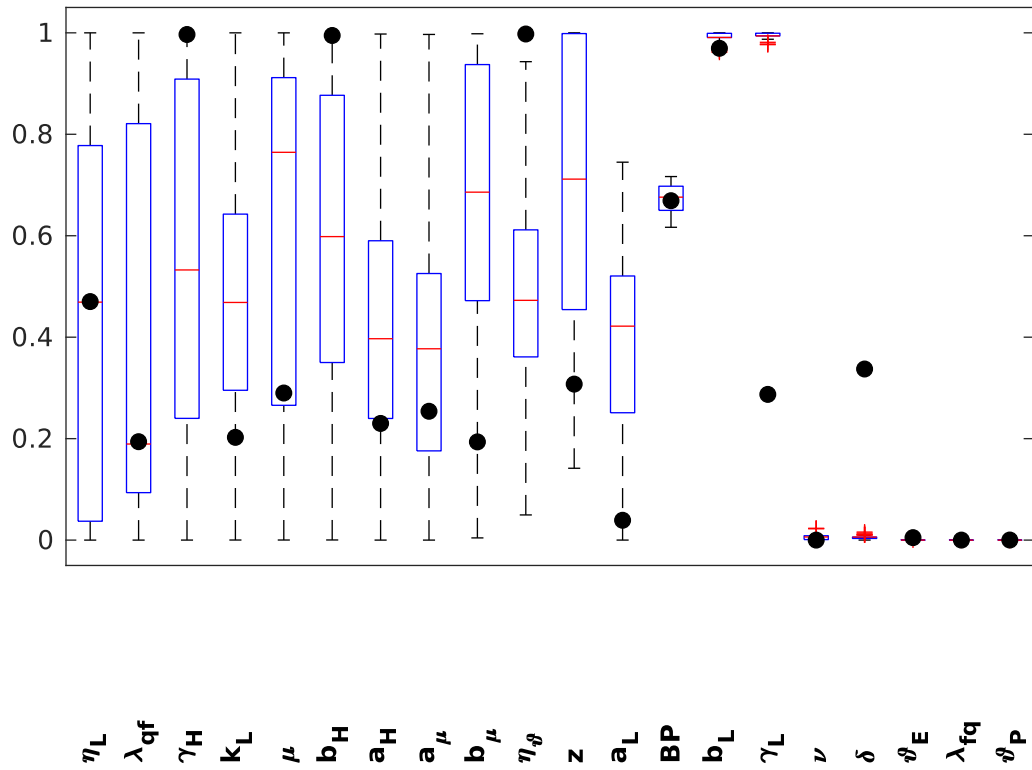
14.2. Estimated parameters with their intervals

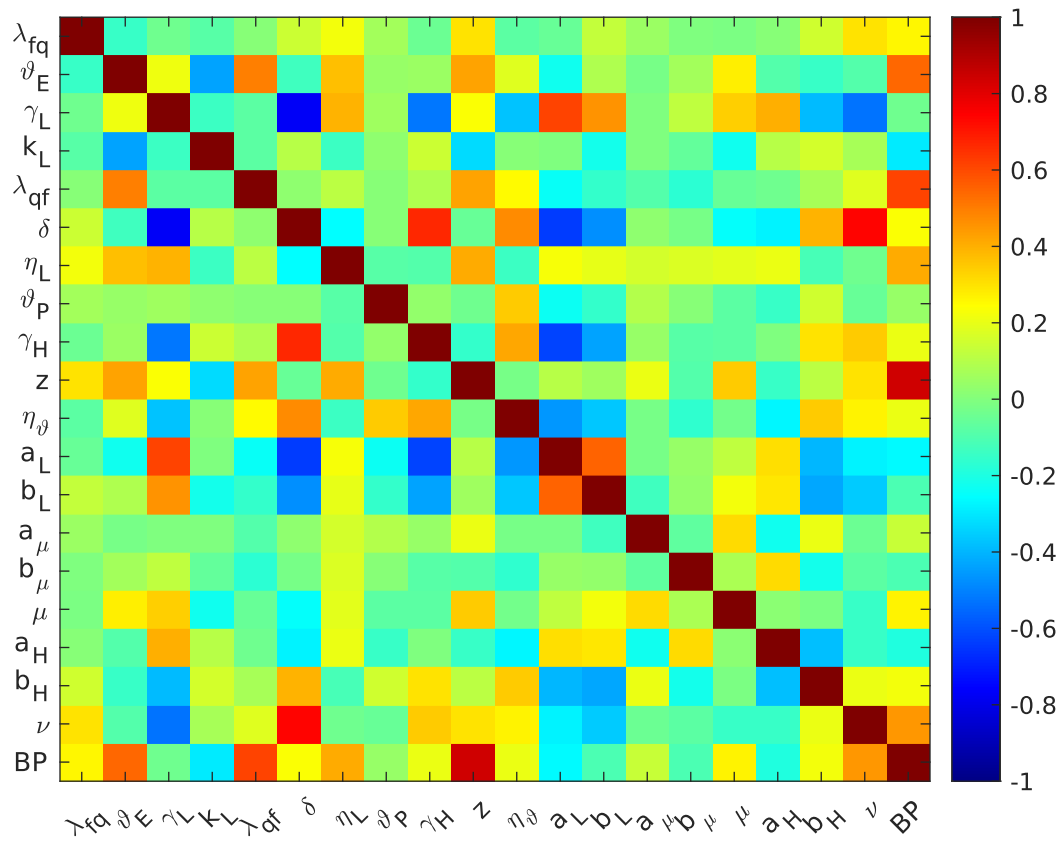
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

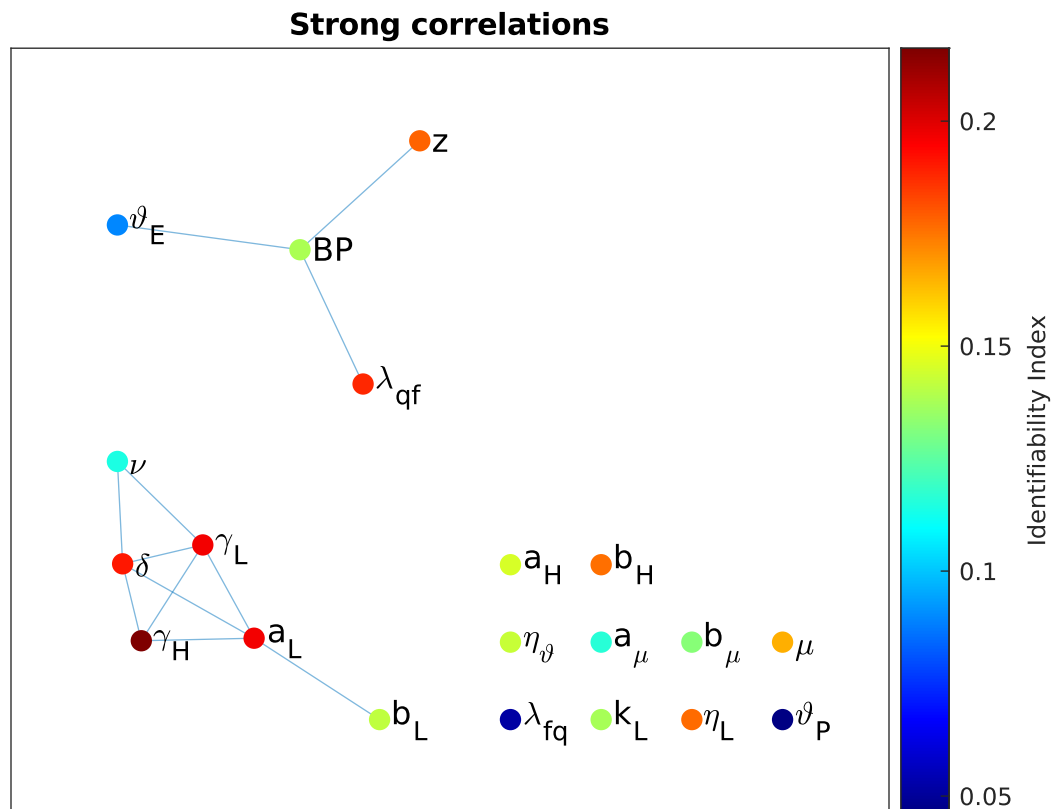
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0'	'0'	'0'	'0.0523'
ϑ_E	'0.0028'	'0.0049'	'0.0001'	'0.0048'	'0.0901'
γ_L	'0.279'	'0.4922'	'0.9939'	'0.2872'	'0.1964'
k_L	'2.747'	'4.69'	'5.2163'	'2.8229'	'0.1379'
λ_{qf}	'0.1918'	'0.5023'	'0.1894'	'0.194'	'0.1878'
δ	'0.044'	'0.0513'	'0.0009'	'0.0506'	'0.1905'
η_L	'0.2793'	'0.5699'	'0.4691'	'0.4702'	'0.1765'
ϑ_P	'0.0001'	'0.0001'	'0'	'0.0001'	'0.0464'
γ_H	'0.8085'	'1'	'0.5326'	'0.9967'	'0.2162'
z	'7.7049'	'9.4061'	'21.3482'	'9.2253'	'0.1781'
η_{ϑ}	'0.9484'	'1'	'0.4726'	'0.9977'	'0.1428'
a_L	'1.3569'	'5.2133'	'6.9045'	'1.5473'	'0.1967'
b_L	'10.7463'	'14.5746'	'14.8712'	'14.5735'	'0.1414'
a_{μ}	'4.4019'	'6.5042'	'6.2803'	'4.5555'	'0.1163'
b_{μ}	'2.8259'	'4.5981'	'10.6026'	'3.7103'	'0.1323'
μ	'0.1352'	'0.3705'	'0.7645'	'0.29'	'0.1654'
a_H	'3.7669'	'4.2358'	'6.5578'	'4.2199'	'0.1458'
b_H	'13.1725'	'15'	'9.3761'	'14.9268'	'0.1761'
ν	'0.0001'	'0.0003'	'3.0904'	'0.0002'	'0.1143'
BP	'631.5'	'705'	'636.9707'	'635.5'	'0.1385'

14.3. Identifiability analysis







14.4. Uncertainty analysis

N=500

