

Validation process forCAQUETA

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 85. The status of the validation is: COMPLETED.

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

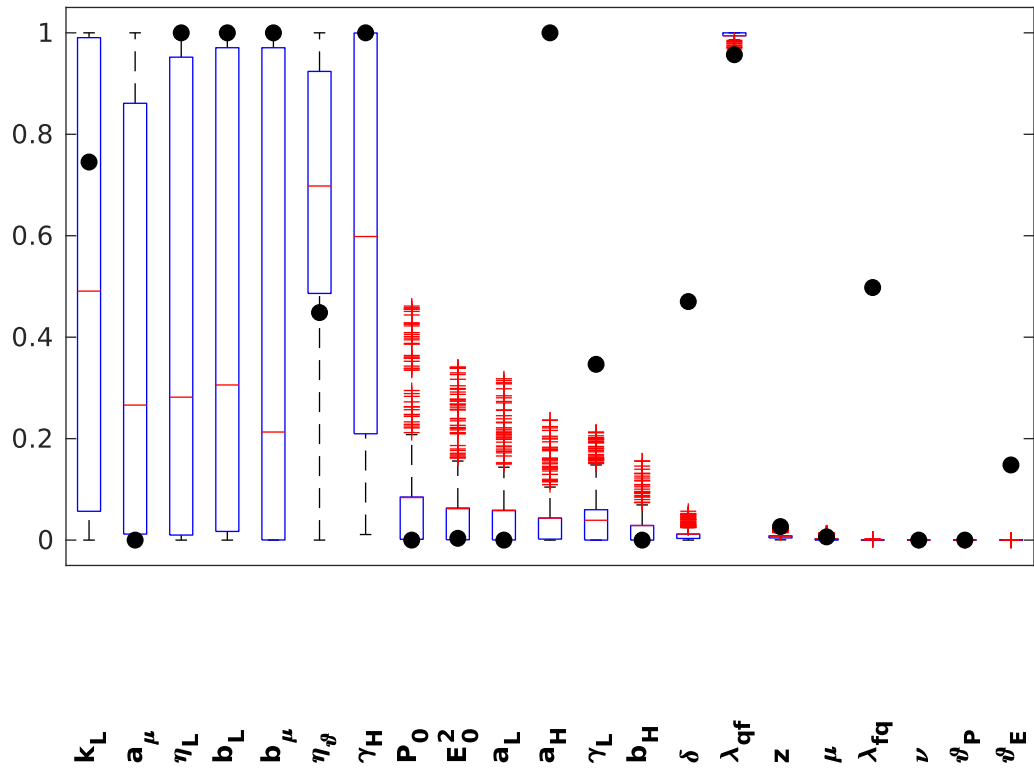
1.2. Estimated parameters with their intervals

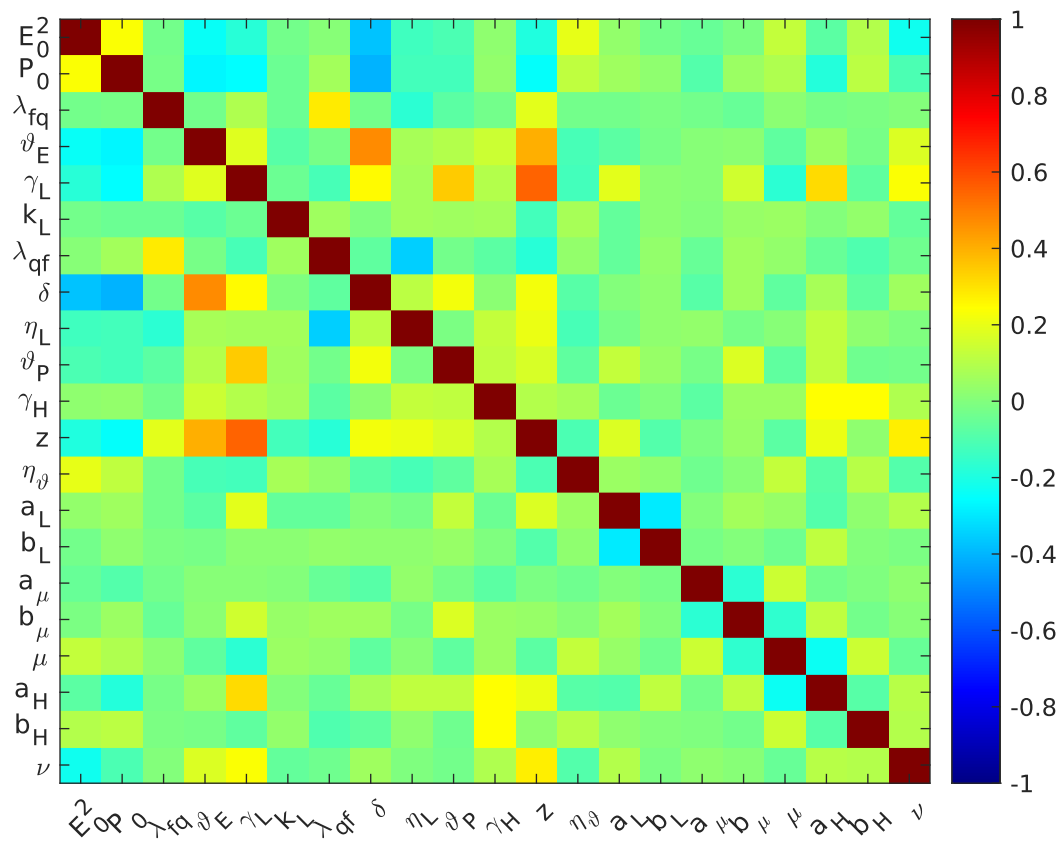
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

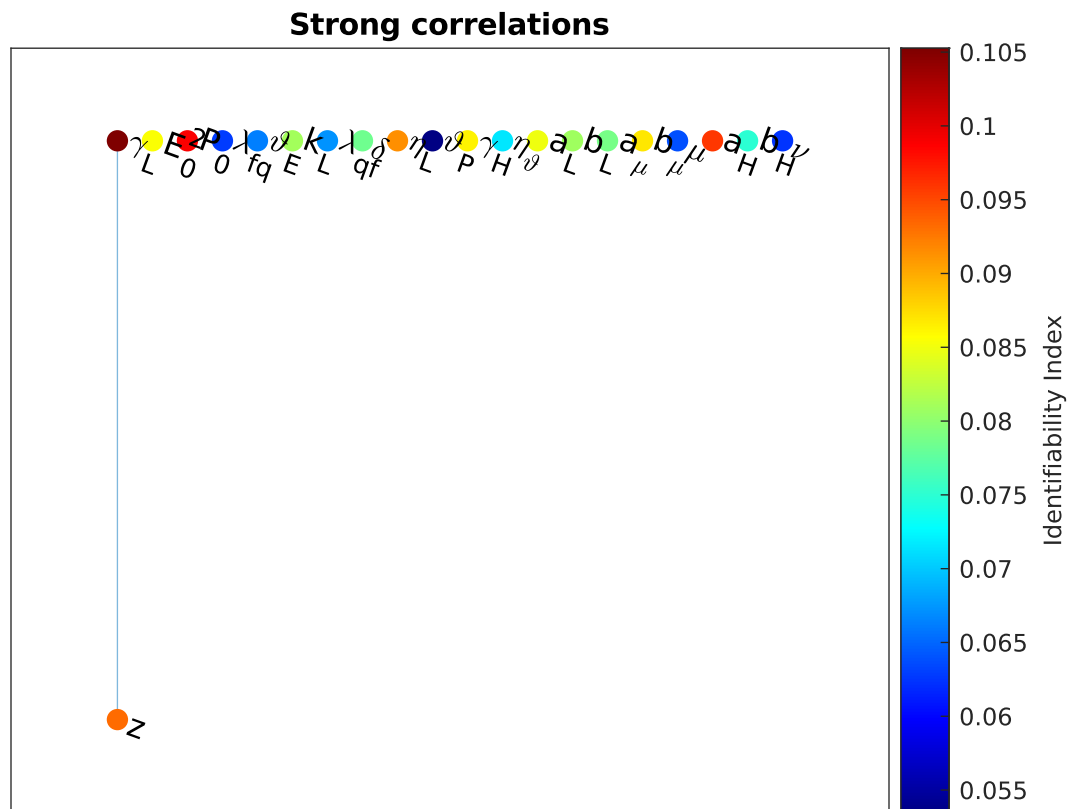
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
E^2_0	'6.8237'	'8.2927'	'126.424'	'7.0781'	'0.0855'
P_0	'0'	'0'	'33.9953'	'0'	'0.099'
λ_{fq}	'0.4525'	'0.5012'	'0.0004'	'0.4979'	'0.0629'
ϑ_E	'0.0806'	'0.1524'	'0'	'0.1481'	'0.0663'
γ_L	'0.3218'	'0.3469'	'0.0393'	'0.3465'	'0.1053'
k_L	'1.2025'	'8.4682'	'5.4173'	'7.7079'	'0.0811'
λ_{qf}	'0.8929'	'0.9797'	'0.9942'	'0.9569'	'0.0673'
δ	'0.0394'	'0.1014'	'0.0018'	'0.0705'	'0.0784'
η_L	'0.7441'	'1'	'0.2818'	'1'	'0.0914'
ϑ_P	'0'	'0'	'0'	'0'	'0.0535'
γ_H	'0.4879'	'1'	'0.5985'	'1'	'0.0863'
z	'0.7907'	'0.852'	'0.2299'	'0.7988'	'0.0932'
η_{ϑ}	'0.1389'	'0.9569'	'0.698'	'0.4485'	'0.0716'
a_L	'1'	'1.1048'	'1.8247'	'1'	'0.085'
b_L	'13.1409'	'15'	'5.2813'	'15'	'0.081'
a_{μ}	'1'	'9.2669'	'4.7261'	'1'	'0.0789'
b_{μ}	'2.7763'	'15'	'3.9827'	'14.9997'	'0.0869'
μ	'0.0041'	'0.0065'	'0.0027'	'0.0064'	'0.064'
a_H	'7.9683'	'15'	'1.6099'	'15'	'0.0959'
b_H	'1'	'6.2745'	'1.4034'	'1'	'0.075'
ν	'0'	'0.007'	'0.0041'	'0.0031'	'0.0626'

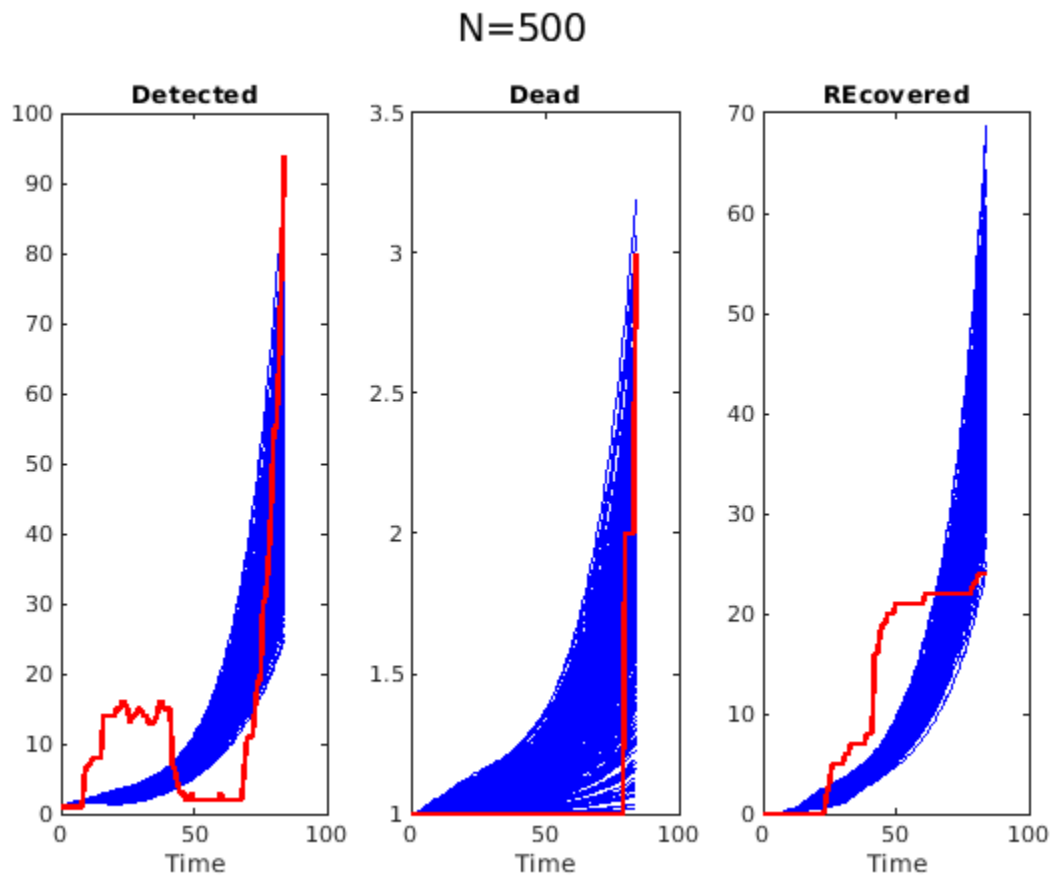
1.3. Identifiability analysis







1.4. Uncertainty analysis



Chapter 2. Extension number2

2.1. Basic information

The extension to be validated consists of the time series from the data85 to the 120. The status of the validation is: COMPLETED.

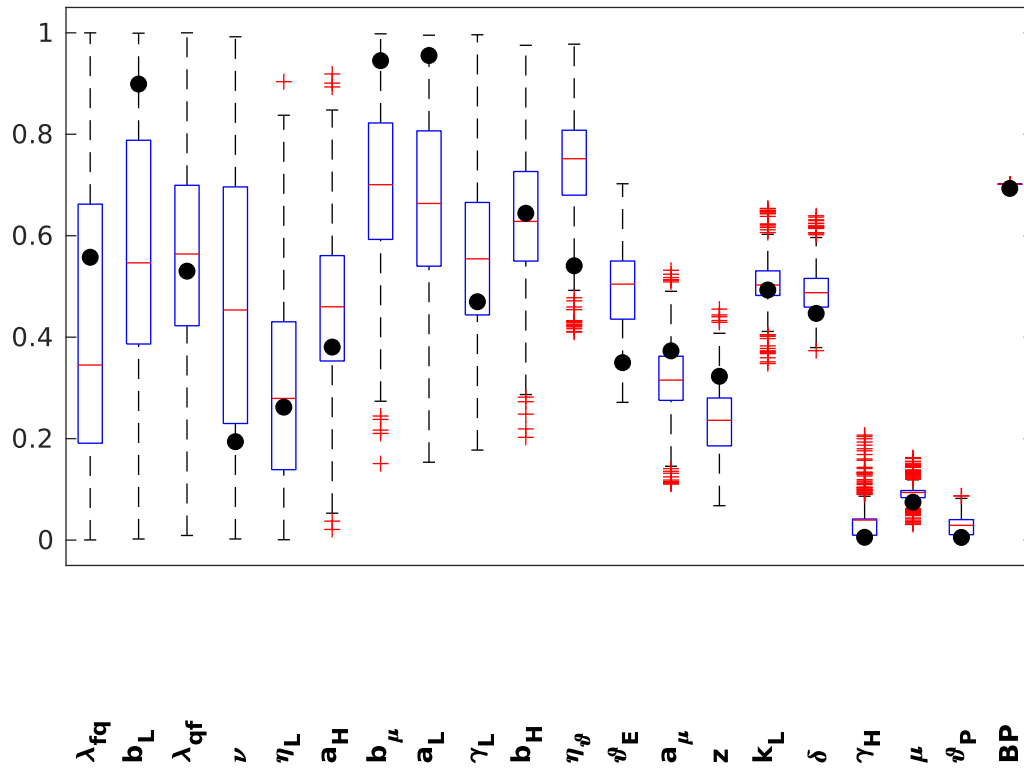
The number of estimations needed to perform the validation was1000.

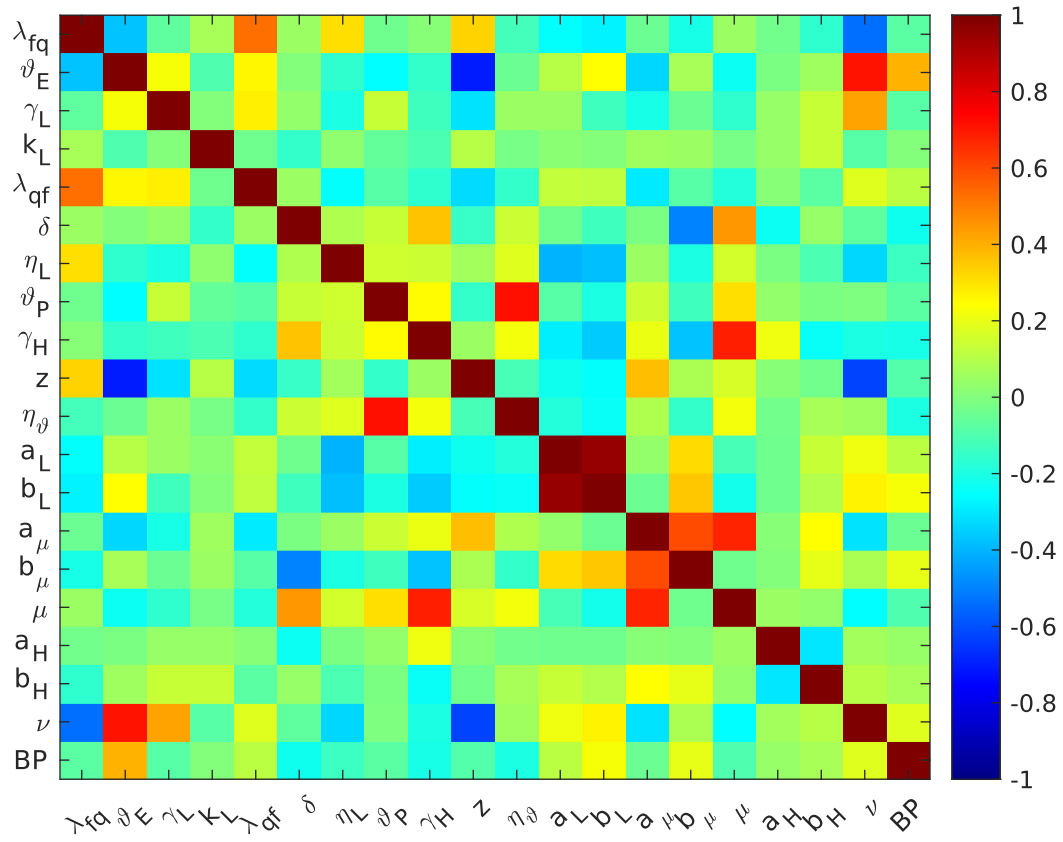
2.2. Estimated parameters with their intervals

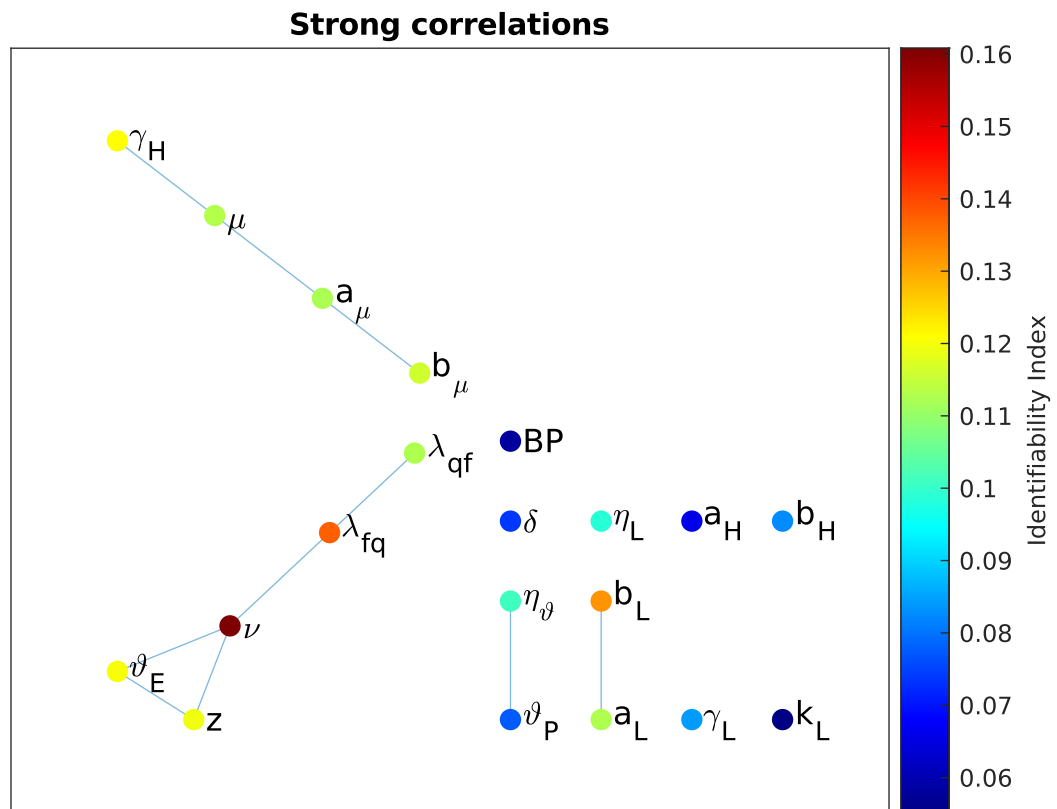
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.3017'	'0.3886'	'0.3451'	'0.5575'	'0.1376'
ϑ_E	'0.4899'	'0.5193'	'0.5046'	'0.3498'	'0.1203'
γ_L	'0.5293'	'0.5796'	'0.5544'	'0.4699'	'0.0842'
k_L	'5.3794'	'5.675'	'5.5272'	'5.437'	'0.0552'
λ_{qf}	'0.5299'	'0.5981'	'0.564'	'0.5301'	'0.1129'
δ	'0.0712'	'0.0751'	'0.0732'	'0.067'	'0.0741'
η_L	'0.2483'	'0.3114'	'0.2799'	'0.2621'	'0.0986'
ϑ_P	'0.0261'	'0.0322'	'0.0292'	'0.0053'	'0.0777'
γ_H	'0.011'	'0.069'	'0.04'	'0.0055'	'0.121'
z	'6.5638'	'7.6266'	'7.0952'	'9.6873'	'0.1195'
η_{ϑ}	'0.7259'	'0.7776'	'0.7517'	'0.5408'	'0.101'
a_L	'9.8827'	'10.698'	'10.2903'	'14.3747'	'0.1127'
b_L	'8.1137'	'9.1886'	'8.6511'	'13.586'	'0.1323'
a_{μ}	'5.1998'	'5.6305'	'5.4151'	'6.2228'	'0.1125'
b_{μ}	'10.353'	'11.2626'	'10.8078'	'14.2314'	'0.116'
μ	'0.0823'	'0.1054'	'0.0938'	'0.0747'	'0.1132'
a_H	'7.0825'	'7.8054'	'7.444'	'6.3274'	'0.066'
b_H	'9.3827'	'10.2013'	'9.792'	'10.0202'	'0.0828'
ν	'206.9427'	'246.6094'	'226.7761'	'97.0221'	'0.1608'
BP	'84.3911'	'84.6089'	'84.5'	'83.5'	'0.0583'

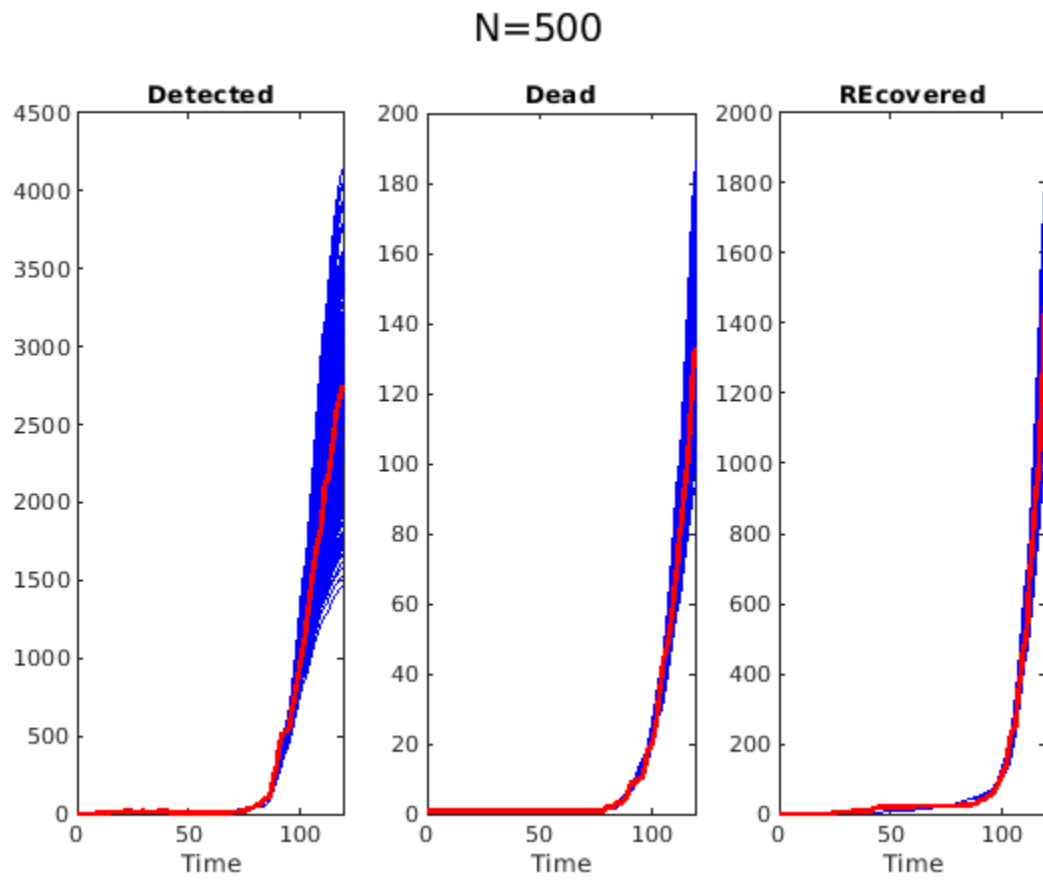
2.3. Identifiability analysis







2.4. Uncertainty analysys



Chapter 3. Extension number3

3.1. Basic information

The extension to be validated consists of the time series from the data120 to the 147. The status of the validation is: COMPLETED.

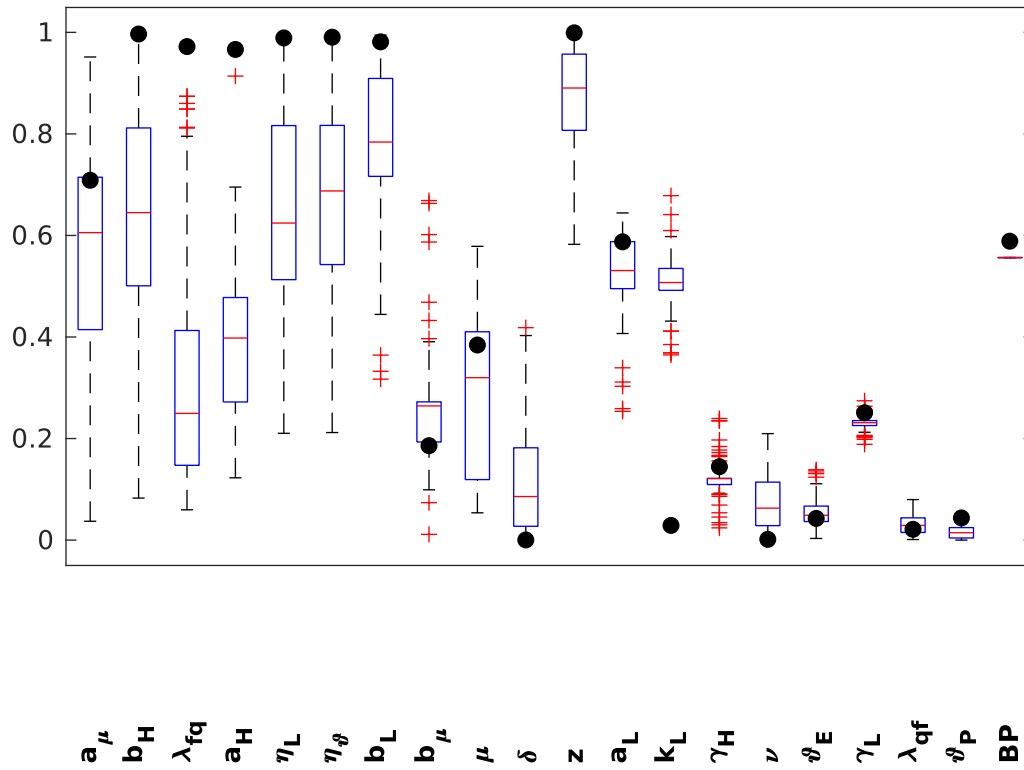
The number of estimations needed to perform the validation was1000.

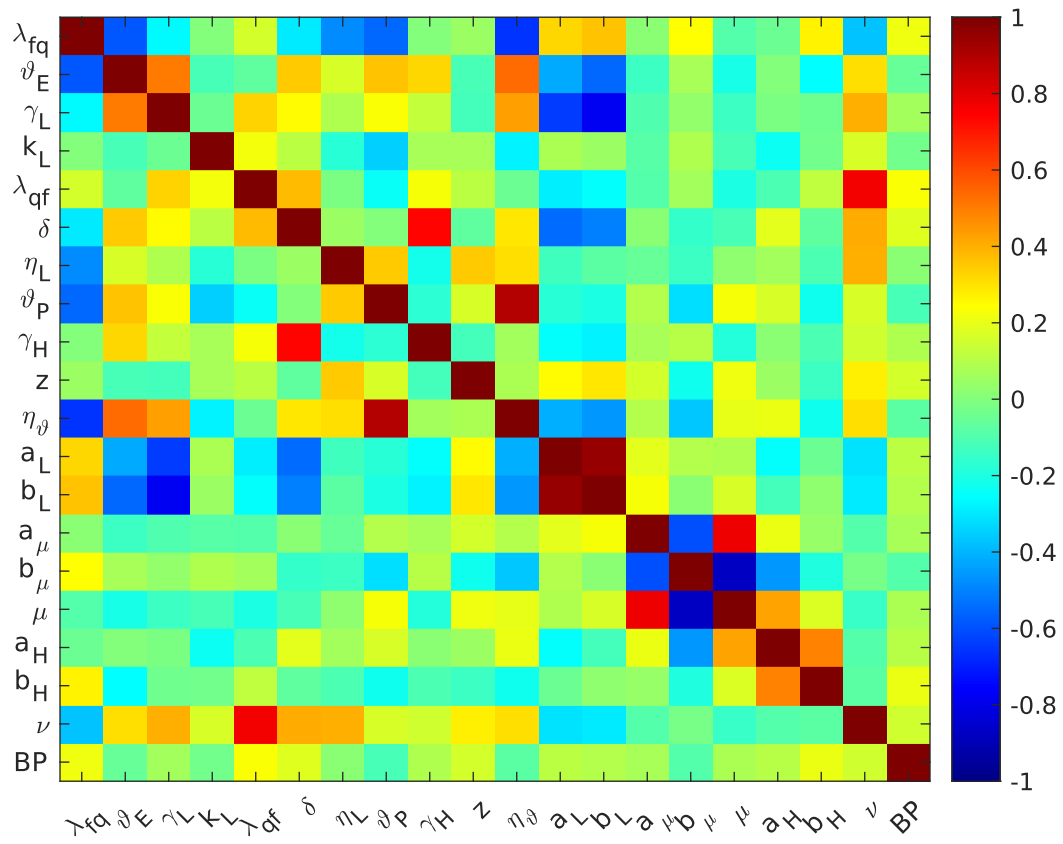
3.2. Estimated parameters with their intervals

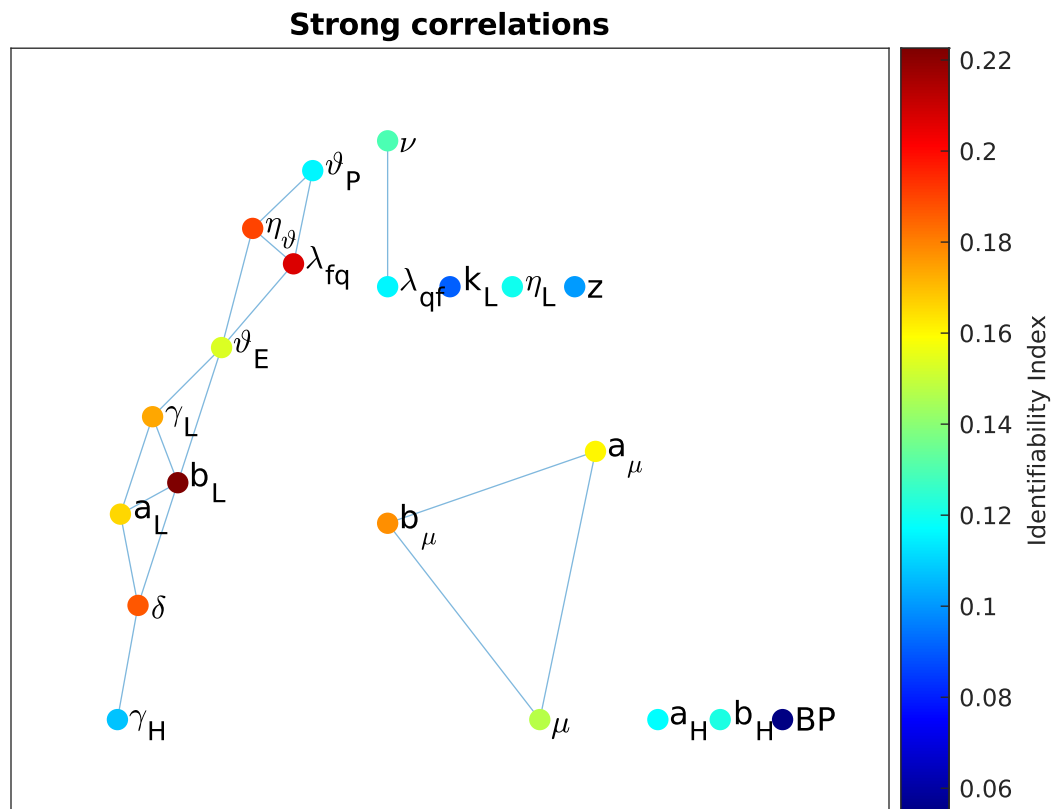
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1712'	'0.3354'	'0.2533'	'0.972'	'0.207'
ϑ_E	'0.0348'	'0.0632'	'0.049'	'0.0427'	'0.1532'
γ_L	'0.1772'	'0.2852'	'0.2312'	'0.2508'	'0.174'
k_L	'5.2348'	'5.8965'	'5.5657'	'1.2601'	'0.091'
λ_{qf}	'0'	'0.06'	'0.029'	'0.0212'	'0.1163'
δ	'0.0037'	'0.0233'	'0.0135'	'0'	'0.1869'
η_L	'0.5693'	'0.6796'	'0.6245'	'0.989'	'0.12'
ϑ_P	'0.0111'	'0.018'	'0.0145'	'0.0437'	'0.1161'
γ_H	'0.0927'	'0.1498'	'0.1212'	'0.1446'	'0.1075'
z	'25.5321'	'27.8111'	'26.6716'	'29.9725'	'0.1009'
η_{ϑ}	'0.634'	'0.7413'	'0.6877'	'0.9905'	'0.1904'
a_L	'7.9475'	'8.9125'	'8.43'	'9.2244'	'0.1662'
b_L	'10.8692'	'13.0067'	'11.9379'	'14.7386'	'0.2226'
a_{μ}	'8.4779'	'10.4778'	'9.4779'	'10.9217'	'0.1607'
b_{μ}	'3.673'	'5.8018'	'4.7374'	'3.6036'	'0.1778'
μ	'0.278'	'0.3618'	'0.3199'	'0.3842'	'0.1475'
a_H	'5.8467'	'7.3074'	'6.577'	'14.5291'	'0.1176'
b_H	'9.1626'	'10.8968'	'10.0297'	'14.954'	'0.122'
ν	'16.3195'	'47.0347'	'31.6771'	'0.7451'	'0.1296'
BP	'119.3281'	'119.6719'	'119.5'	'121.4976'	'0.0547'

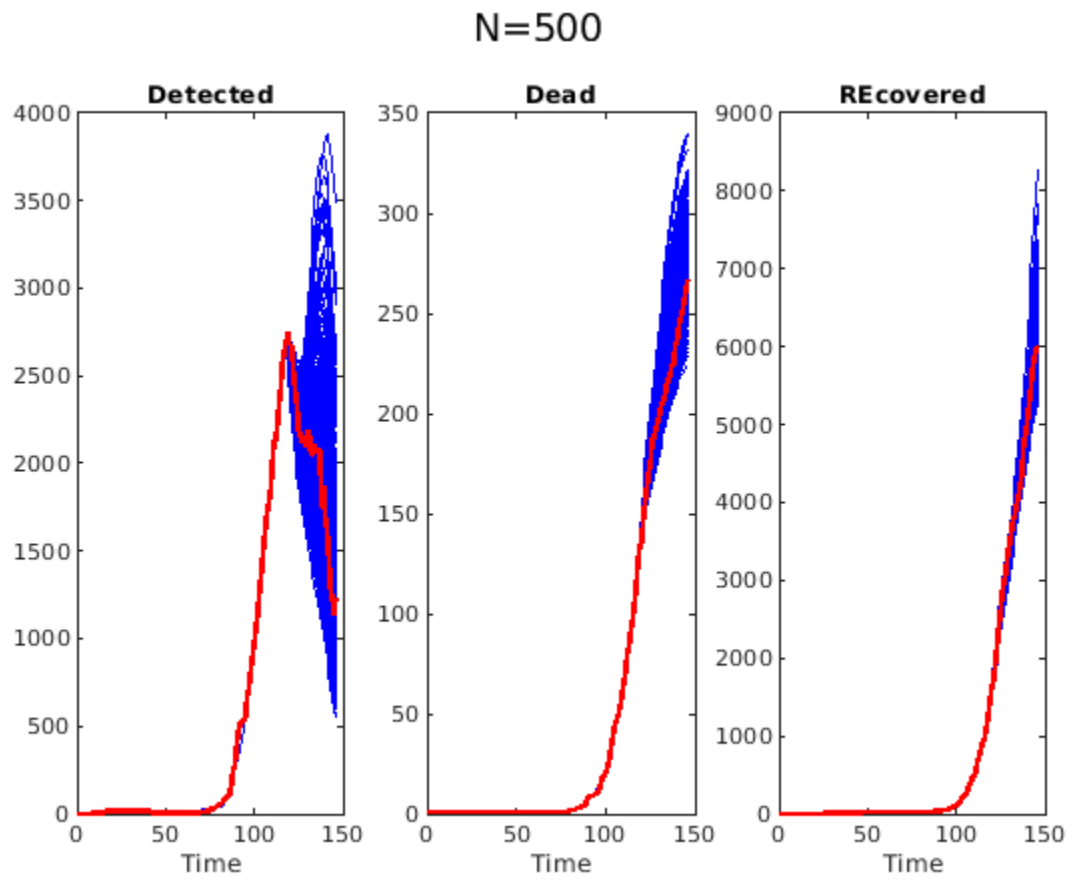
3.3. Identifiability analysys







3.4. Uncertainty analysys



Chapter 4. Extension number4

4.1. Basic information

The extension to be validated consists of the time series from the data147 to the 177. The status of the validation is: COMPLETED.

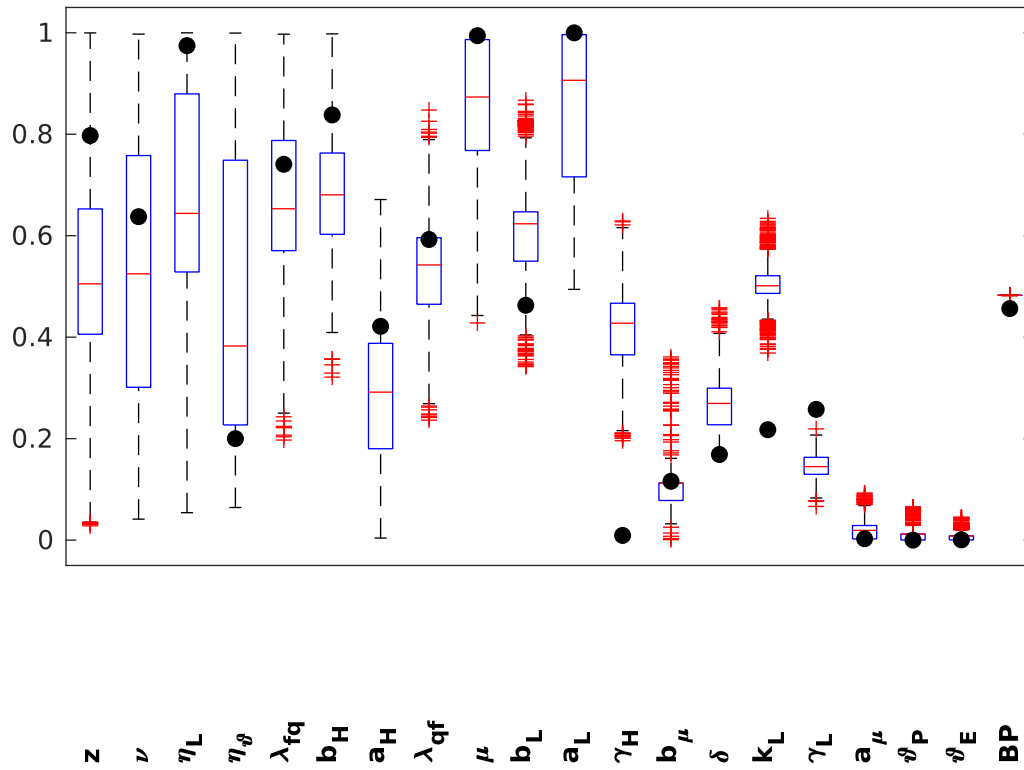
The number of estimations needed to perform the validation was1000.

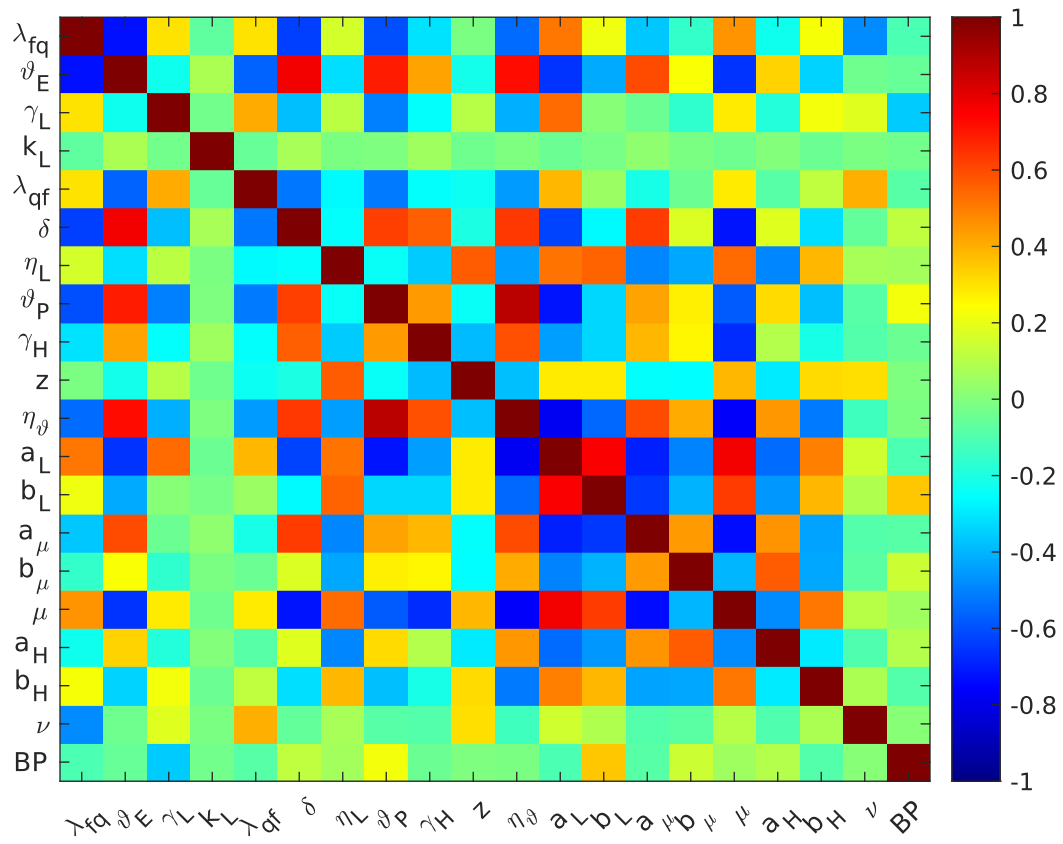
4.2. Estimated parameters with their intervals

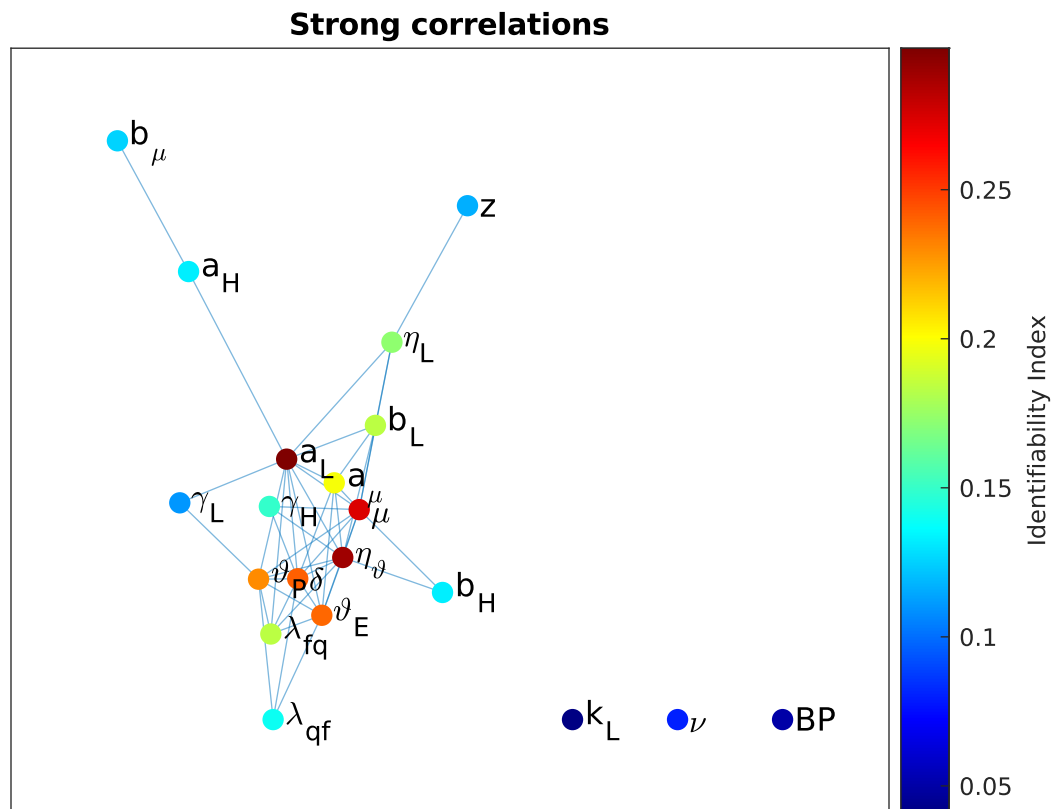
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.6363'	'0.6697'	'0.653'	'0.7408'	'0.1841'
ϑ_E	'0'	'0.0264'	'0.0083'	'0.0005'	'0.2387'
γ_L	'0.1424'	'0.1472'	'0.1448'	'0.2577'	'0.1111'
k_L	'5.4354'	'5.5879'	'5.5117'	'2.9583'	'0.0412'
λ_{qf}	'0.5304'	'0.5544'	'0.5424'	'0.5925'	'0.1394'
δ	'0.0394'	'0.0414'	'0.0404'	'0.0253'	'0.2408'
η_L	'0.6247'	'0.6633'	'0.644'	'0.9746'	'0.1725'
ϑ_P	'0.0078'	'0.0161'	'0.012'	'0'	'0.2297'
γ_H	'0.4173'	'0.4377'	'0.4275'	'0.0092'	'0.1495'
z	'14.5378'	'15.7678'	'15.1528'	'23.9215'	'0.1172'
η_{ϑ}	'0.3598'	'0.4054'	'0.3826'	'0.1999'	'0.2886'
a_L	'13.4502'	'13.9035'	'13.6769'	'14.9982'	'0.2975'
b_L	'9.5651'	'9.893'	'9.729'	'7.4803'	'0.1834'
a_{μ}	'1.2084'	'1.3285'	'1.2684'	'1.038'	'0.199'
b_{μ}	'2.2797'	'2.8722'	'2.576'	'2.6225'	'0.1256'
μ	'0.8622'	'0.8845'	'0.8733'	'0.9943'	'0.274'
a_H	'4.9136'	'5.2531'	'5.0833'	'6.8986'	'0.1325'
b_H	'10.3811'	'10.6713'	'10.5262'	'12.7324'	'0.1327'
ν	'250.5839'	'274.313'	'262.4485'	'318.7421'	'0.0806'
BP	'147.4555'	'147.5445'	'147.5'	'146.0136'	'0.0512'

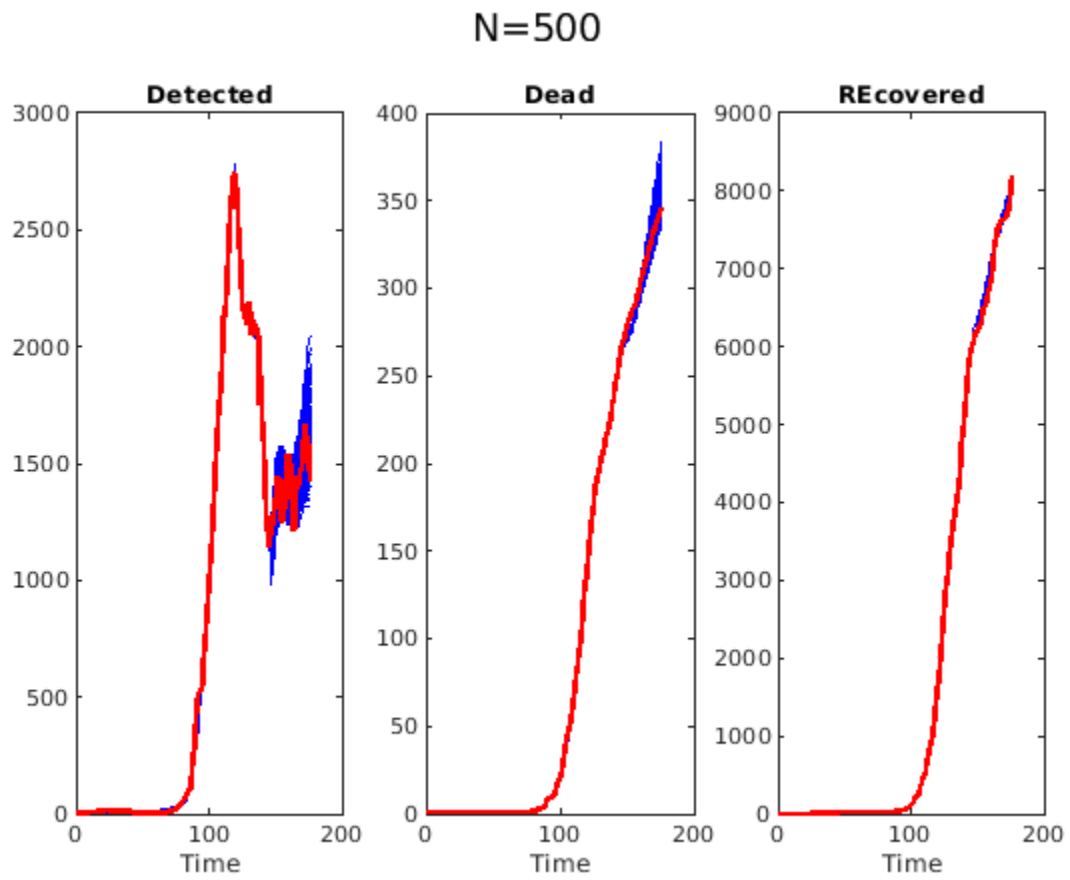
4.3. Identifiability analysis







4.4. Uncertainty analysys



Chapter 5. Extension number5

5.1. Basic information

The extension to be validated consists of the time series from the data177 to the 246. The status of the validation is: COMPLETED.

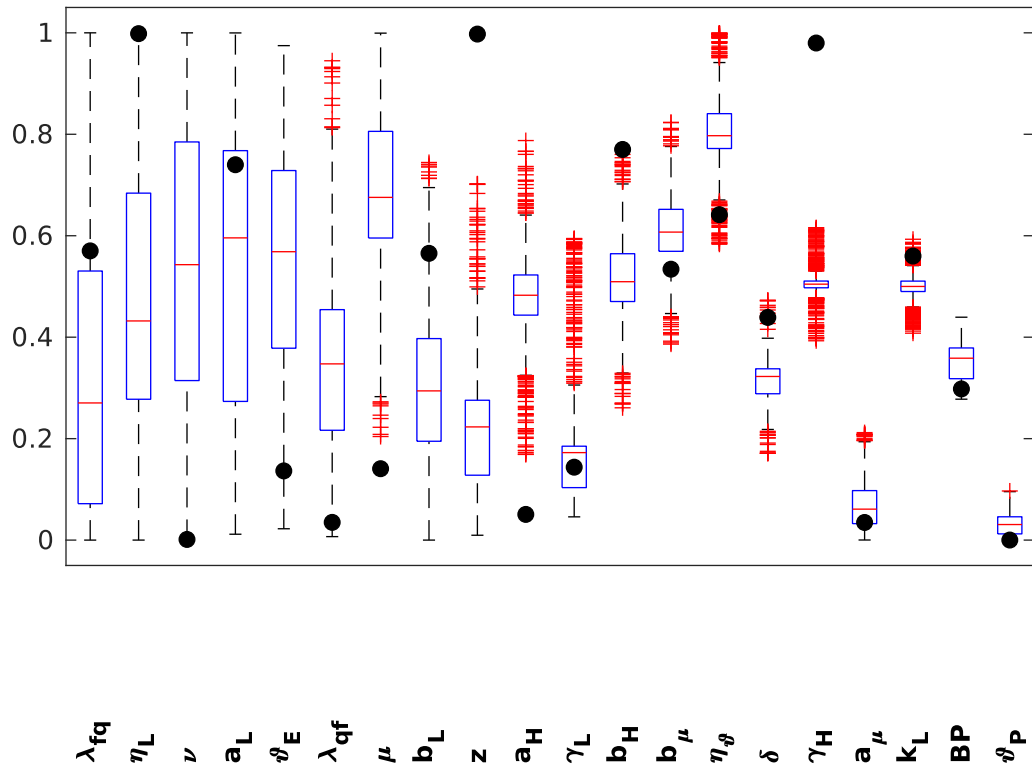
The number of estimations needed to perform the validation was1000.

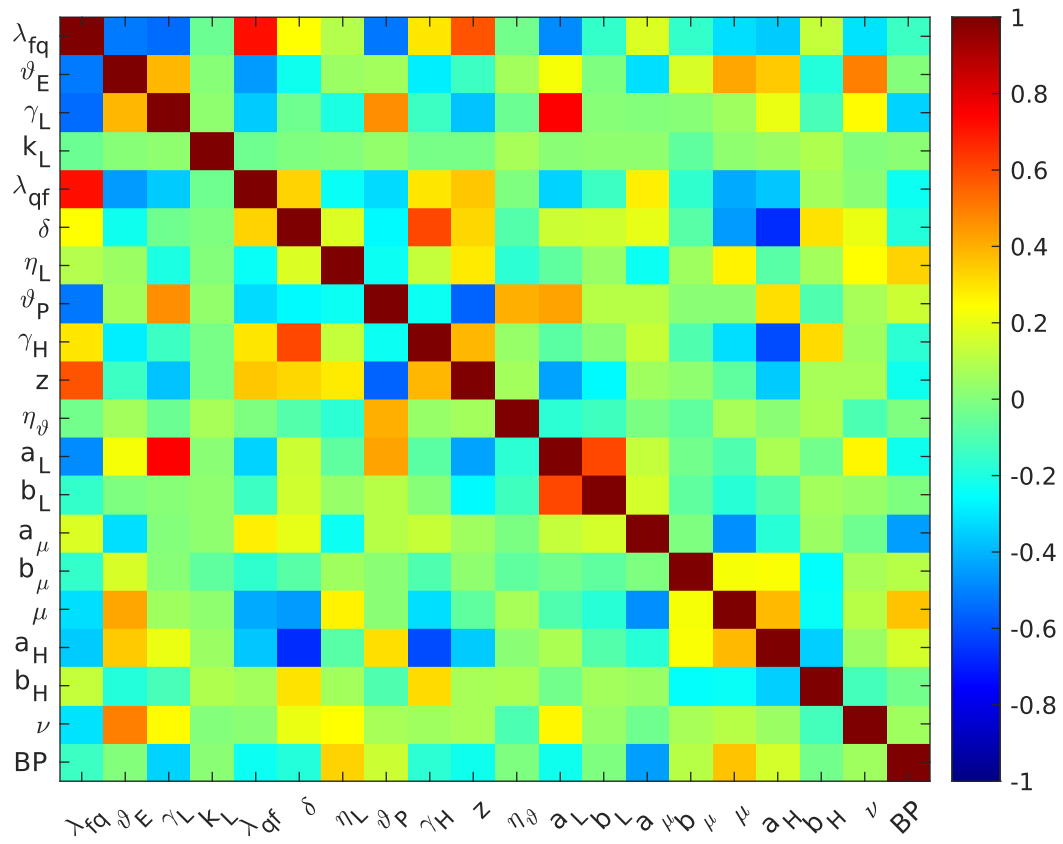
5.2. Estimated parameters with their intervals

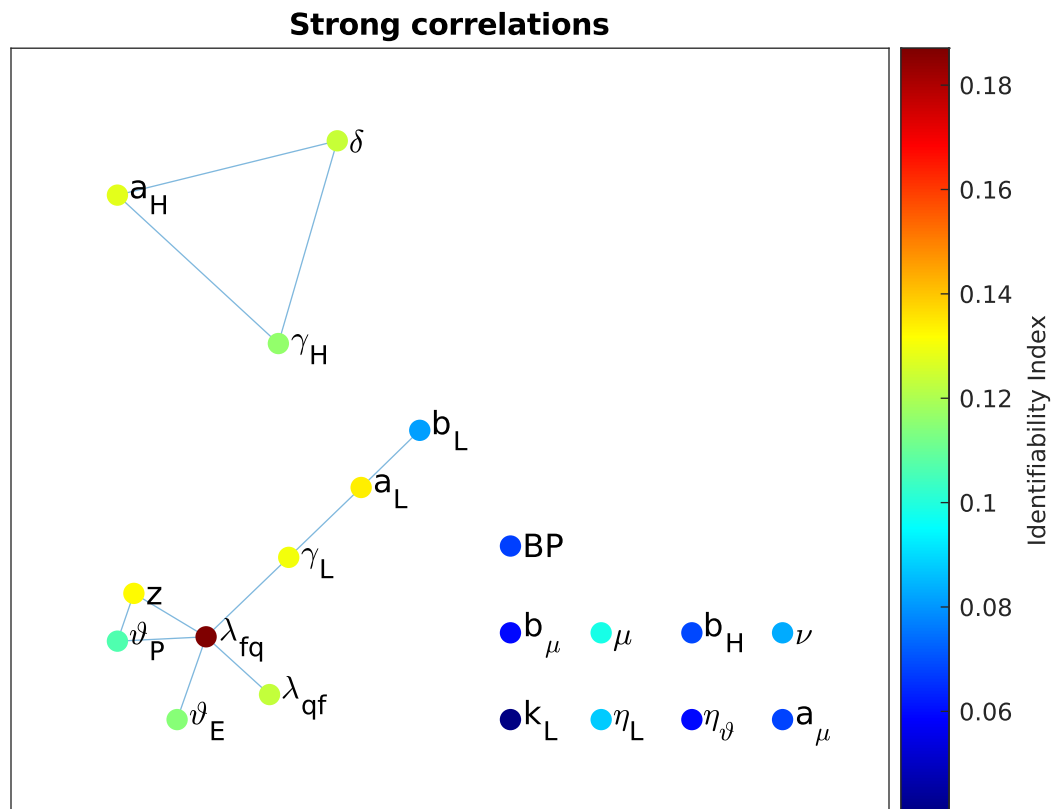
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.2433'	'0.2975'	'0.2704'	'0.5701'	'0.1871'
ϑ_E	'0.546'	'0.591'	'0.5685'	'0.1364'	'0.1146'
γ_L	'0.1464'	'0.1994'	'0.1729'	'0.1437'	'0.1302'
k_L	'5.4264'	'5.5738'	'5.5001'	'6.0395'	'0.0407'
λ_{qf}	'0.3255'	'0.3694'	'0.3474'	'0.035'	'0.1233'
δ	'0.0461'	'0.0507'	'0.0484'	'0.0658'	'0.1241'
η_L	'0.4061'	'0.458'	'0.432'	'0.9984'	'0.0881'
ϑ_P	'0.0287'	'0.0327'	'0.0307'	'0.0001'	'0.107'
γ_H	'0.4909'	'0.5182'	'0.5045'	'0.9799'	'0.1163'
z	'5.9802'	'7.4388'	'6.7095'	'29.9258'	'0.1326'
η_{ϑ}	'0.7828'	'0.8115'	'0.7972'	'0.6415'	'0.0598'
a_L	'8.9601'	'9.7216'	'9.3409'	'11.3596'	'0.1343'
b_L	'4.8957'	'5.3437'	'5.1197'	'8.9144'	'0.0816'
a_{μ}	'1.7743'	'1.9347'	'1.8545'	'1.4866'	'0.0685'
b_{μ}	'9.3472'	'9.6536'	'9.5004'	'8.4763'	'0.0596'
μ	'0.6577'	'0.6929'	'0.6753'	'0.1407'	'0.0987'
a_H	'7.5242'	'7.991'	'7.7576'	'1.7091'	'0.1278'
b_H	'7.9772'	'8.2853'	'8.1312'	'11.7816'	'0.069'
ν	'258.5835'	'284.3763'	'271.4799'	'0.6531'	'0.0831'
BP	'182.1509'	'182.8491'	'182.5'	'176.5'	'0.0679'

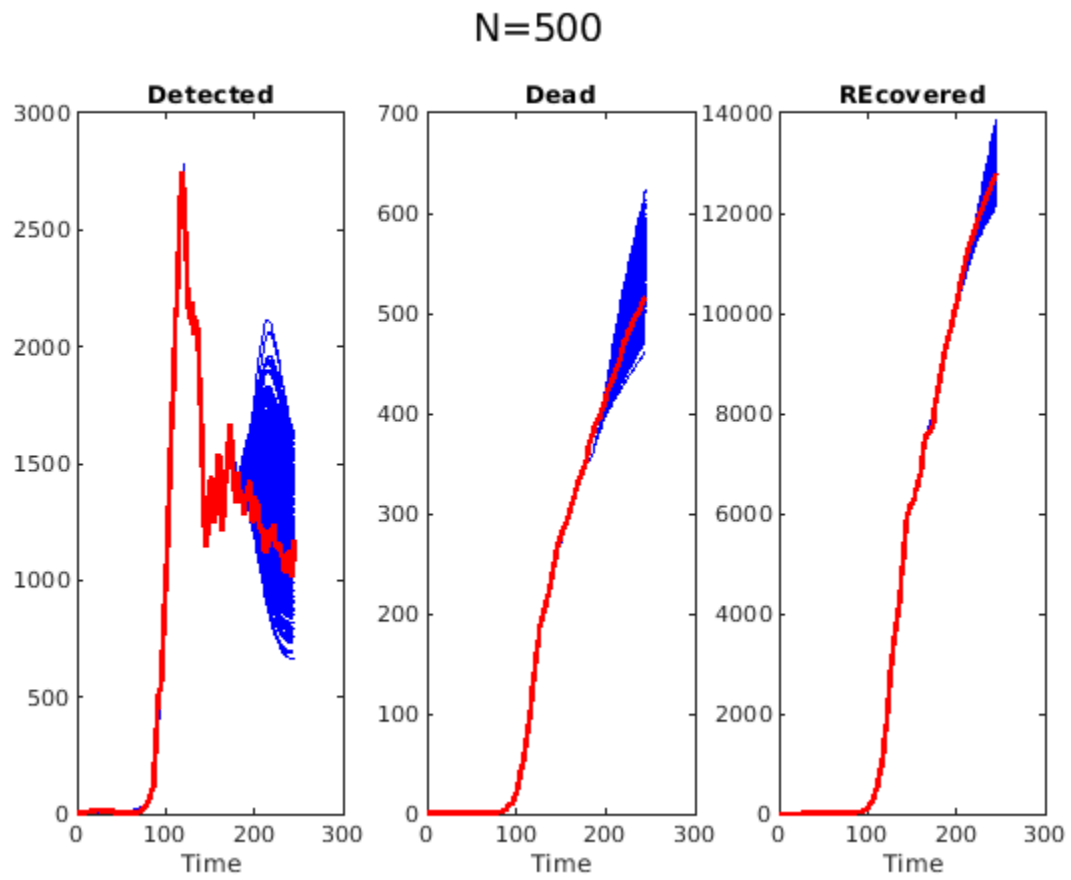
5.3. Identifiability analysys







5.4. Uncertainty analysis



Chapter 6. Extension number6

6.1. Basic information

The extension to be validated consists of the time series from the data246 to the 317. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

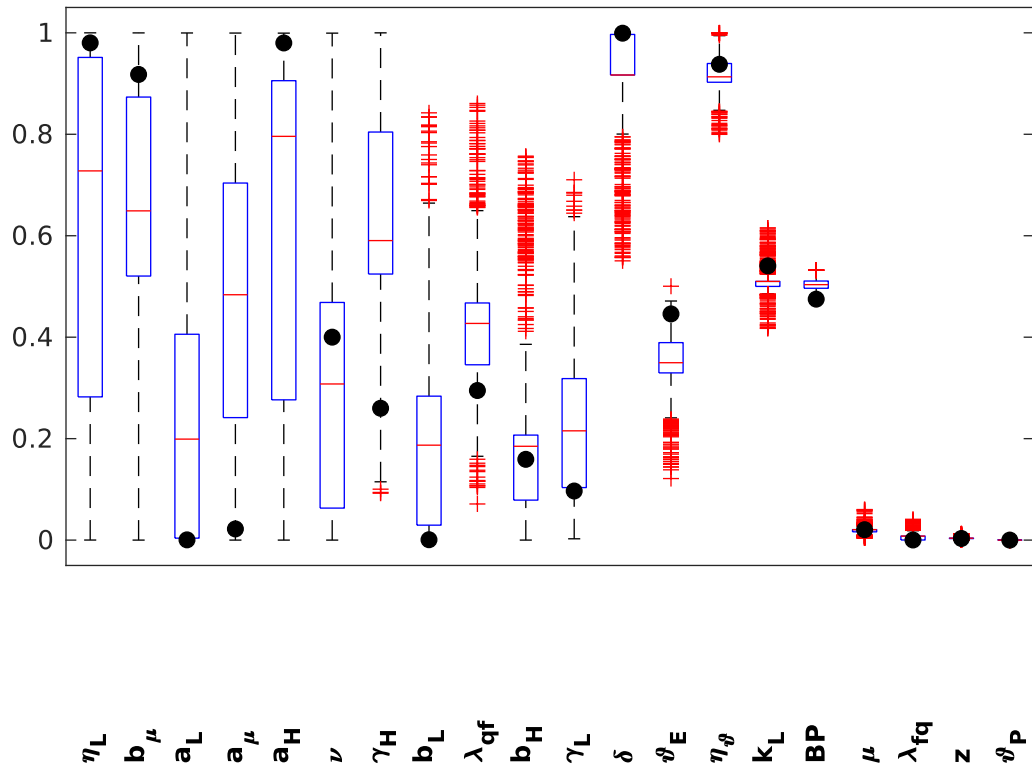
6.2. Estimated parameters with their intervals

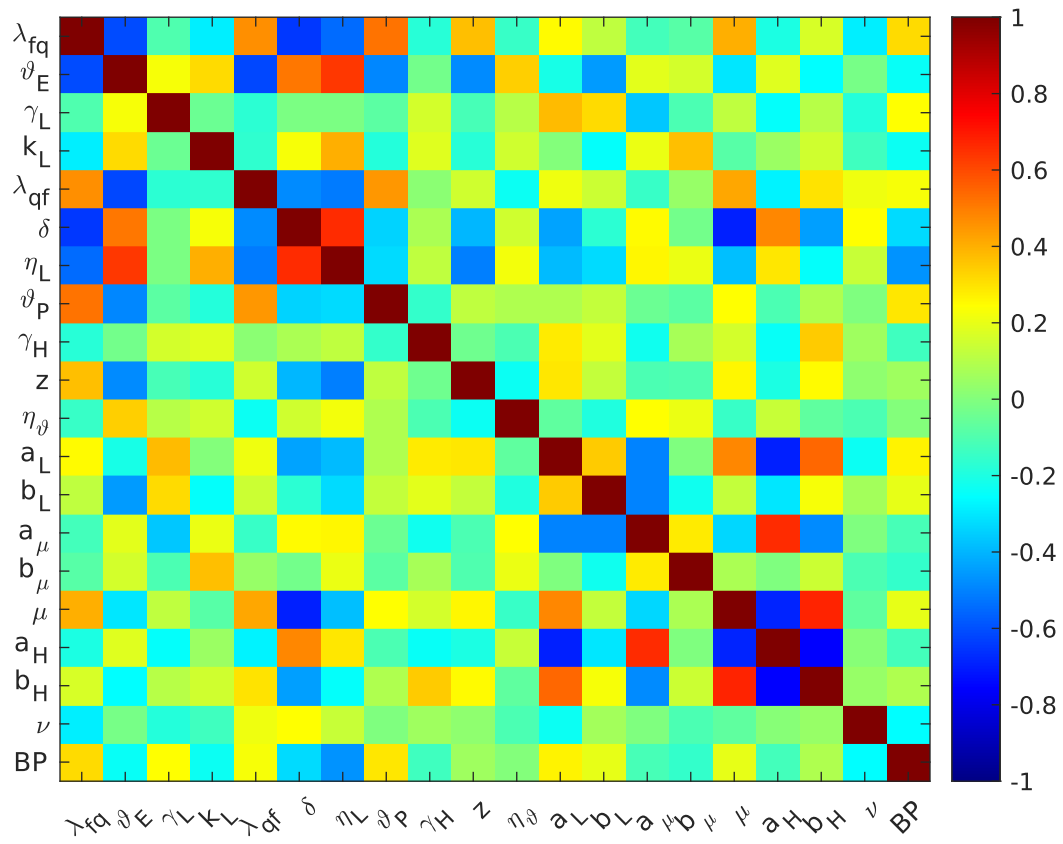
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

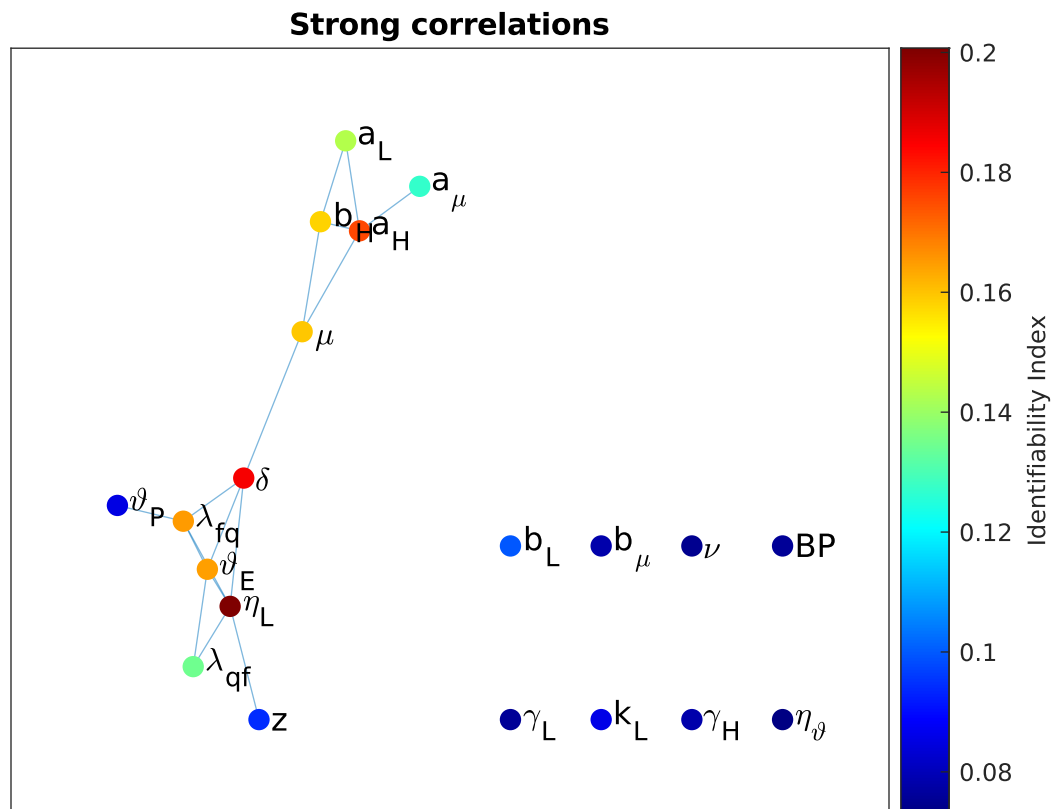
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0005'	'0.0079'	'0.0002'	'0.1652'
\vartheta_E	'0.3054'	'0.5692'	'0.3497'	'0.4459'	'0.1648'
\gamma_L	'0.0804'	'0.126'	'0.2155'	'0.0968'	'0.0763'
k_L	'1.225'	'9.649'	'5.5897'	'5.8649'	'0.0858'
\lambda_{qf}	'0.2832'	'0.9633'	'0.4276'	'0.2949'	'0.1348'
\delta	'0'	'0.15'	'0.1375'	'0.1499'	'0.1857'
\eta_L	'0.3995'	'1'	'0.7278'	'0.9802'	'0.2007'
\vartheta_P	'0'	'0'	'0'	'0'	'0.0853'
\gamma_H	'0.0518'	'1'	'0.5903'	'0.2599'	'0.0785'
z	'0.0612'	'0.1279'	'0.1154'	'0.0956'	'0.0945'
\eta_{\vartheta}	'0.3702'	'0.9738'	'0.9132'	'0.938'	'0.0733'
a_L	'1.0056'	'1.2817'	'3.7871'	'1.0066'	'0.1432'
b_L	'1'	'1.9181'	'3.62'	'1.0103'	'0.1001'
a_{\mu}	'1.252'	'13.6'	'7.7716'	'1.3082'	'0.1272'
b_{\mu}	'1'	'15'	'10.0864'	'13.8515'	'0.0785'
\mu	'0'	'0.0461'	'0.0206'	'0.0205'	'0.1594'
a_H	'1.35'	'15'	'12.1427'	'14.7203'	'0.1758'
b_H	'1'	'14.44'	'3.5908'	'3.2293'	'0.158'
\nu	'64.6801'	'500'	'153.8919'	'200.0329'	'0.0752'
BP	'243.3424'	'256.4999'	'247.4999'	'243.5'	'0.0762'

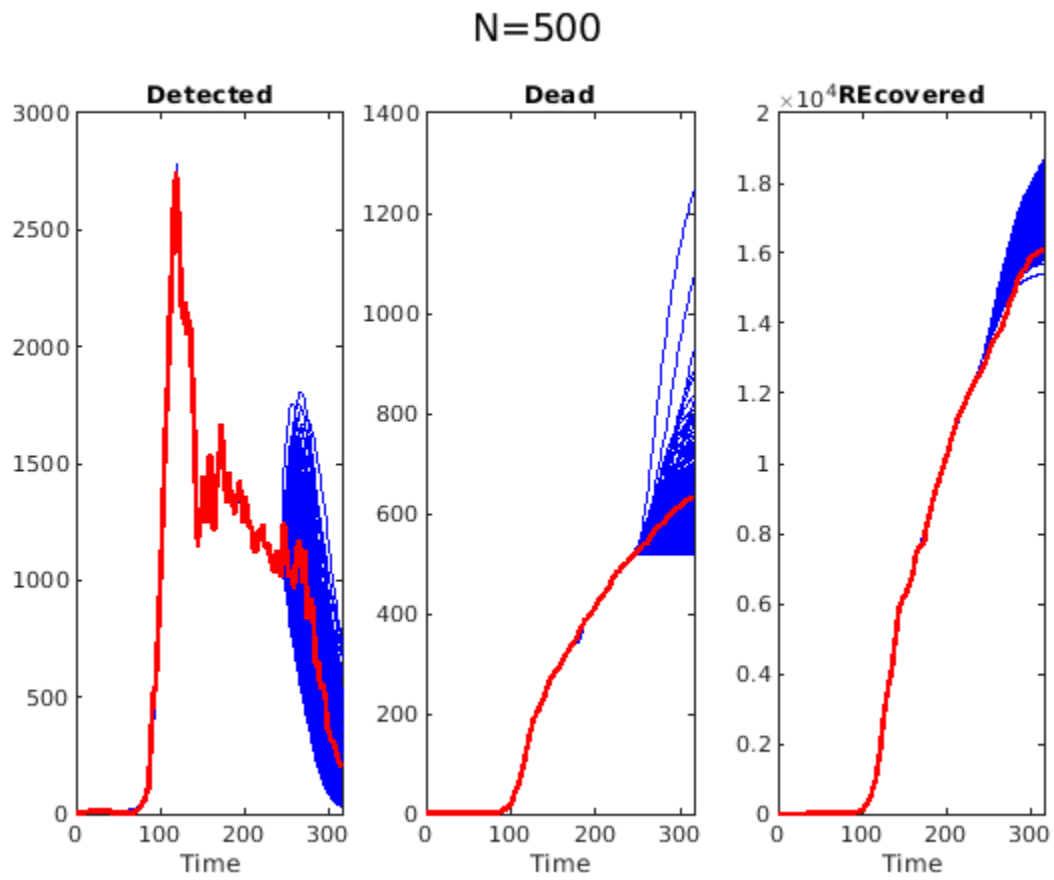
6.3. Identifiability analysis







6.4. Uncertainty analysis



Chapter 7. Extension number7

7.1. Basic information

The extension to be validated consists of the time series from the data317 to the 349. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

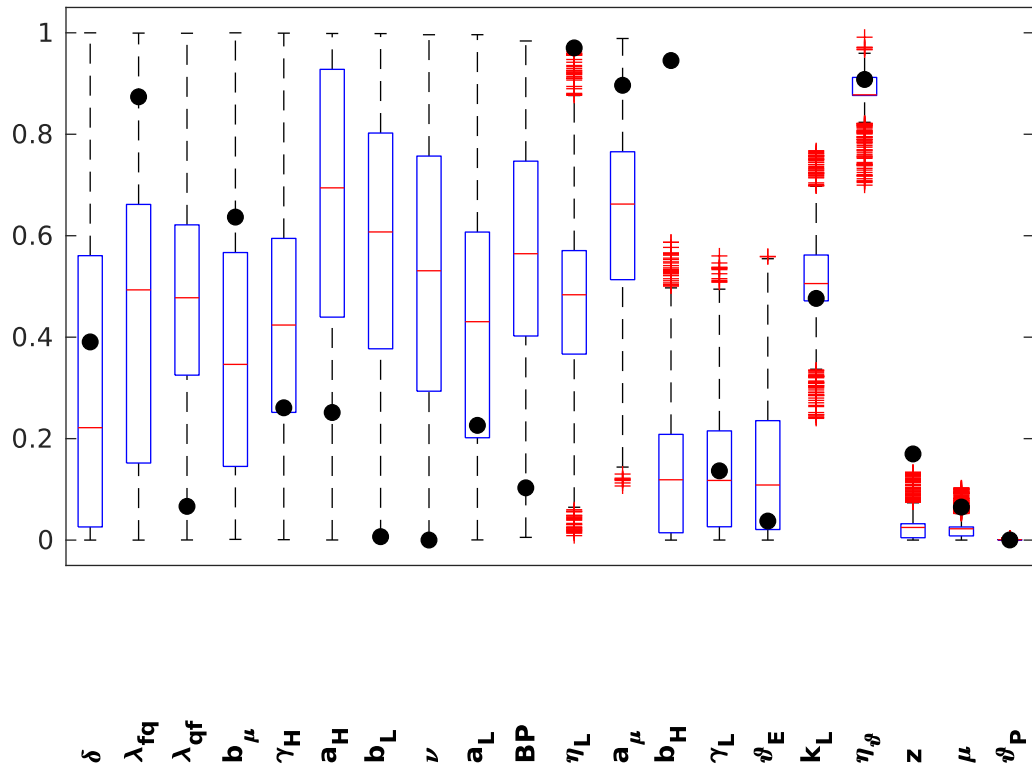
7.2. Estimated parameters with their intervals

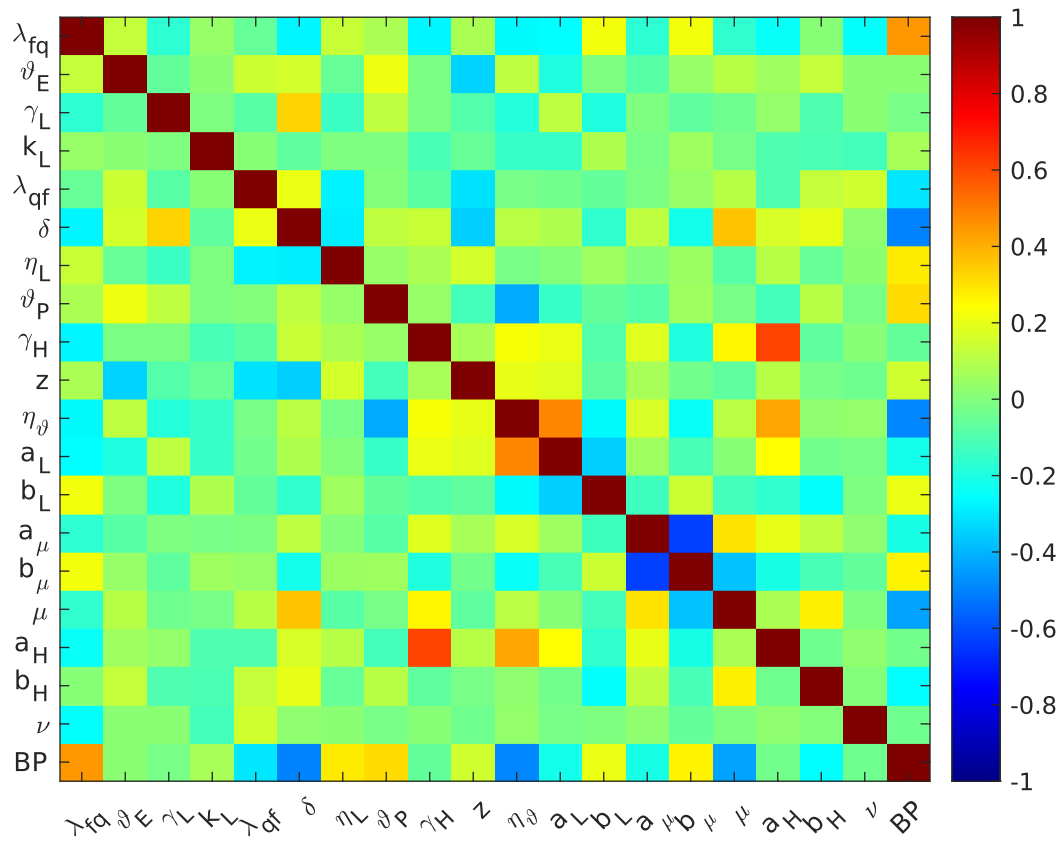
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

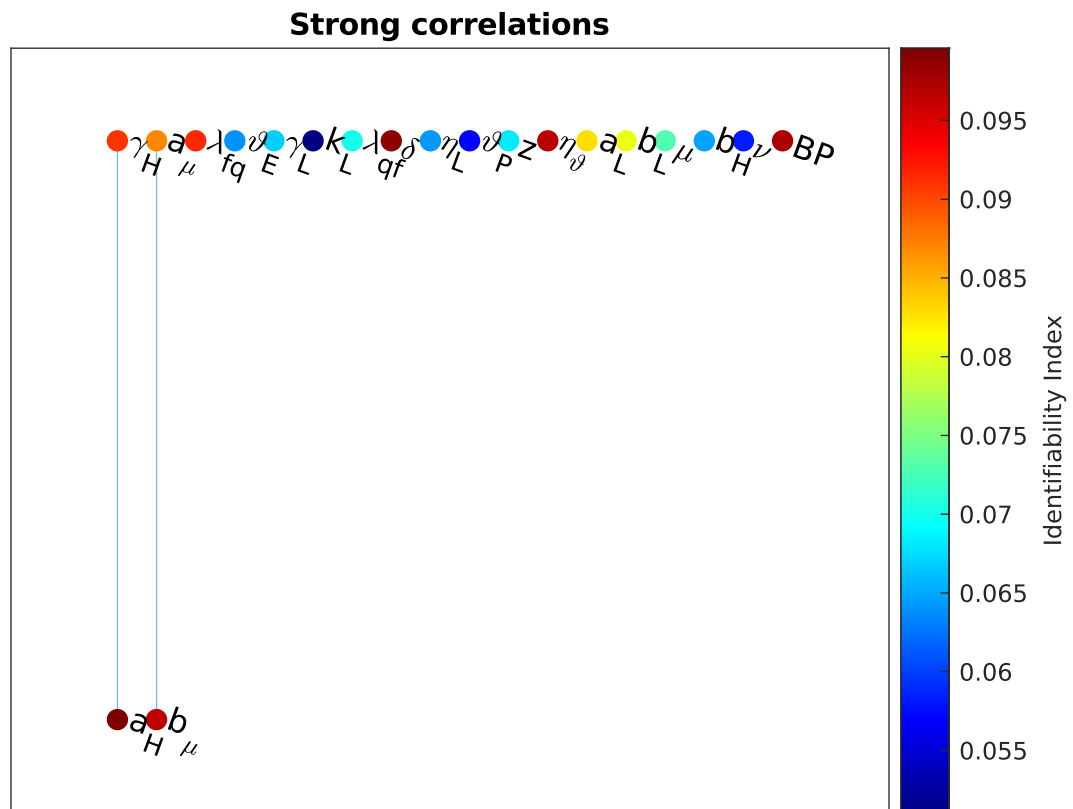
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.8396'	'0.9445'	'0.4932'	'0.8738'	'0.0915'
ϑ_E	'0.0355'	'0.0603'	'0.1086'	'0.0375'	'0.064'
γ_L	'0.0823'	'0.1369'	'0.1176'	'0.1366'	'0.0669'
k_L	'1.8763'	'9.2578'	'5.5512'	'5.2877'	'0.0511'
λ_{qf}	'0.06'	'0.0669'	'0.4777'	'0.0665'	'0.0701'
δ	'0.0039'	'0.0937'	'0.0332'	'0.0586'	'0.0988'
η_L	'0.9111'	'0.9739'	'0.4836'	'0.9702'	'0.0642'
ϑ_P	'0.0001'	'0.0005'	'0.0007'	'0.0003'	'0.0572'
γ_H	'0.2036'	'0.7705'	'0.4239'	'0.2608'	'0.091'
z	'4.8236'	'5.453'	'0.7479'	'5.0951'	'0.0683'
η_{ϑ}	'0.7862'	'0.9572'	'0.8777'	'0.908'	'0.0968'
a_L	'4.0262'	'5.4101'	'7.0273'	'4.1665'	'0.0828'
b_L	'1.0433'	'1.3908'	'9.504'	'1.0946'	'0.0803'
a_{μ}	'6.2835'	'14.6355'	'10.2734'	'13.5511'	'0.087'
b_{μ}	'2.4526'	'10.7794'	'5.849'	'9.914'	'0.0965'
μ	'0.0024'	'0.0909'	'0.0223'	'0.0651'	'0.073'
a_H	'4.2844'	'10.1029'	'10.7209'	'4.5211'	'0.0996'
b_H	'6.7494'	'15'	'2.6648'	'14.2342'	'0.0648'
ν	'0.0067'	'0.0985'	'265.4586'	'0.0552'	'0.0583'
BP	'254.8816'	'264.8162'	'298.5'	'255.5828'	'0.0974'

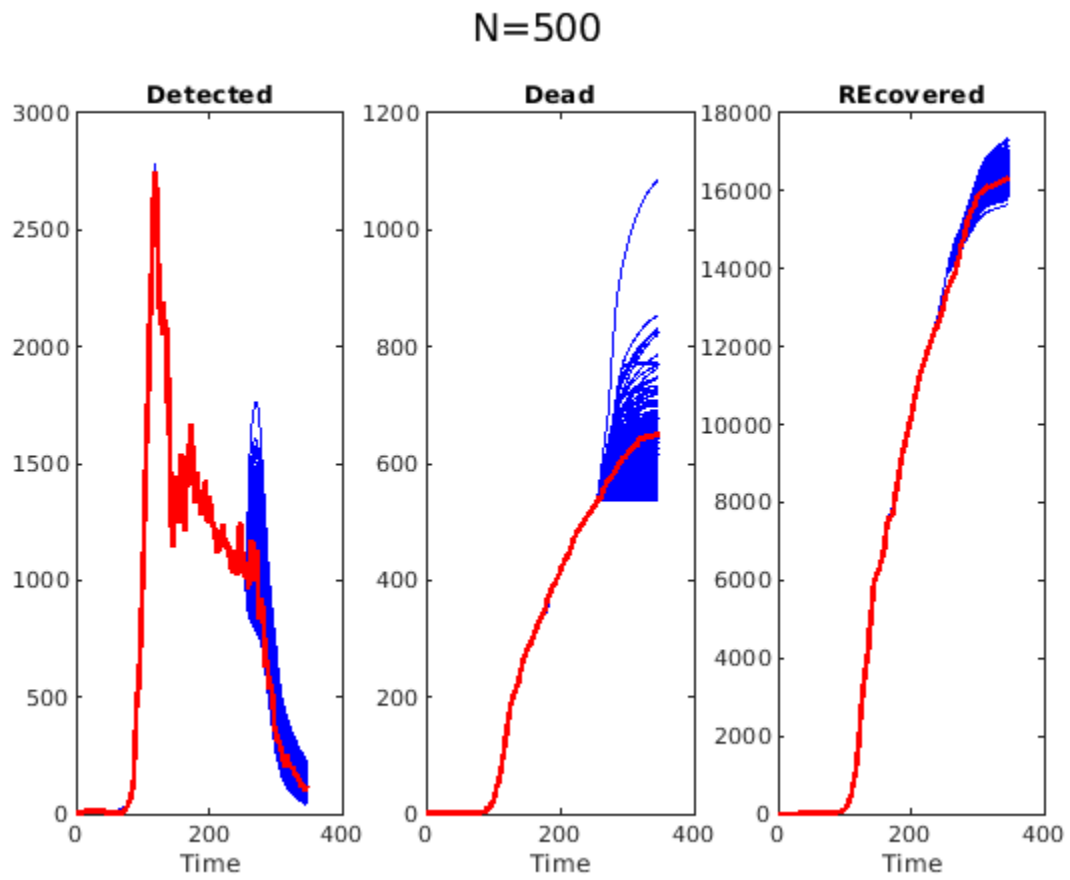
7.3. Identifiability analysis







7.4. Uncertainty analysis



Chapter 8. Extension number8

8.1. Basic information

The extension to be validated consists of the time series from the data349 to the 420. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

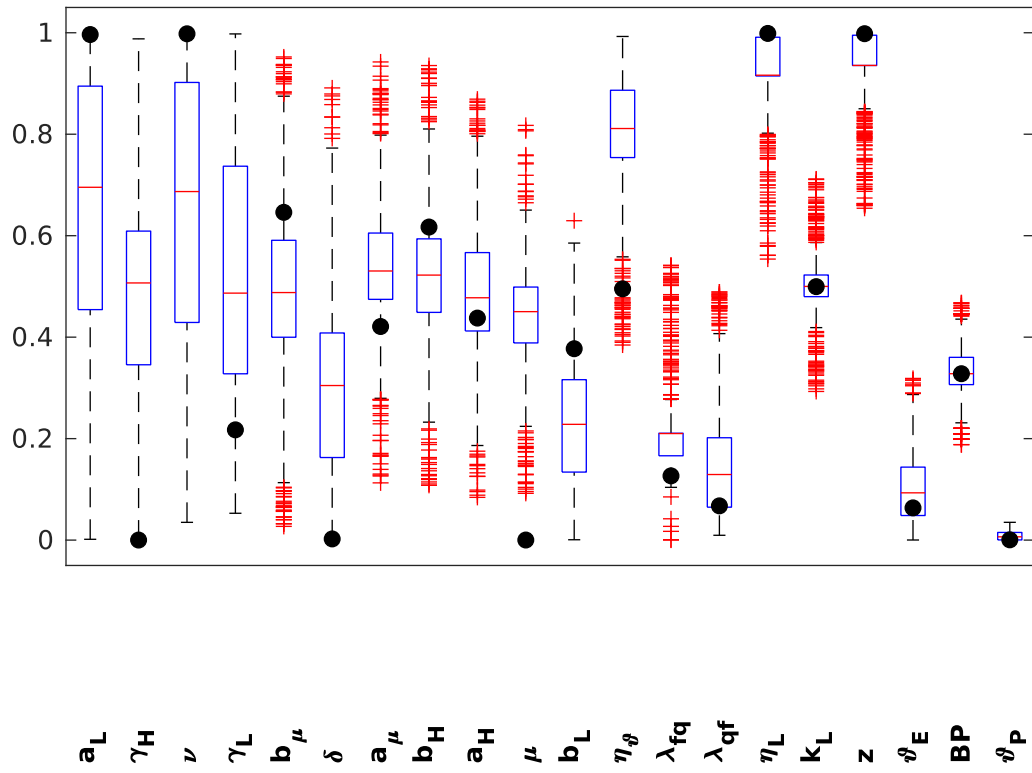
8.2. Estimated parameters with their intervals

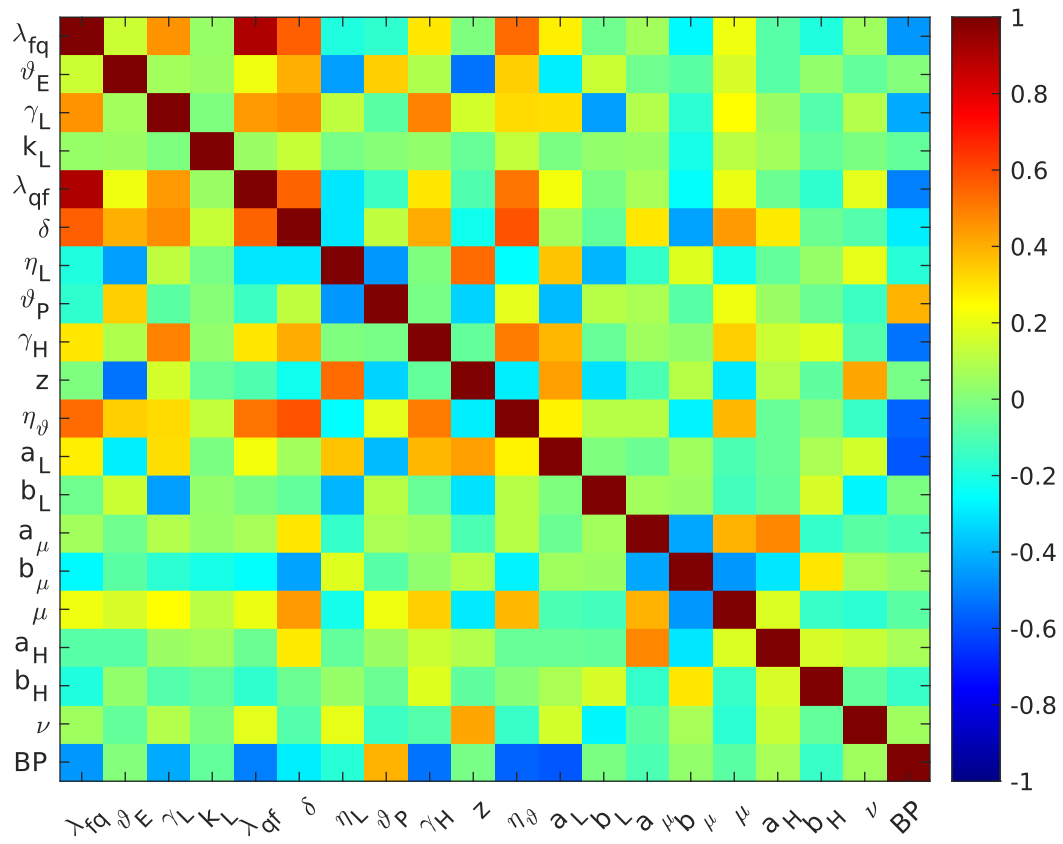
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

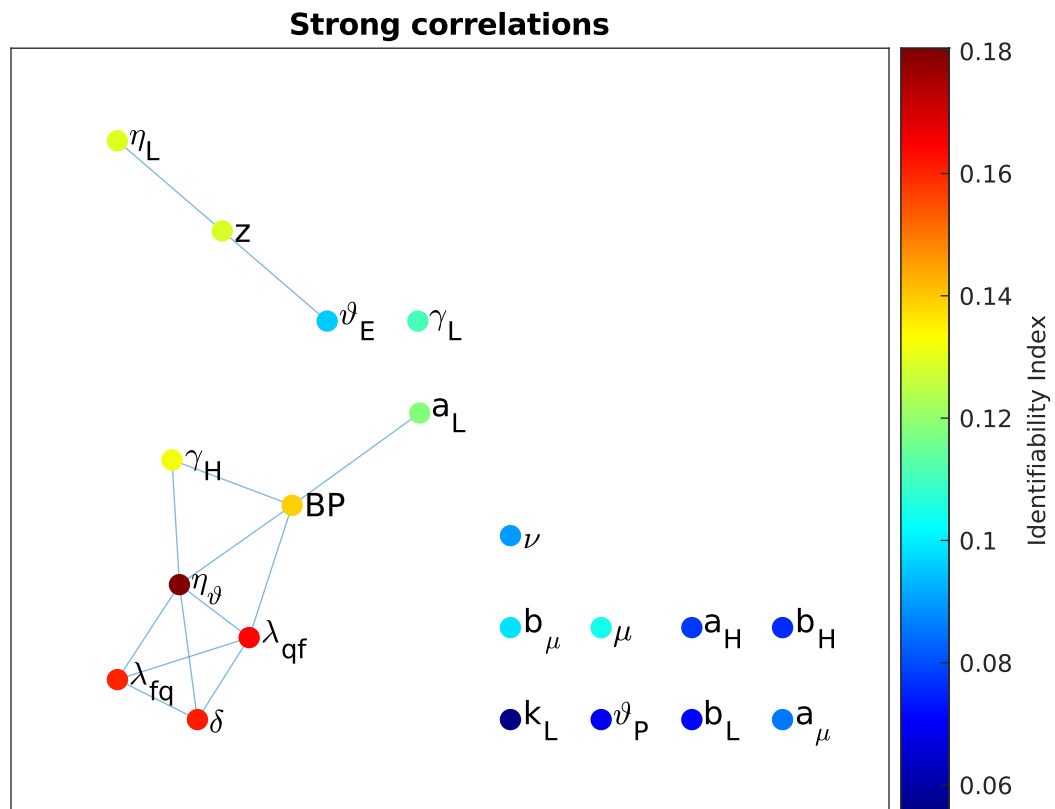
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1198'	'0.1369'	'0.2106'	'0.1266'	'0.1601'
ϑ_E	'0.0167'	'0.1242'	'0.0932'	'0.0635'	'0.0958'
γ_L	'0.2145'	'0.5992'	'0.4868'	'0.2173'	'0.1111'
k_L	'1'	'10'	'5.4999'	'5.496'	'0.0556'
λ_{qf}	'0.0601'	'0.0726'	'0.1302'	'0.0675'	'0.1643'
δ	'0'	'0.0007'	'0.0457'	'0.0003'	'0.1614'
η_L	'0.7444'	'1'	'0.9148'	'0.9987'	'0.1297'
ϑ_P	'0.0005'	'0.0014'	'0.0065'	'0.0005'	'0.0689'
γ_H	'0'	'0.0002'	'0.5069'	'0.0001'	'0.1319'
z	'19.0768'	'30'	'28.0637'	'29.9439'	'0.1285'
η_{ϑ}	'0.4644'	'0.5474'	'0.8112'	'0.4952'	'0.1805'
a_L	'11.2137'	'15'	'10.7357'	'14.9507'	'0.1183'
b_L	'3.8883'	'6.2931'	'4.2328'	'6.2809'	'0.0714'
a_{μ}	'2.2835'	'15'	'8.4259'	'6.894'	'0.0858'
b_{μ}	'1.7'	'15'	'7.8307'	'10.0444'	'0.0989'
μ	'0'	'0.0003'	'0.4503'	'0.0001'	'0.1045'
a_H	'1'	'15'	'7.6871'	'7.1263'	'0.0777'
b_H	'1'	'13.6'	'8.3125'	'9.6381'	'0.0761'
ν	'400.448'	'500'	'343.4936'	'498.9707'	'0.0898'
BP	'344.2266'	'350.6092'	'347.5'	'347.5'	'0.1393'

8.3. Identifiability analysys

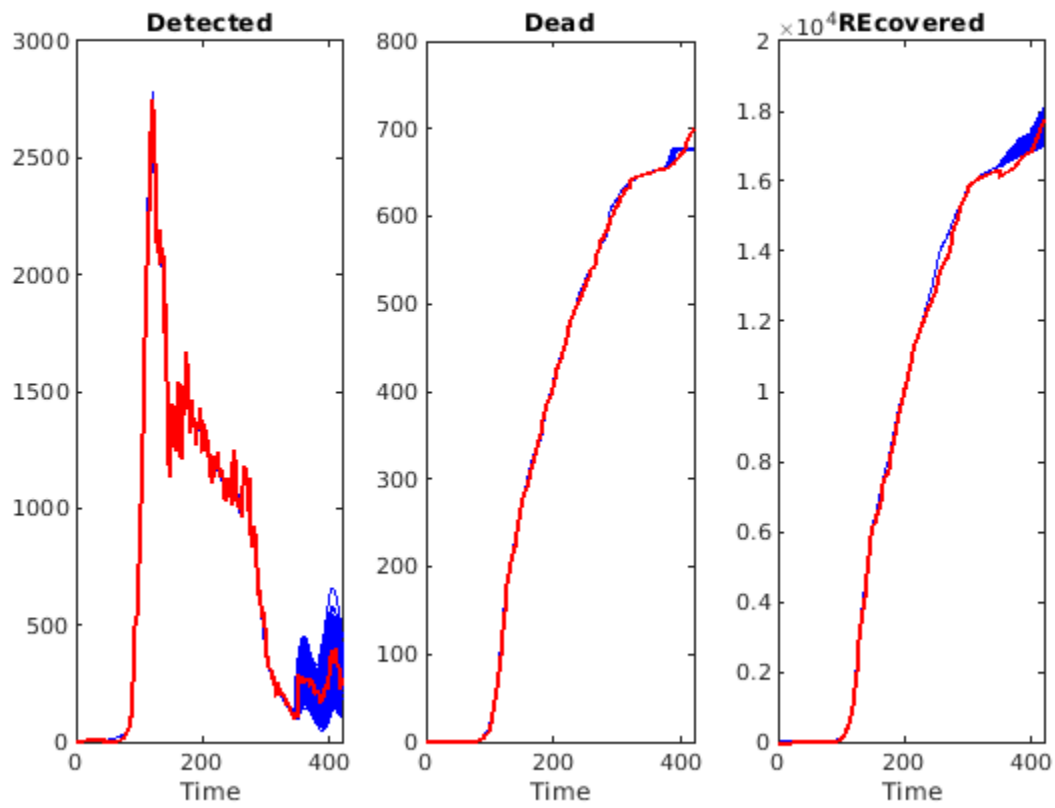






8.4. Uncertainty analysis

N=500



Chapter 9. Extension number9

9.1. Basic information

The extension to be validated consists of the time series from the data420 to the 442. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

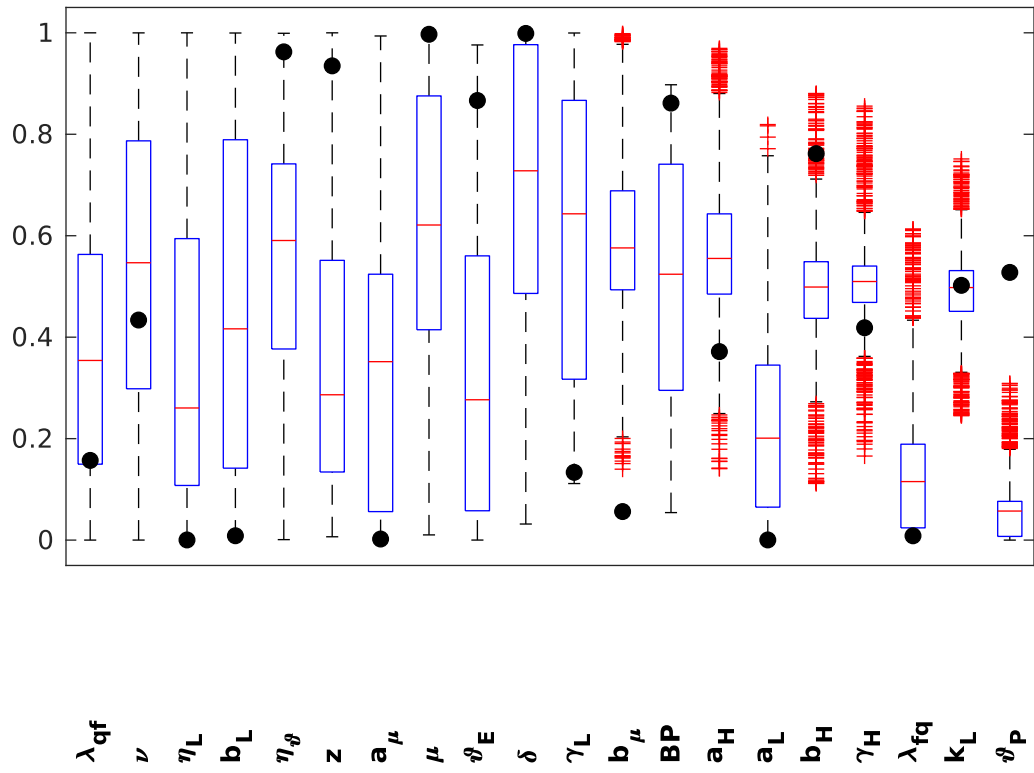
9.2. Estimated parameters with their intervals

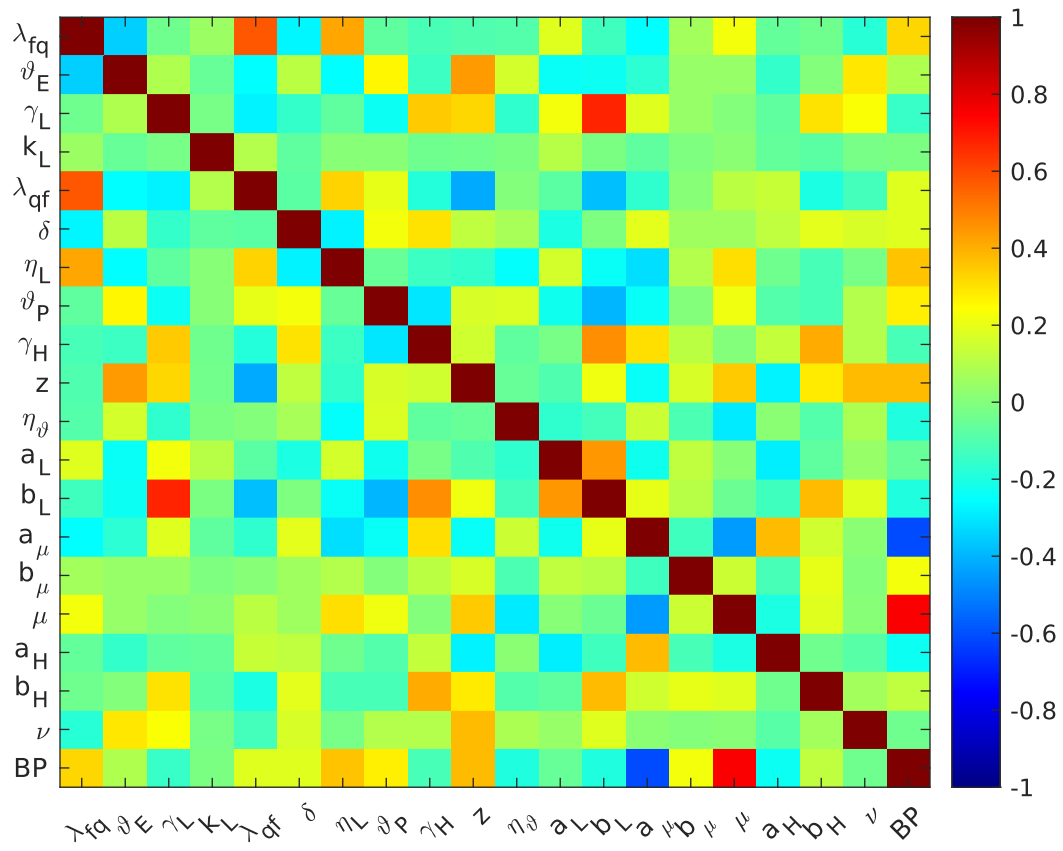
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

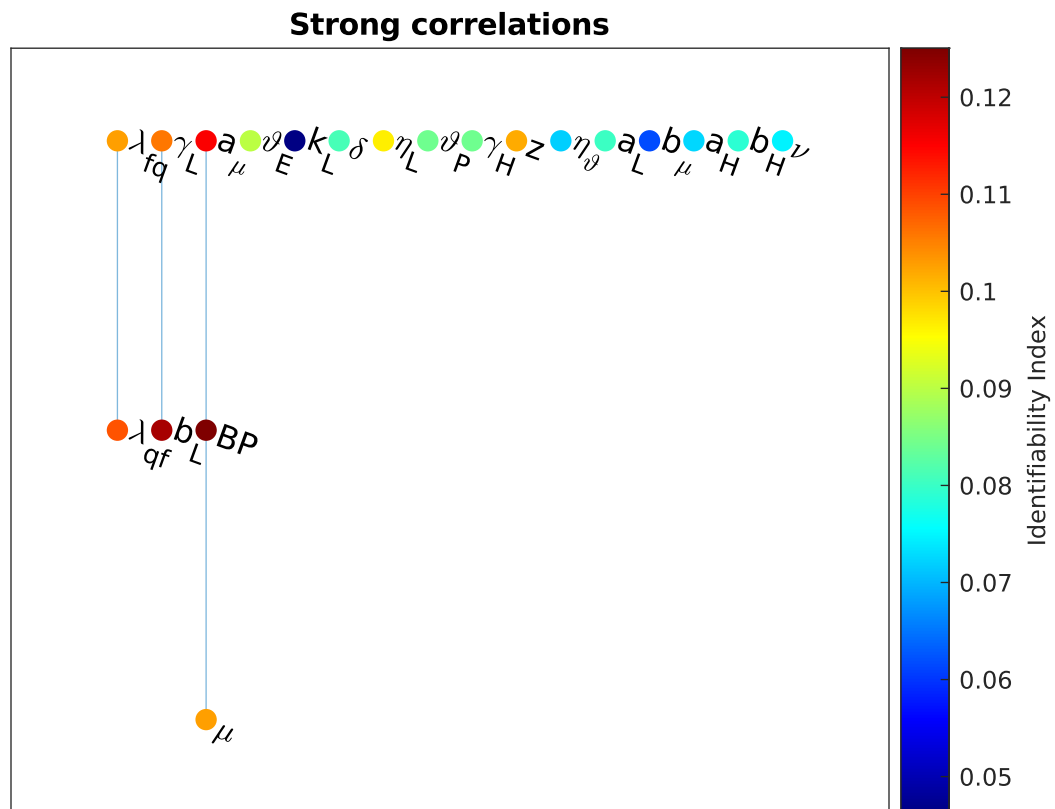
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0008'	'0.0191'	'0.1156'	'0.0085'	'0.1027'
ϑ_E	'0.8144'	'0.8694'	'0.2766'	'0.8665'	'0.0901'
γ_L	'0.1172'	'0.1961'	'0.6432'	'0.1336'	'0.1058'
k_L	'1.45'	'10'	'5.4804'	'5.5197'	'0.0463'
λ_{qf}	'0.1491'	'0.3044'	'0.3541'	'0.1571'	'0.1086'
δ	'0.0218'	'0.15'	'0.1092'	'0.1498'	'0.0812'
η_L	'0.0001'	'0.0007'	'0.2604'	'0.0003'	'0.0965'
ϑ_P	'0.4947'	'0.6977'	'0.0576'	'0.5277'	'0.0842'
γ_H	'0.0554'	'0.8975'	'0.5097'	'0.4186'	'0.0844'
z	'22.206'	'28.0645'	'8.5945'	'28.0455'	'0.1018'
η_{ϑ}	'0.0684'	'1'	'0.5906'	'0.9624'	'0.0719'
a_L	'1'	'1.3905'	'3.8135'	'1.0044'	'0.0803'
b_L	'1.0867'	'2.3626'	'6.8303'	'1.12'	'0.1217'
a_{μ}	'1'	'11.4509'	'5.9241'	'1.0295'	'0.1152'
b_{μ}	'1'	'15'	'9.0634'	'1.7875'	'0.0618'
μ	'0.02'	'1'	'0.6211'	'0.9971'	'0.1026'
a_H	'1.623'	'15'	'8.773'	'6.202'	'0.0726'
b_H	'1.28'	'15'	'7.9839'	'11.6649'	'0.0791'
ν	'214.7911'	'319.7686'	'273.3701'	'216.8968'	'0.0749'
BP	'417.339'	'421.5056'	'392.5'	'420.4982'	'0.125'

9.3. Identifiability analysis

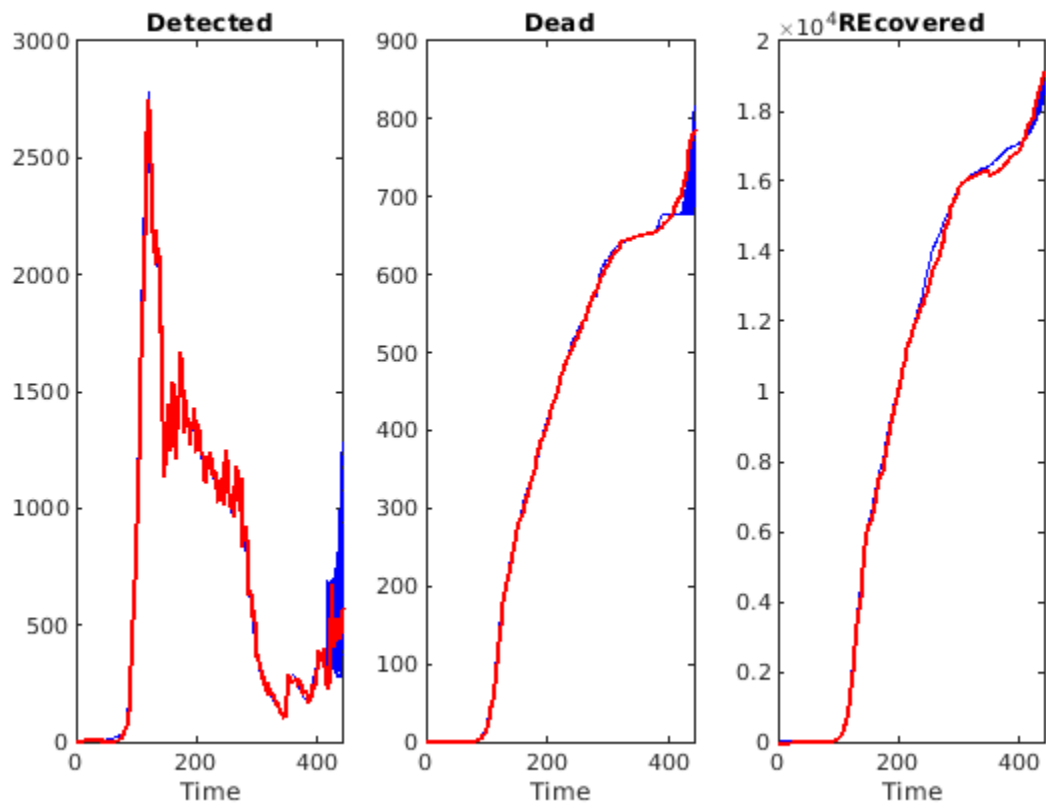






9.4. Uncertainty analysis

N=500



Chapter 10. Extension number10

10.1. Basic information

The extension to be validated consists of the time series from the data442 to the 449. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

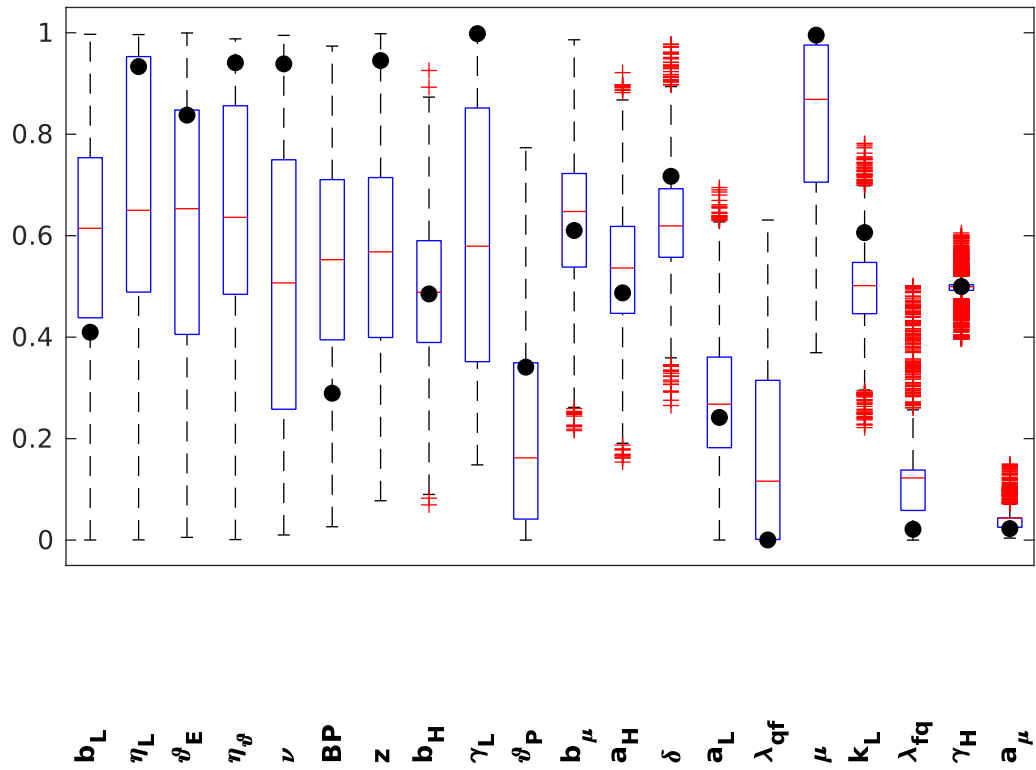
10.2. Estimated parameters with their intervals

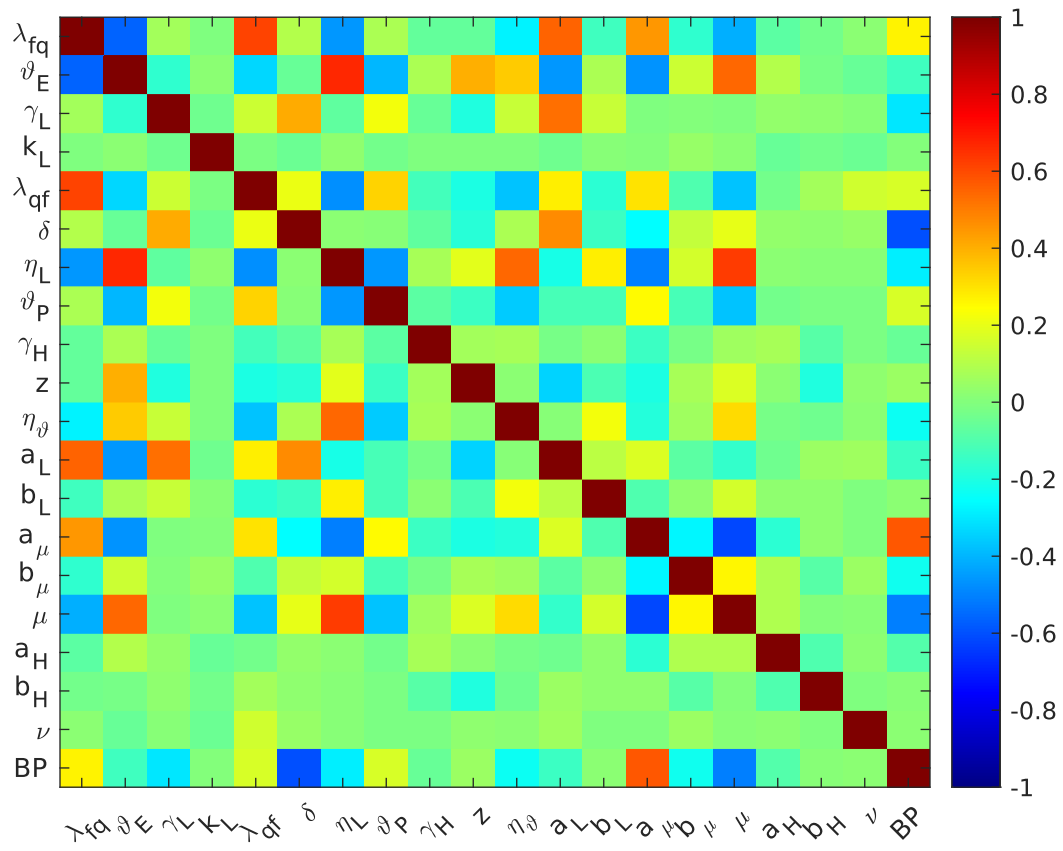
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

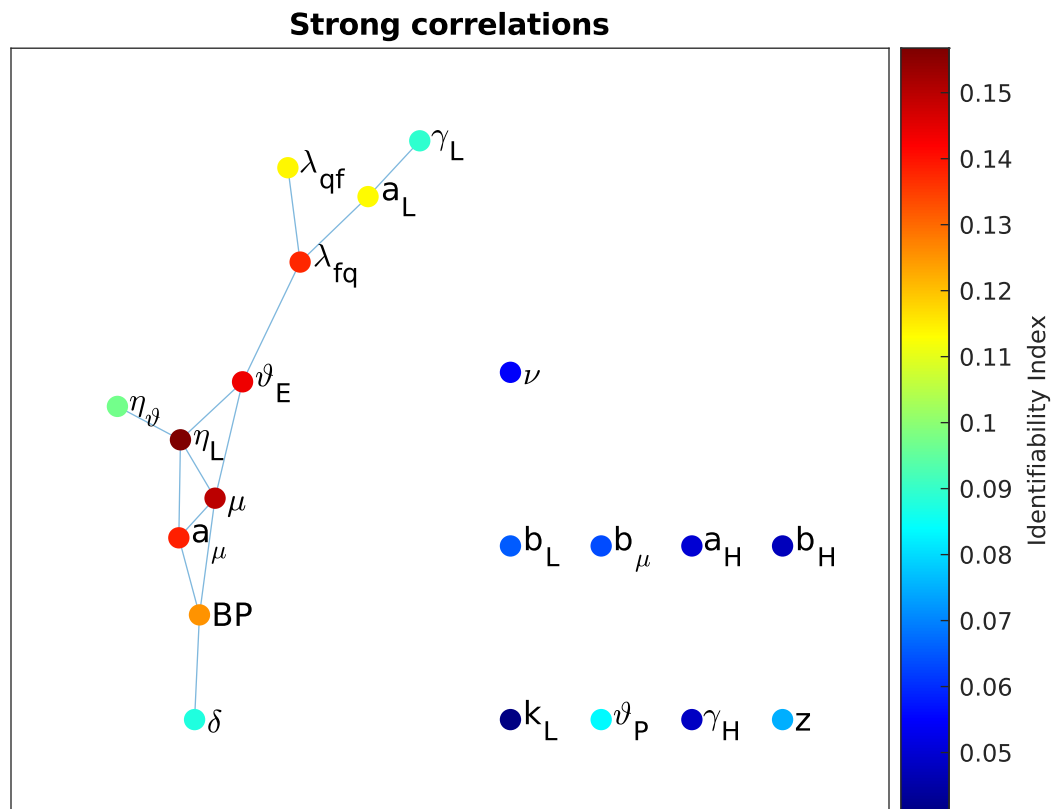
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0196'	'0.0309'	'0.1226'	'0.0213'	'0.1375'
ϑ_E	'0.7802'	'0.8413'	'0.6532'	'0.8377'	'0.144'
γ_L	'0.4229'	'1'	'0.5794'	'0.9982'	'0.0898'
k_L	'1.7181'	'9.64'	'5.5131'	'6.4551'	'0.041'
λ_{qf}	'0'	'0.0006'	'0.1164'	'0.0003'	'0.1142'
δ	'0.0206'	'0.1446'	'0.0929'	'0.1076'	'0.0877'
η_L	'0.2495'	'0.97'	'0.6501'	'0.9333'	'0.1567'
ϑ_P	'0.3112'	'0.4744'	'0.1625'	'0.3409'	'0.0838'
γ_H	'0.025'	'1'	'0.4995'	'0.4997'	'0.0484'
z	'22.387'	'29.2497'	'17.0452'	'28.3563'	'0.0753'
η_{ϑ}	'0.1911'	'0.9676'	'0.6362'	'0.9409'	'0.0971'
a_L	'3.4719'	'5.4904'	'4.7512'	'4.3842'	'0.1136'
b_L	'5.5063'	'13.341'	'9.6047'	'6.7361'	'0.0655'
a_{μ}	'1.271'	'11.8396'	'1.6112'	'1.317'	'0.1383'
b_{μ}	'1'	'13.1296'	'10.0648'	'9.5433'	'0.064'
μ	'0.271'	'1'	'0.8687'	'0.9953'	'0.1498'
a_H	'2.6358'	'14.0022'	'8.508'	'7.8223'	'0.0503'
b_H	'1.2688'	'14.44'	'7.8379'	'7.7927'	'0.0473'
ν	'333.0808'	'471.6738'	'253.4566'	'469.3251'	'0.0546'
BP	'425.4931'	'427.0414'	'430.5'	'425.5'	'0.1252'

10.3. Identifiability analysis

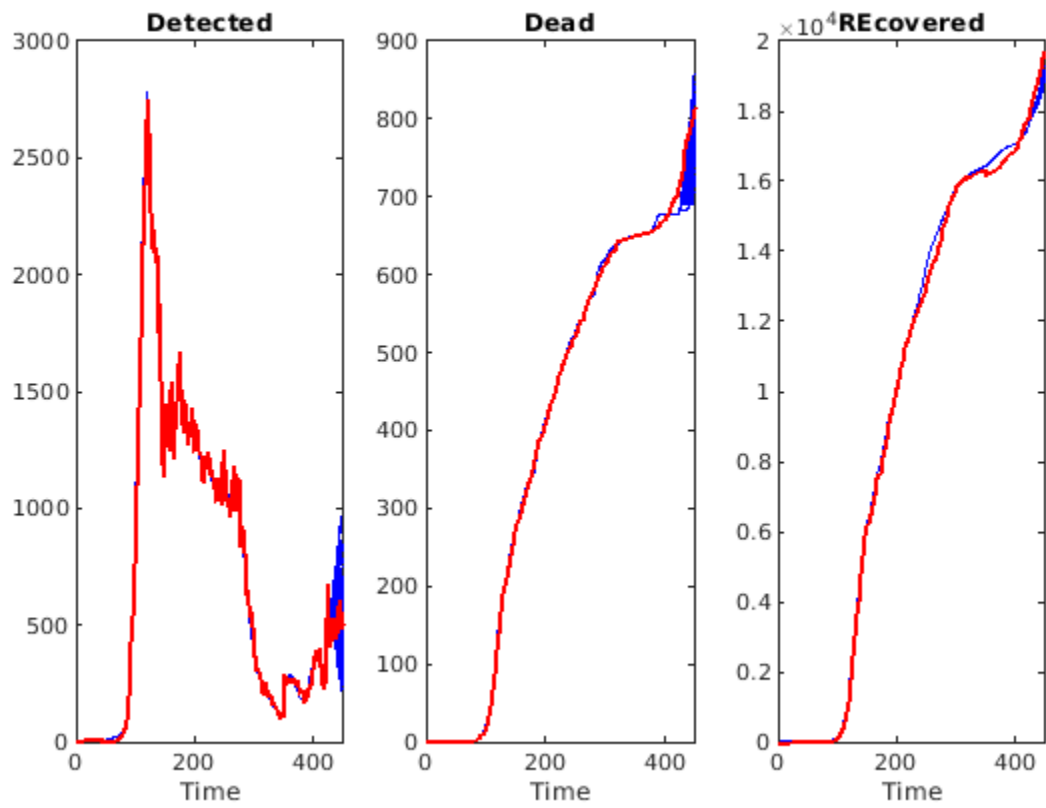






10.4. Uncertainty analysis

N=500



Chapter 11. Extension number11

11.1. Basic information

The extension to be validated consists of the time series from the data449 to the 457. The status of the validation is: COMPLETED.

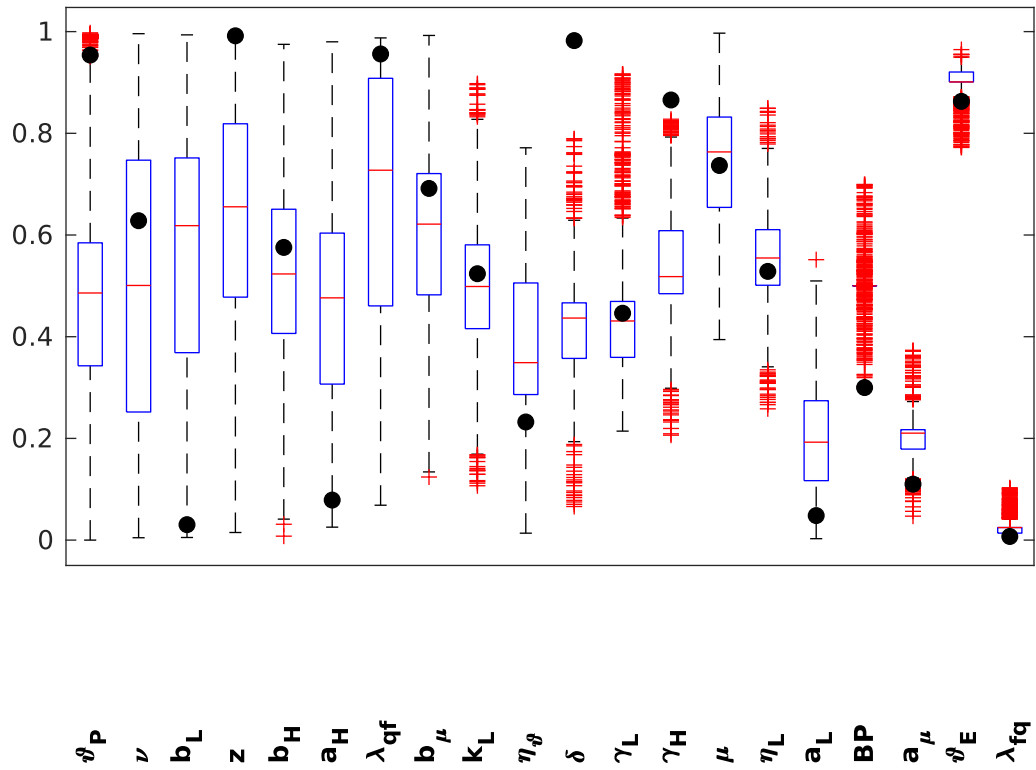
The number of estimations needed to perform the validation was1000.

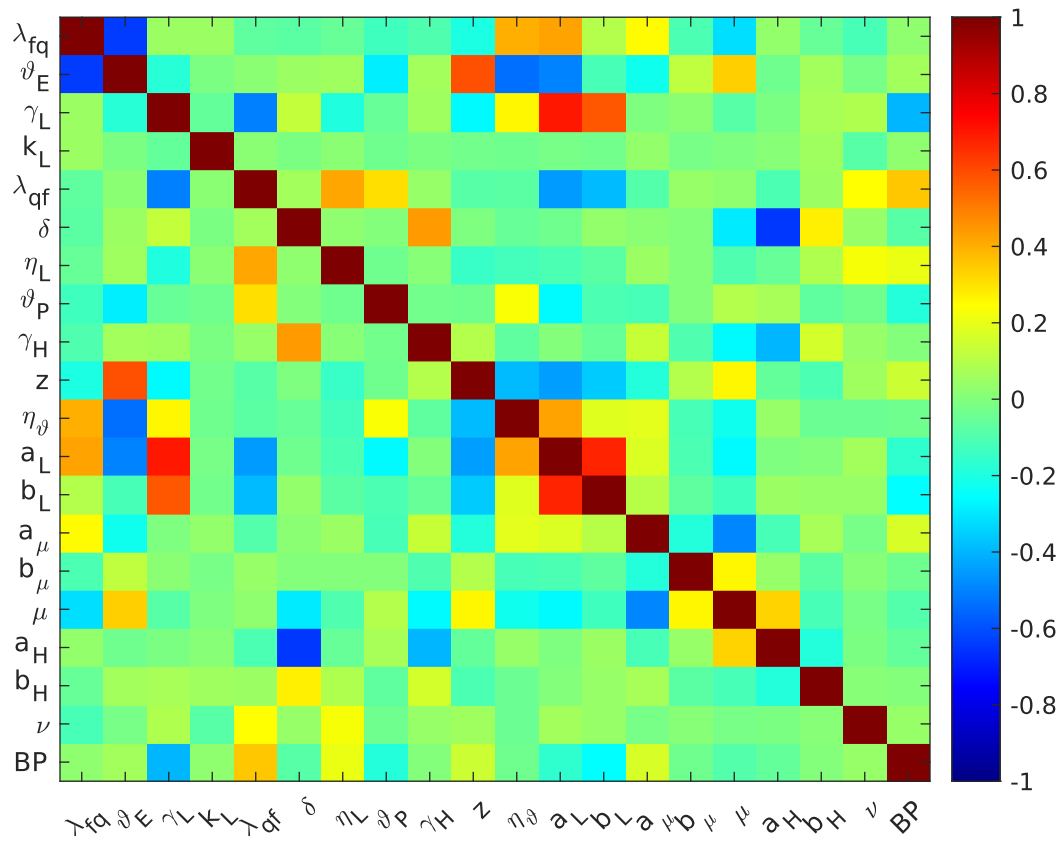
11.2. Estimated parameters with their intervals

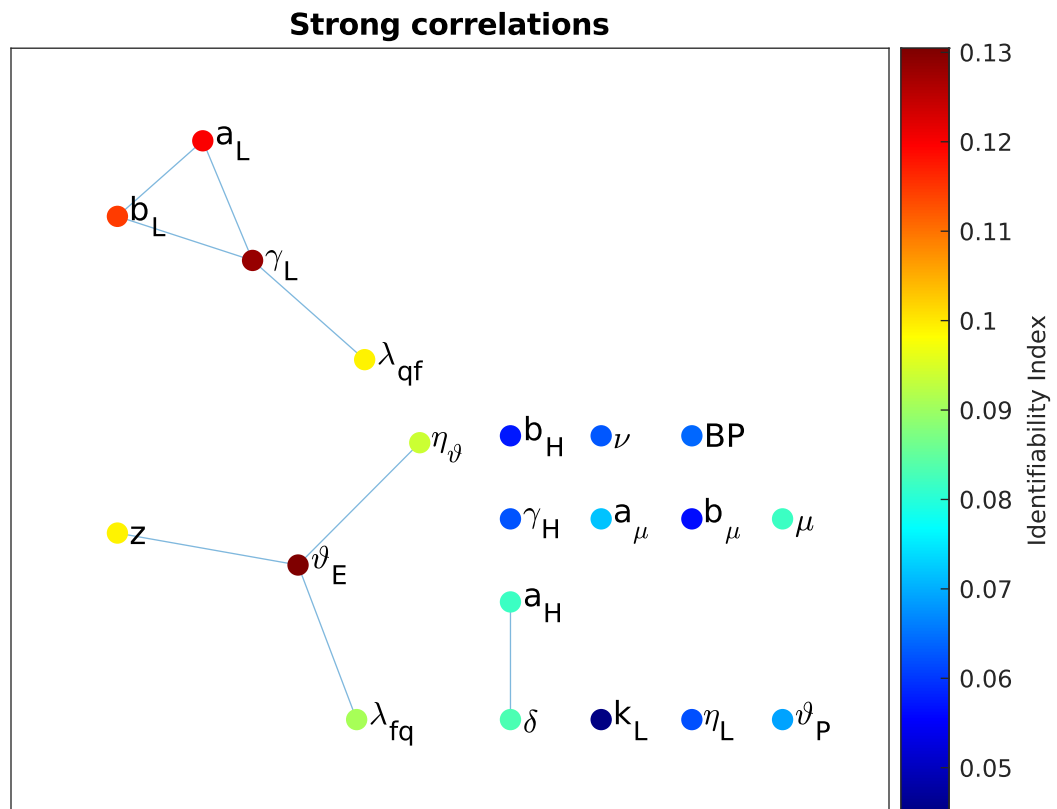
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.011'	'0.0384'	'0.0247'	'0.0071'	'0.0908'
\vartheta_E	'0.8817'	'0.9203'	'0.901'	'0.8628'	'0.1305'
\gamma_L	'0.4112'	'0.4508'	'0.431'	'0.4461'	'0.1283'
k_L	'5.3724'	'5.6046'	'5.4885'	'5.7149'	'0.045'
\lambda_{qf}	'0.7077'	'0.7471'	'0.7274'	'0.956'	'0.0991'
\delta	'0.0629'	'0.0681'	'0.0655'	'0.1473'	'0.0833'
\eta_L	'0.5424'	'0.5672'	'0.5548'	'0.5285'	'0.0621'
\vartheta_P	'0.4678'	'0.5042'	'0.486'	'0.9539'	'0.0693'
\gamma_H	'0.5064'	'0.53'	'0.5182'	'0.8656'	'0.0627'
z	'19.1433'	'20.1856'	'19.6645'	'29.7526'	'0.0992'
\eta_{\vartheta}	'0.3361'	'0.3618'	'0.349'	'0.2323'	'0.0938'
a_L	'3.5593'	'3.833'	'3.6961'	'1.6749'	'0.12'
b_L	'9.3419'	'9.973'	'9.6575'	'1.425'	'0.1147'
a_{\mu}	'3.7463'	'4.1432'	'3.9447'	'2.5404'	'0.072'
b_{\mu}	'9.4968'	'9.8906'	'9.6937'	'10.6825'	'0.0567'
\mu	'0.7523'	'0.7744'	'0.7633'	'0.7367'	'0.082'
a_H	'7.4441'	'7.8949'	'7.6695'	'2.1019'	'0.0818'
b_H	'8.1434'	'8.512'	'8.3277'	'9.0583'	'0.0576'
\nu	'239.2227'	'261.5649'	'250.3938'	'314.0641'	'0.0627'
BP	'444.4497'	'444.5503'	'444.5'	'443.4999'	'0.0643'

11.3. Identifiability analysis

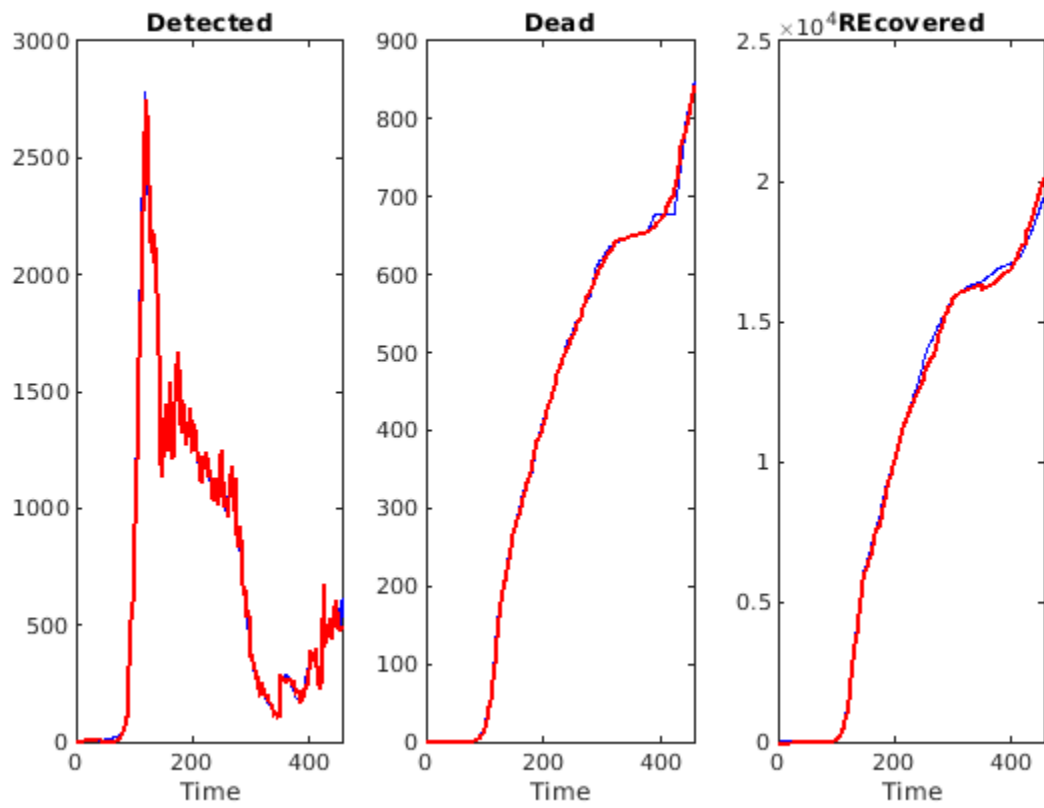






11.4. Uncertainty analysis

N=500



Chapter 12. Extension number12

12.1. Basic information

The extension to be validated consists of the time series from the data457 to the 464. The status of the validation is: COMPLETED.

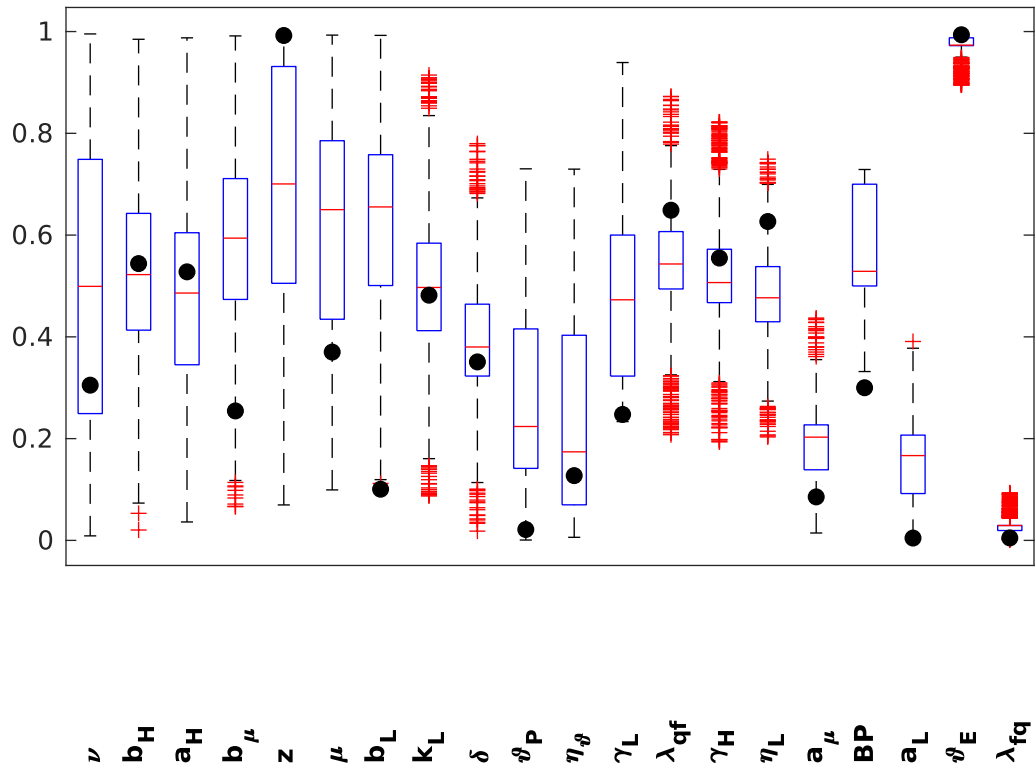
The number of estimations needed to perform the validation was1000.

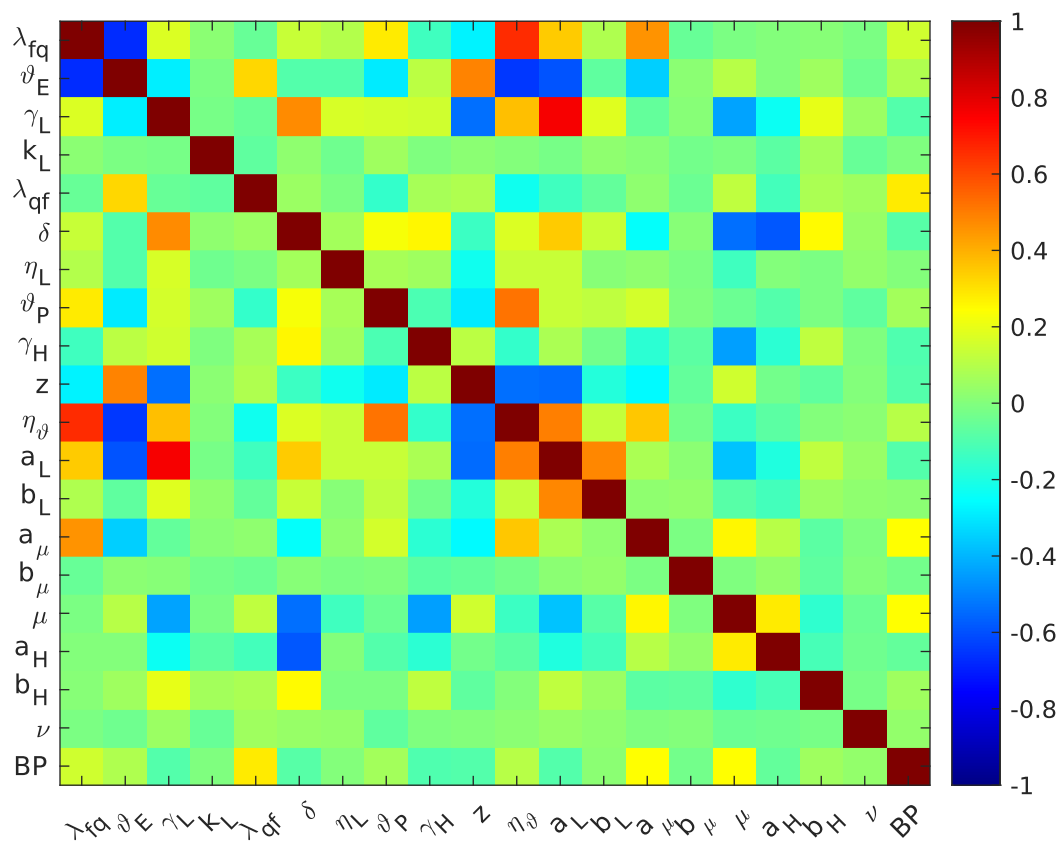
12.2. Estimated parameters with their intervals

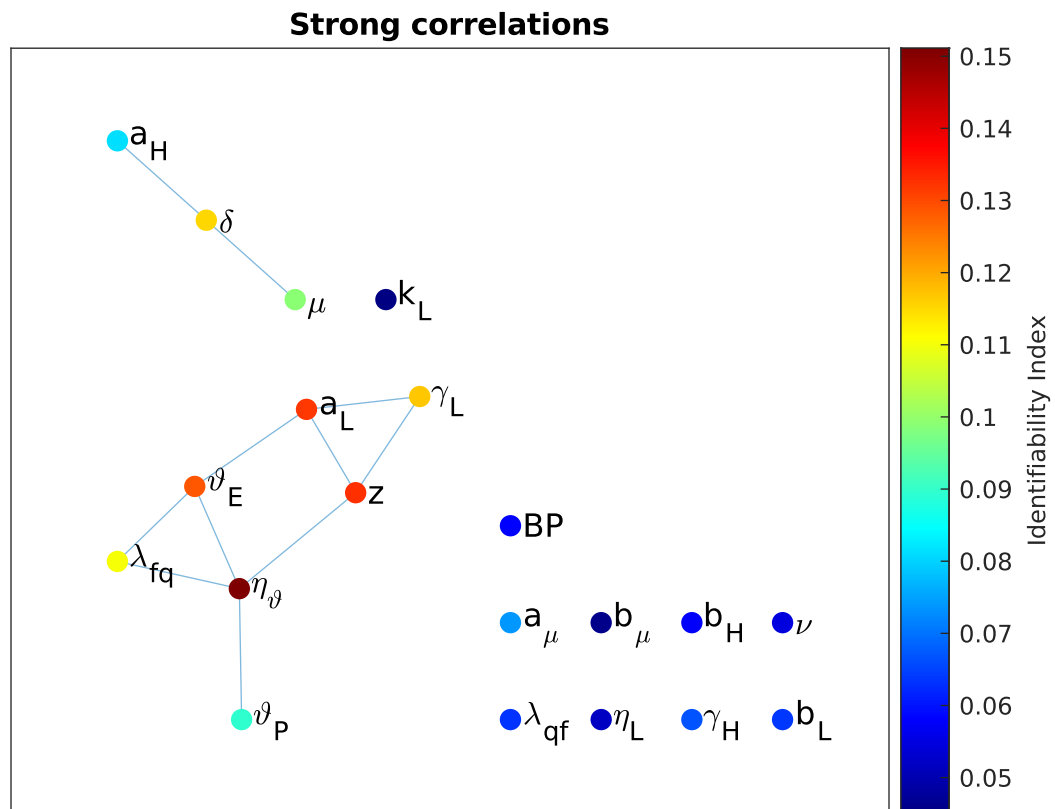
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0143'	'0.0442'	'0.0293'	'0.0049'	'0.1105'
ϑ_E	'0.9613'	'0.9853'	'0.9733'	'0.9937'	'0.1285'
γ_L	'0.4607'	'0.4849'	'0.4728'	'0.2475'	'0.1172'
k_L	'5.3543'	'5.5931'	'5.4737'	'5.3371'	'0.0452'
λ_{qf}	'0.53'	'0.5564'	'0.5432'	'0.6489'	'0.0635'
δ	'0.0546'	'0.0595'	'0.057'	'0.0526'	'0.1151'
η_L	'0.4667'	'0.4868'	'0.4768'	'0.6267'	'0.0518'
ϑ_P	'0.2075'	'0.2401'	'0.2238'	'0.0214'	'0.0898'
γ_H	'0.4943'	'0.5191'	'0.5067'	'0.5549'	'0.0667'
z	'20.4487'	'21.5823'	'21.0155'	'29.7677'	'0.1327'
η_{ϑ}	'0.1575'	'0.1906'	'0.174'	'0.1273'	'0.1511'
a_L	'3.2352'	'3.4315'	'3.3333'	'1.0644'	'0.1317'
b_L	'9.9557'	'10.3939'	'10.1748'	'2.4082'	'0.0642'
a_{μ}	'3.6694'	'4.0115'	'3.8405'	'2.1967'	'0.0739'
b_{μ}	'9.1133'	'9.5188'	'9.3161'	'4.5619'	'0.0463'
μ	'0.633'	'0.667'	'0.65'	'0.3701'	'0.0993'
a_H	'7.596'	'8.015'	'7.8055'	'8.3889'	'0.0814'
b_H	'8.126'	'8.4998'	'8.3129'	'8.6156'	'0.0577'
ν	'238.4442'	'260.7854'	'249.6148'	'152.5272'	'0.055'
BP	'451.5947'	'451.6932'	'451.644'	'450.5'	'0.0581'

12.3. Identifiability analysis

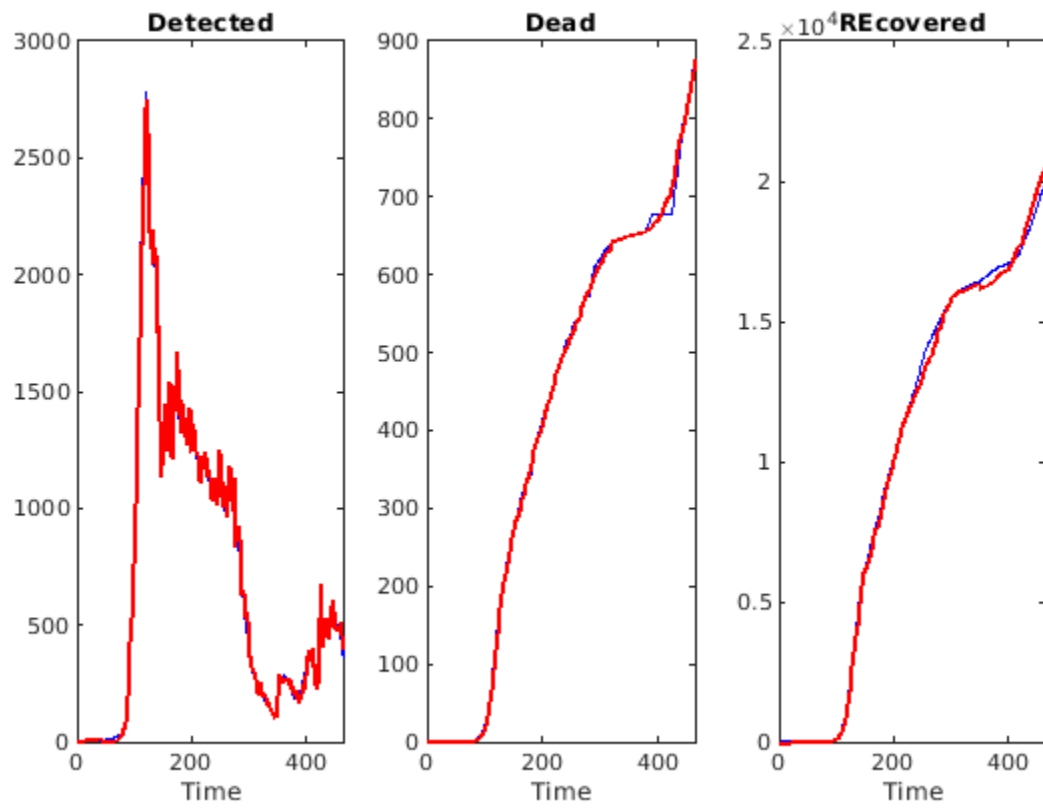






12.4. Uncertainty analysis

N=500



Chapter 13. Extension number13

13.1. Basic information

The extension to be validated consists of the time series from the data464 to the 478. The status of the validation is: COMPLETED.

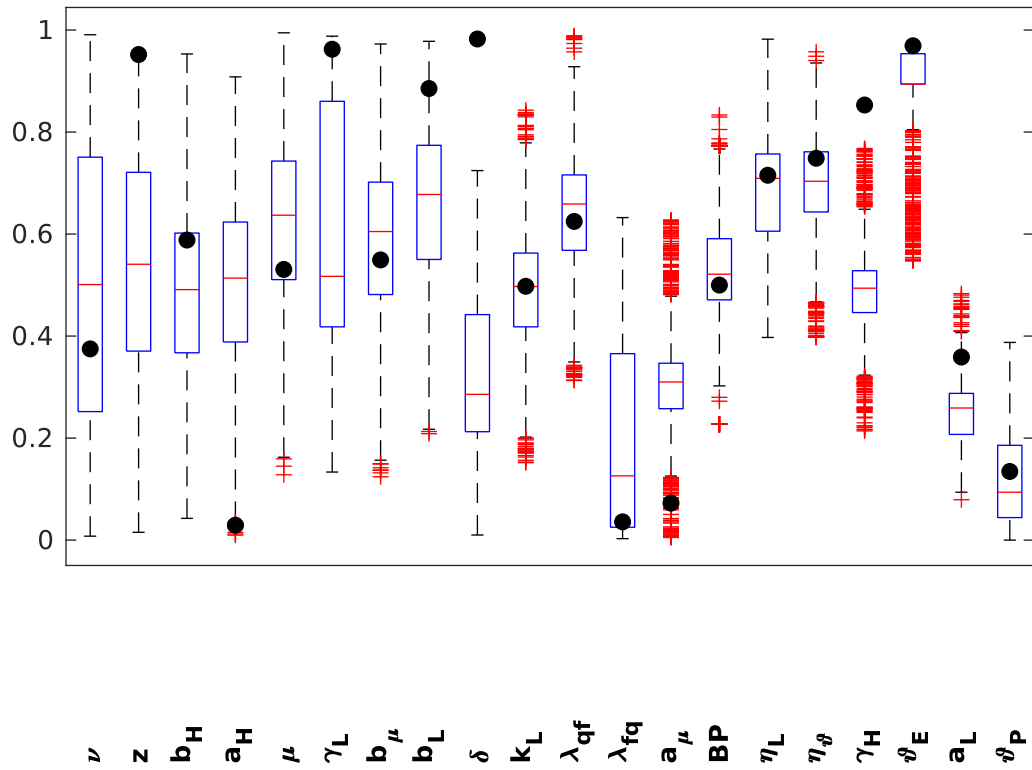
The number of estimations needed to perform the validation was1000.

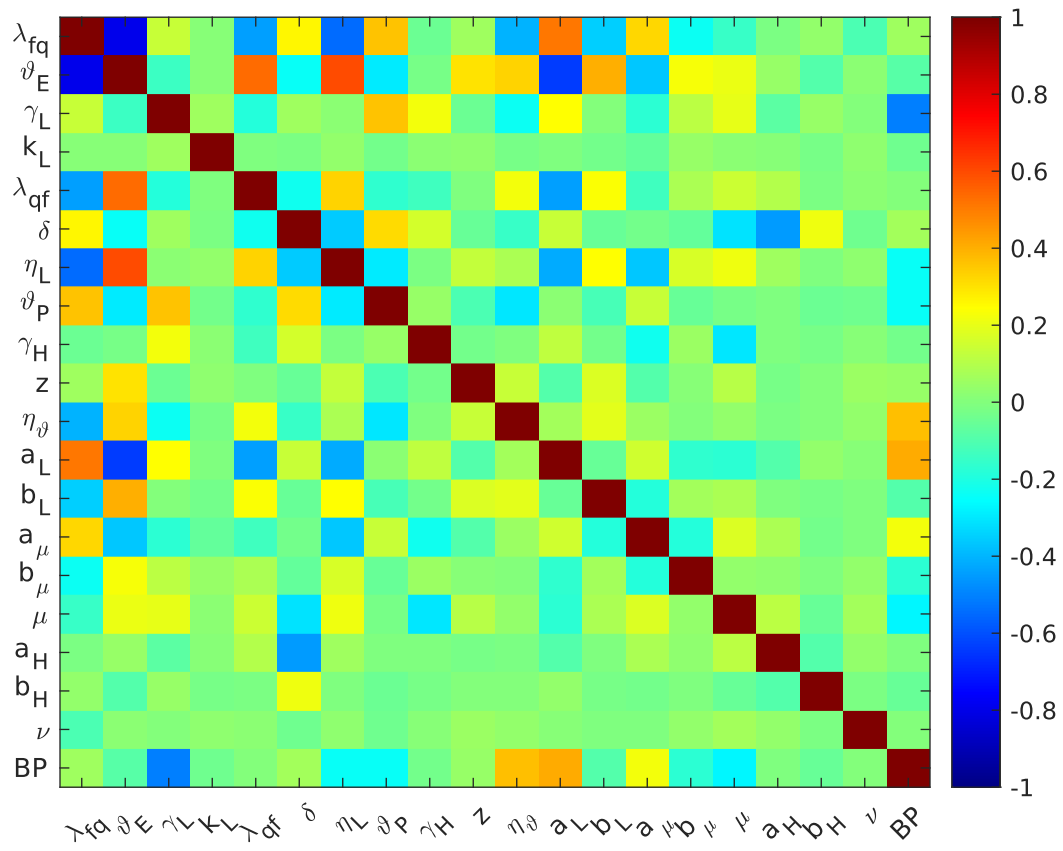
13.2. Estimated parameters with their intervals

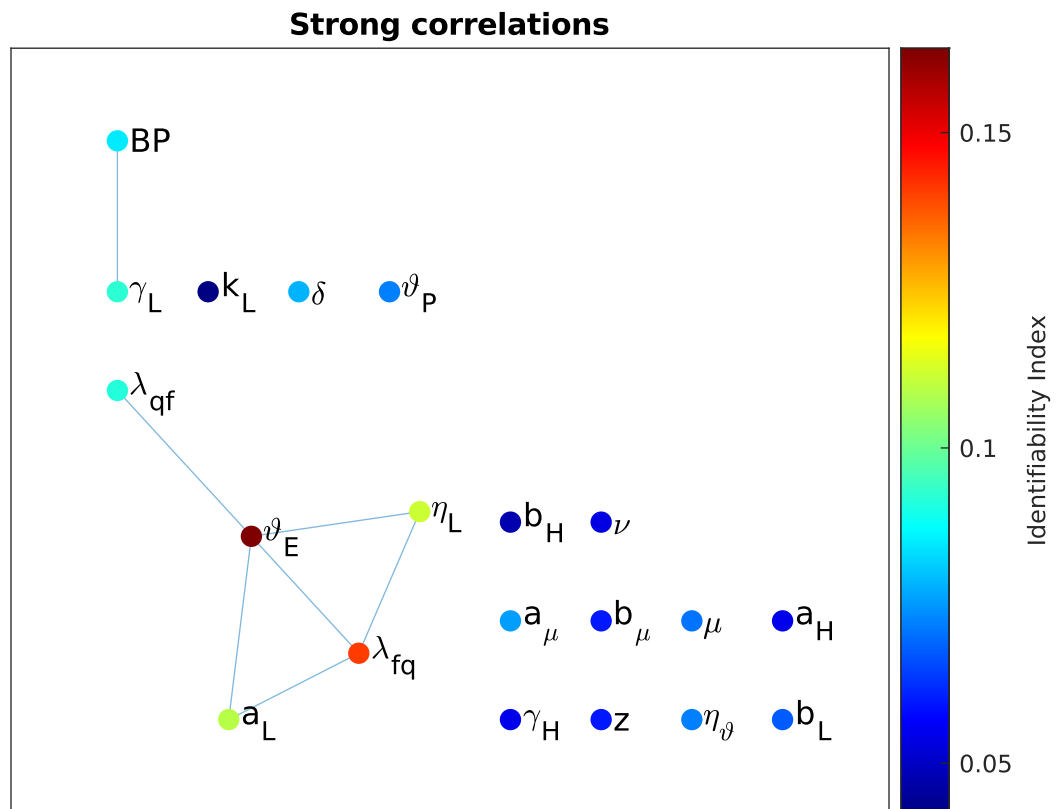
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1082'	'0.1443'	'0.1262'	'0.0358'	'0.141'
ϑ_E	'0.8723'	'0.9156'	'0.894'	'0.9692'	'0.1634'
γ_L	'0.4973'	'0.537'	'0.5172'	'0.9624'	'0.0925'
k_L	'5.3708'	'5.5783'	'5.4745'	'5.4785'	'0.0422'
λ_{qf}	'0.6473'	'0.6704'	'0.6588'	'0.6248'	'0.0919'
δ	'0.0408'	'0.045'	'0.0429'	'0.1474'	'0.0786'
η_L	'0.6993'	'0.719'	'0.7092'	'0.7153'	'0.1114'
ϑ_P	'0.0834'	'0.1047'	'0.0941'	'0.1346'	'0.0724'
γ_H	'0.4825'	'0.5053'	'0.4939'	'0.853'	'0.0547'
z	'15.7244'	'16.7249'	'16.2246'	'28.5581'	'0.06'
η_{ϑ}	'0.6894'	'0.7175'	'0.7035'	'0.7487'	'0.0722'
a_L	'4.4594'	'4.7927'	'4.6261'	'6.0239'	'0.1091'
b_L	'10.2907'	'10.6826'	'10.4867'	'13.3948'	'0.0681'
a_{μ}	'5.1427'	'5.5382'	'5.3405'	'2.0152'	'0.0761'
b_{μ}	'9.2771'	'9.658'	'9.4676'	'8.6907'	'0.0601'
μ	'0.6242'	'0.6495'	'0.6369'	'0.5307'	'0.0709'
a_H	'7.9937'	'8.3892'	'8.1915'	'1.4086'	'0.0545'
b_H	'7.6964'	'8.0538'	'7.8751'	'9.236'	'0.0476'
ν	'239.3377'	'261.6827'	'250.5102'	'187.4417'	'0.054'
BP	'462.6037'	'462.8659'	'462.7348'	'462.4997'	'0.0853'

13.3. Identifiability analysis

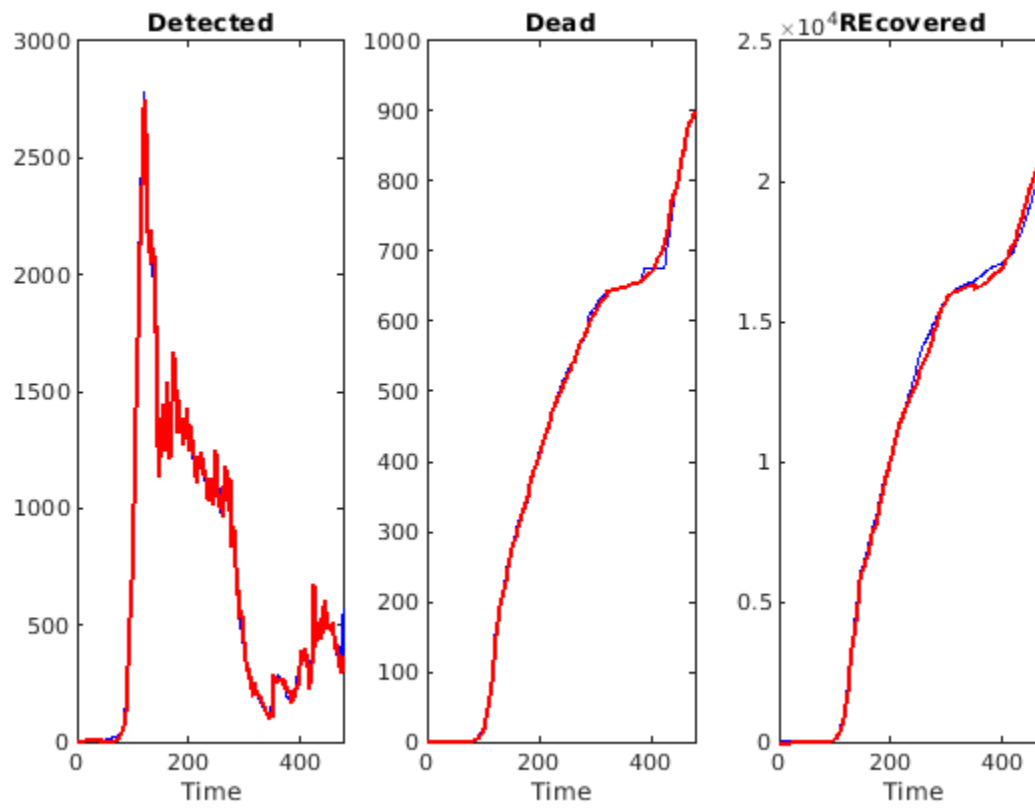






13.4. Uncertainty analysys

N=500



Chapter 14. Extension number14

14.1. Basic information

The extension to be validated consists of the time series from the data478 to the 522. The status of the validation is: COMPLETED.

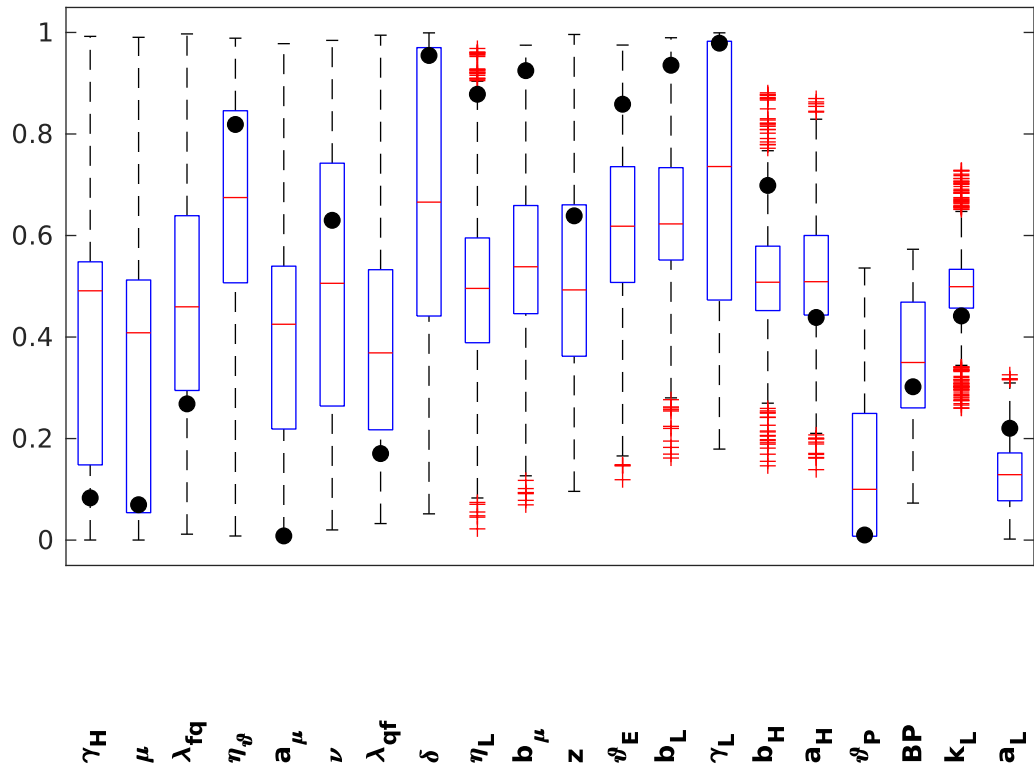
The number of estimations needed to perform the validation was1000.

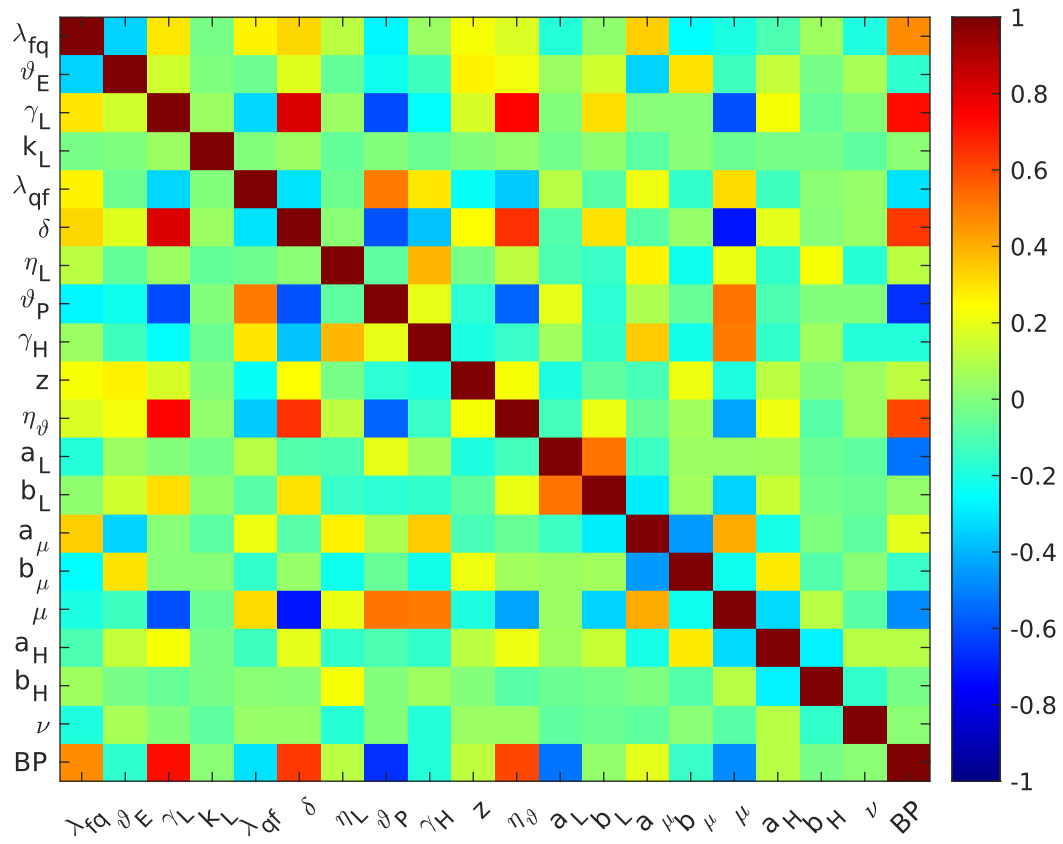
14.2. Estimated parameters with their intervals

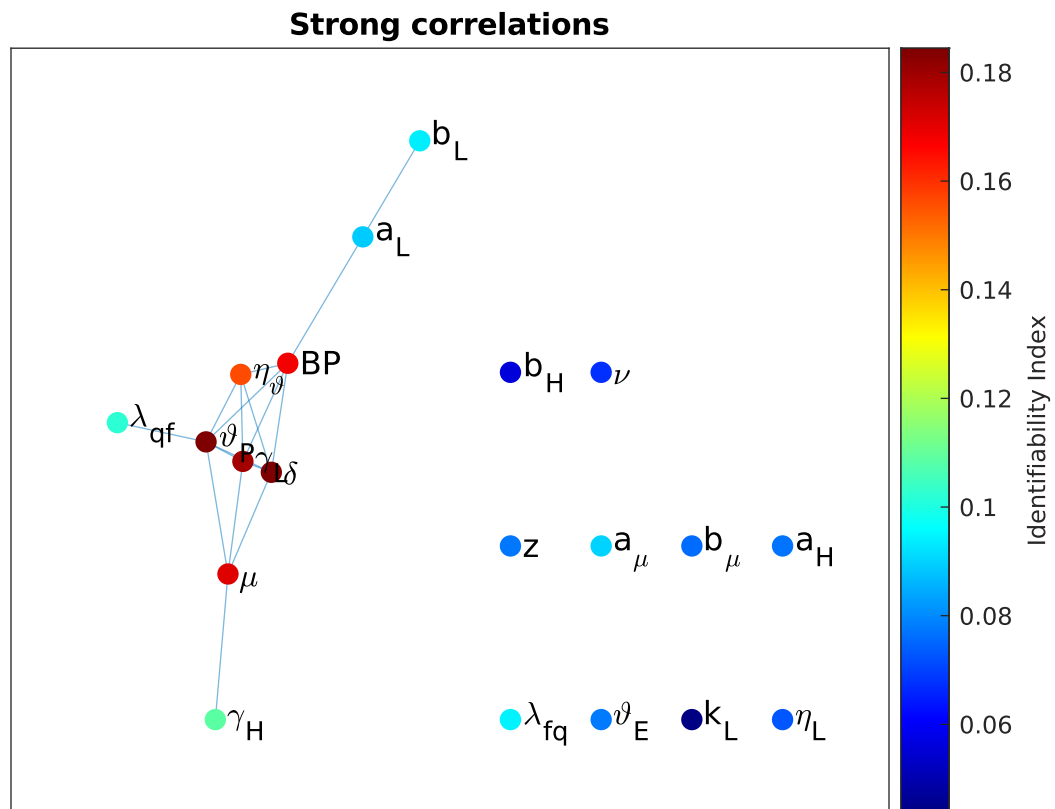
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4388'	'0.4802'	'0.4595'	'0.2684'	'0.0946'
ϑ_E	'0.6023'	'0.6341'	'0.6182'	'0.8586'	'0.0781'
γ_L	'0.7116'	'0.7601'	'0.7359'	'0.9789'	'0.1791'
k_L	'5.3893'	'5.5958'	'5.4926'	'4.9743'	'0.0438'
λ_{qf}	'0.3512'	'0.3864'	'0.3688'	'0.1704'	'0.1021'
δ	'0.096'	'0.1037'	'0.0999'	'0.1432'	'0.1841'
η_L	'0.4791'	'0.5126'	'0.4958'	'0.8783'	'0.0734'
ϑ_P	'0.0779'	'0.1222'	'0.1'	'0.0101'	'0.1845'
γ_H	'0.4686'	'0.5136'	'0.4911'	'0.0832'	'0.109'
z	'14.2732'	'15.2984'	'14.7858'	'19.1636'	'0.0778'
η_{ϑ}	'0.6569'	'0.6926'	'0.6748'	'0.8187'	'0.156'
a_L	'2.7164'	'2.8977'	'2.8071'	'4.0841'	'0.089'
b_L	'9.465'	'9.9716'	'9.7183'	'14.0953'	'0.0943'
a_{μ}	'6.687'	'7.2183'	'6.9526'	'1.1155'	'0.0901'
b_{μ}	'8.3241'	'8.7497'	'8.5369'	'13.9471'	'0.076'
μ	'0.3856'	'0.4312'	'0.4084'	'0.0697'	'0.1712'
a_H	'7.933'	'8.3198'	'8.1264'	'7.1396'	'0.0768'
b_H	'7.8957'	'8.3281'	'8.1119'	'10.7814'	'0.0563'
ν	'240.5058'	'265.3512'	'252.9285'	'314.9664'	'0.068'
BP	'480.2285'	'481.3584'	'480.7935'	'478.5'	'0.1682'

14.3. Identifiability analysis







14.4. Uncertainty analysis

N=500

