

Validation process forPUTUMAYO

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 62. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

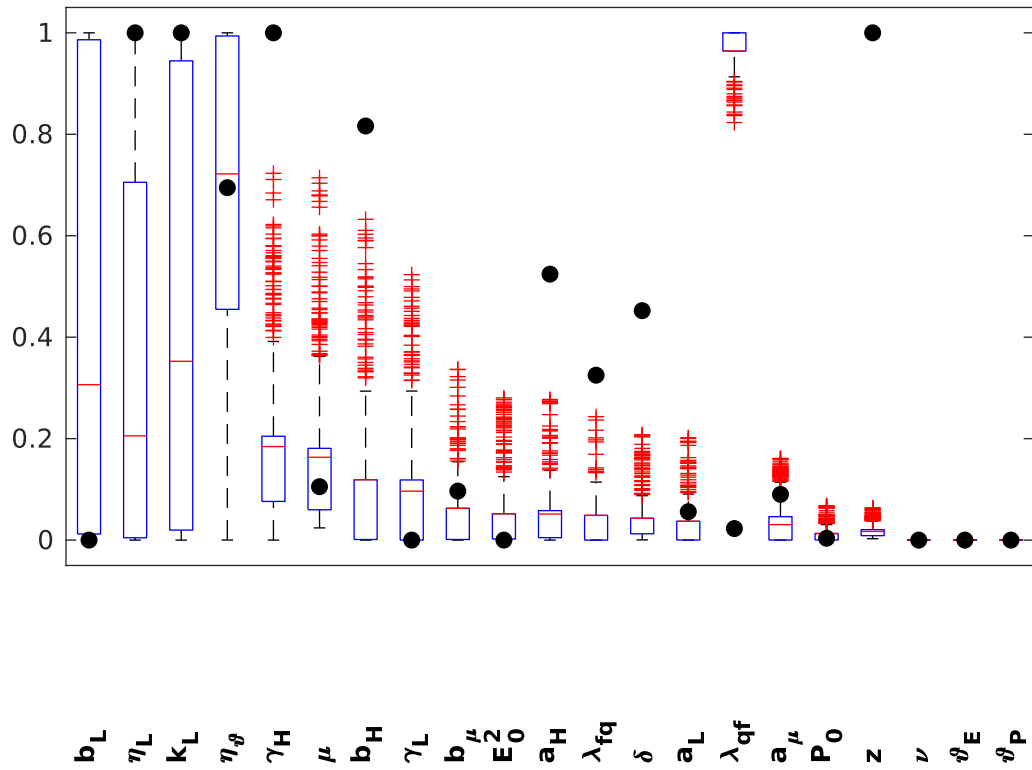
1.2. Estimated parameters with their intervals

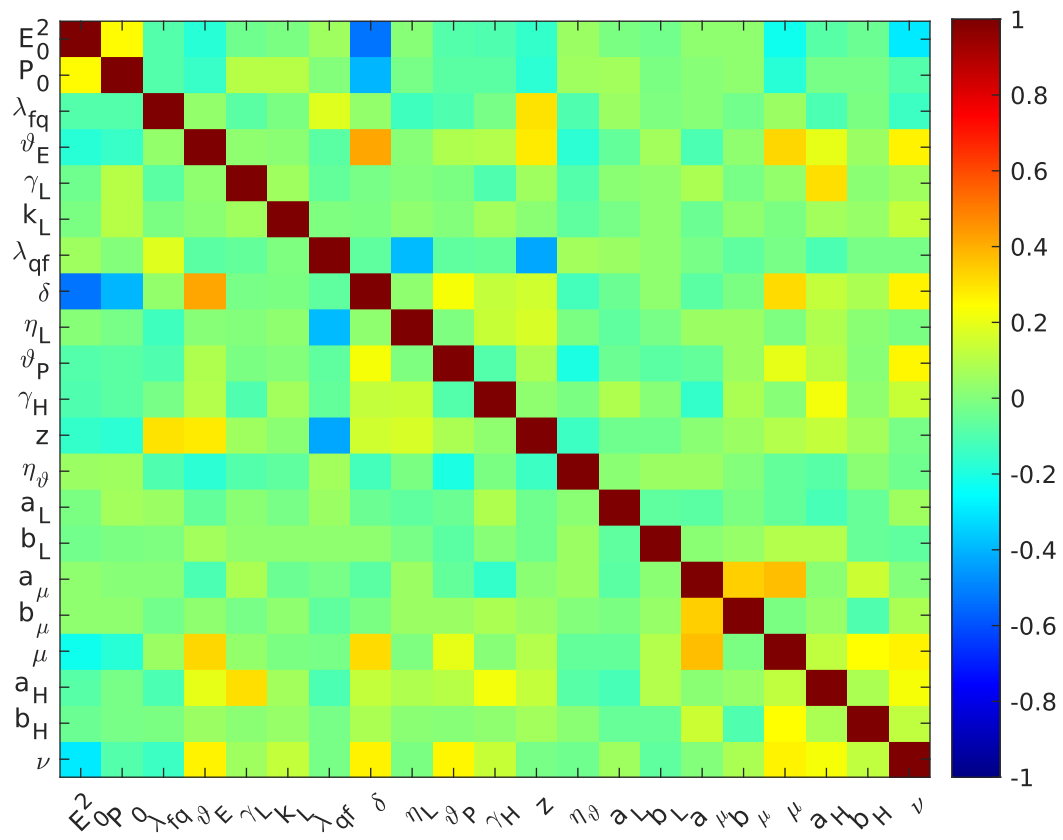
It was necessary to fix 0 parameters of 11 that could be fixed to complete validation.

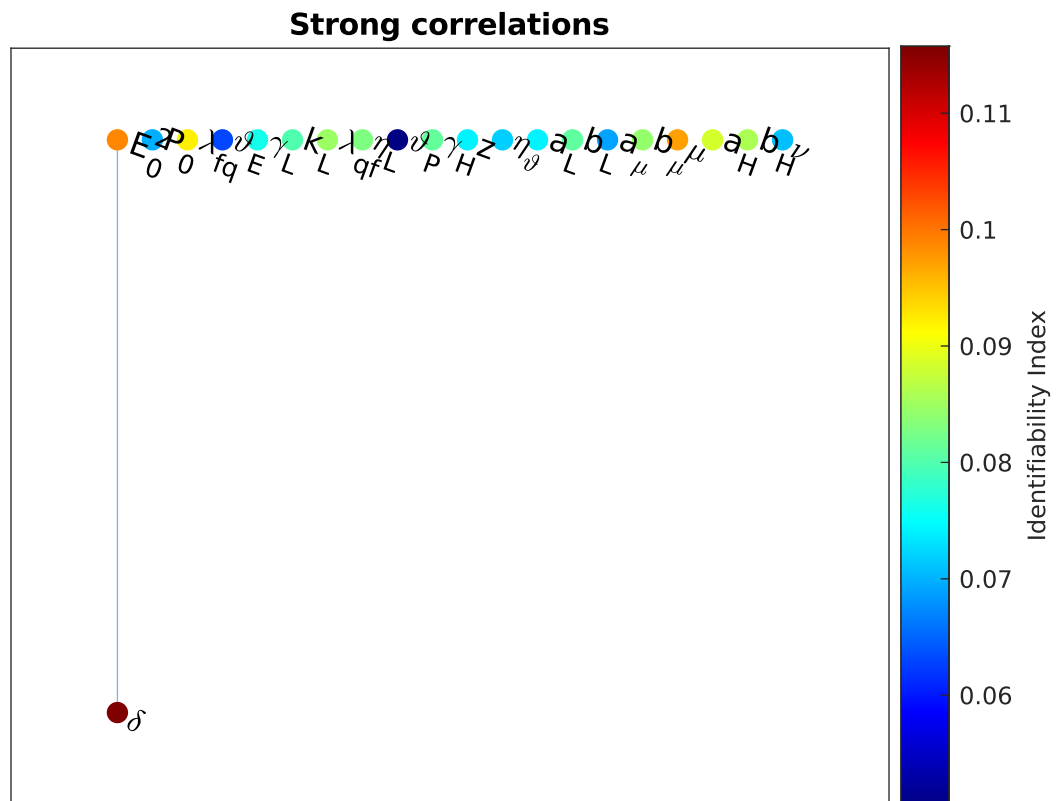
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
E^2_0	'0.0019'	'0.0464'	'103.6967'	'0.0206'	'0.0988'
P_0	'1.3761'	'1.6549'	'5.2086'	'1.4702'	'0.0699'
λ_{fq}	'0.3155'	'0.3264'	'0.0487'	'0.3251'	'0.0922'
ϑ_E	'0'	'0'	'0'	'0'	'0.0631'
γ_L	'0'	'0'	'0.0964'	'0'	'0.0762'
k_L	'3.7306'	'10'	'4.1724'	'10'	'0.08'
λ_{qf}	'0.022'	'0.0238'	'0.964'	'0.0228'	'0.0849'
δ	'0.0641'	'0.0829'	'0.0065'	'0.0678'	'0.1158'
η_L	'0.9625'	'1'	'0.2055'	'1'	'0.083'
ϑ_P	'0'	'0'	'0'	'0'	'0.0506'
γ_H	'0.469'	'1'	'0.1845'	'1'	'0.0812'
z	'27.7311'	'30'	'0.5111'	'30'	'0.0742'
η_{ϑ}	'0.2323'	'0.9386'	'0.7219'	'0.6947'	'0.0718'
a_L	'1.5985'	'12.97'	'1.5192'	'1.7832'	'0.0741'
b_L	'1'	'13.6'	'5.2888'	'1'	'0.0812'
a_{μ}	'2.1007'	'2.3854'	'1.4273'	'2.2619'	'0.0692'
b_{μ}	'1.9955'	'2.727'	'1.8778'	'2.3523'	'0.0842'
μ	'0.0817'	'0.1067'	'0.1633'	'0.1053'	'0.0973'
a_H	'7.2737'	'8.8272'	'1.7188'	'8.3402'	'0.0884'
b_H	'10.3277'	'13.9526'	'2.6668'	'12.4286'	'0.086'
ν	'0'	'0'	'0.0016'	'0'	'0.0708'

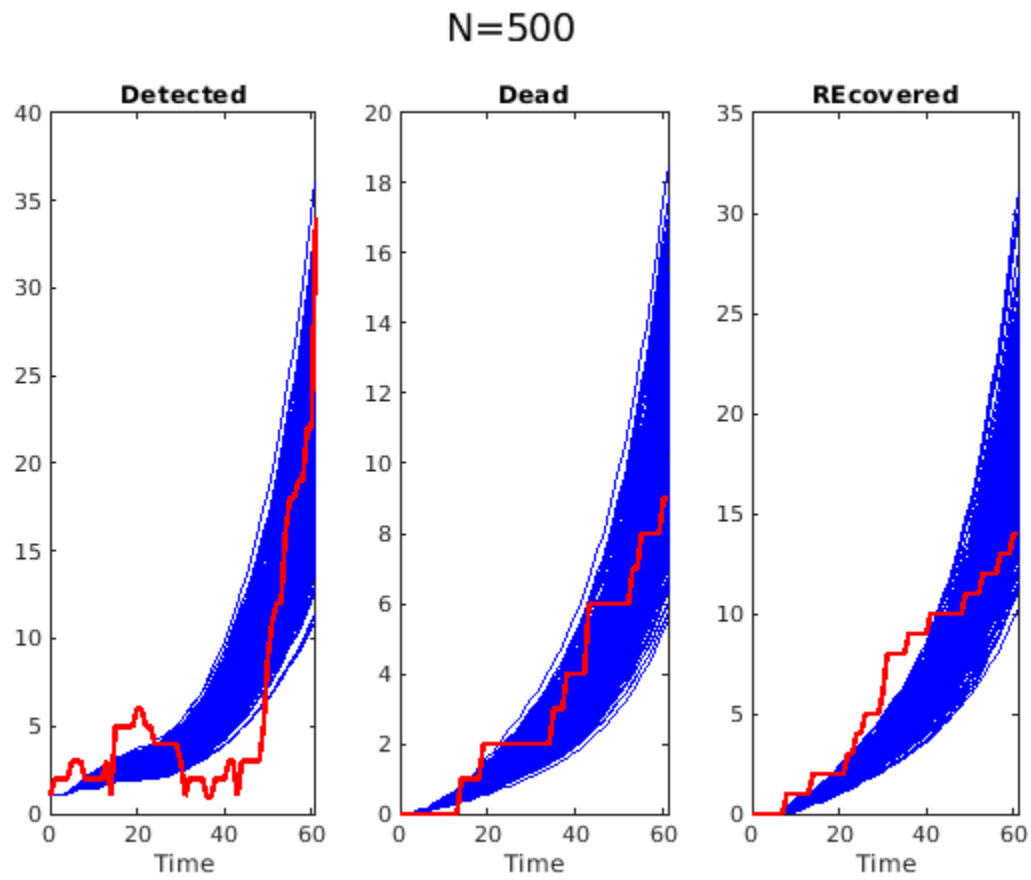
1.3. Identifiability analysis







1.4. Uncertainty analysis



Chapter 2. Extension number2

2.1. Basic information

The extension to be validated consists of the time series from the data62 to the 89. The status of the validation is: COMPLETED.

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

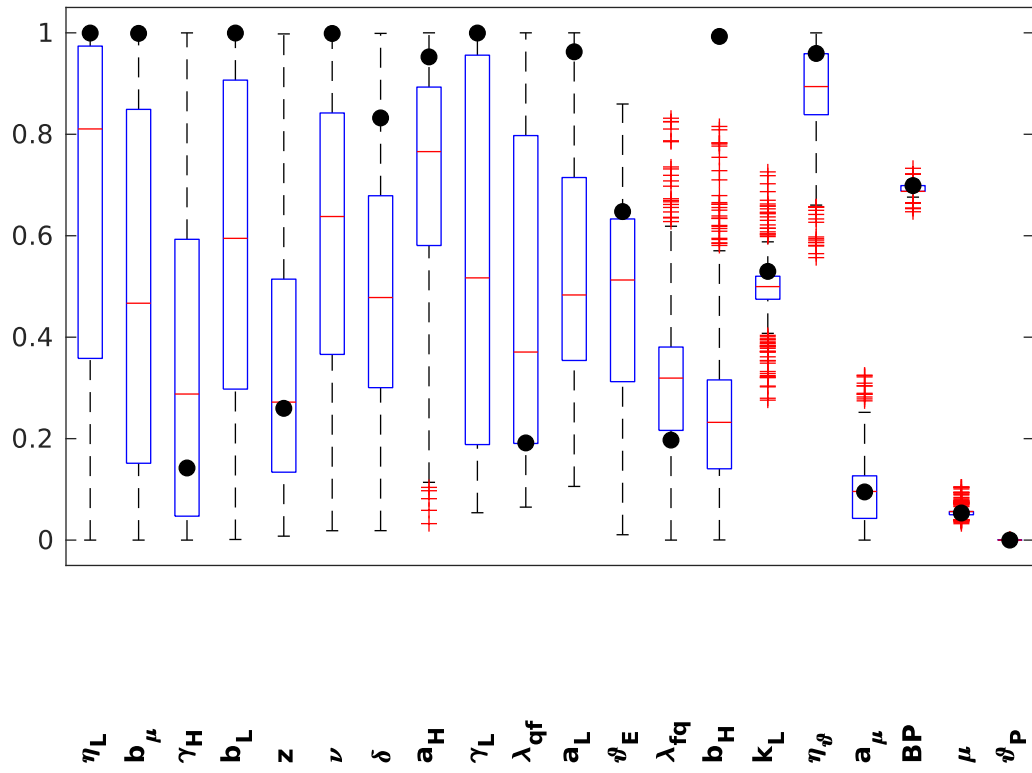
2.2. Estimated parameters with their intervals

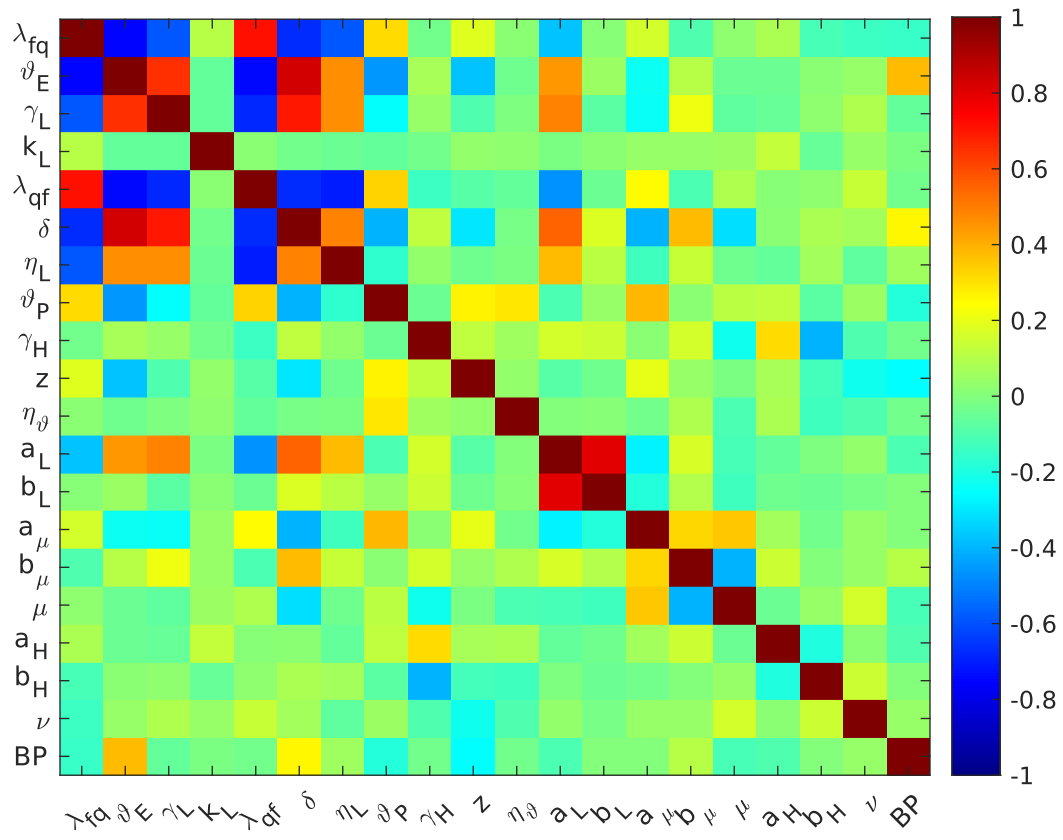
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

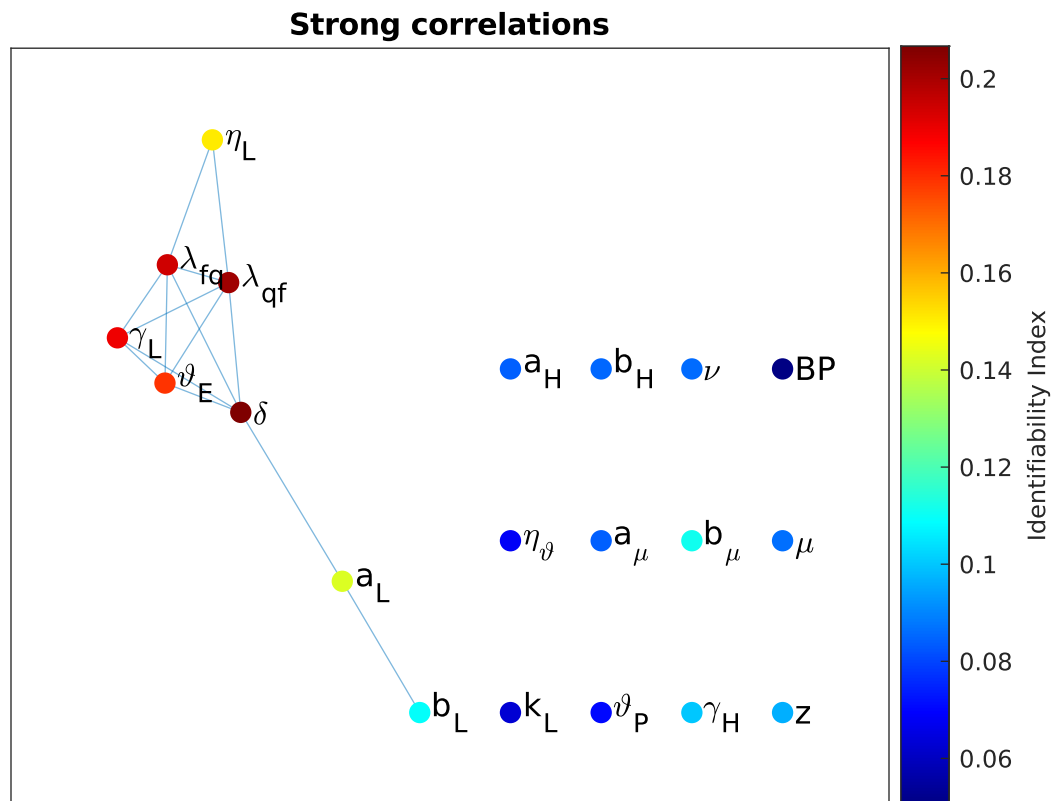
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.1838'	'0.2211'	'0.3194'	'0.1972'	'0.194'
ϑ_E	'0.5827'	'0.8389'	'0.5127'	'0.6476'	'0.179'
γ_L	'0.607'	'1'	'0.5169'	'0.9996'	'0.189'
k_L	'1.36'	'10'	'5.4974'	'5.7673'	'0.0632'
λ_{qf}	'0.1703'	'0.1985'	'0.3707'	'0.1916'	'0.2012'
δ	'0.0823'	'0.1356'	'0.0717'	'0.1248'	'0.2067'
η_L	'0.8047'	'1'	'0.8105'	'0.9996'	'0.1507'
ϑ_P	'0'	'0'	'0.0001'	'0'	'0.0712'
γ_H	'0.008'	'0.2537'	'0.288'	'0.1422'	'0.1001'
z	'5.9768'	'9.4713'	'8.1599'	'7.7922'	'0.0964'
η_{ϑ}	'0.516'	'1'	'0.8941'	'0.9593'	'0.0688'
a_L	'12.2014'	'14.5407'	'7.7655'	'14.4763'	'0.1421'
b_L	'12.2697'	'15'	'9.3278'	'14.9941'	'0.1097'
a_{μ}	'1.5045'	'4.0143'	'2.3426'	'2.3293'	'0.0843'
b_{μ}	'7.2219'	'15'	'7.5374'	'14.9847'	'0.111'
μ	'0.0486'	'0.0797'	'0.0563'	'0.0534'	'0.0867'
a_H	'5.3999'	'14.5909'	'11.7218'	'14.3356'	'0.0846'
b_H	'4.794'	'15'	'4.2497'	'14.9003'	'0.0859'
ν	'401.1445'	'500'	'318.9455'	'499.3573'	'0.086'
BP	'60.6497'	'63.2599'	'61.5'	'62.4994'	'0.0506'

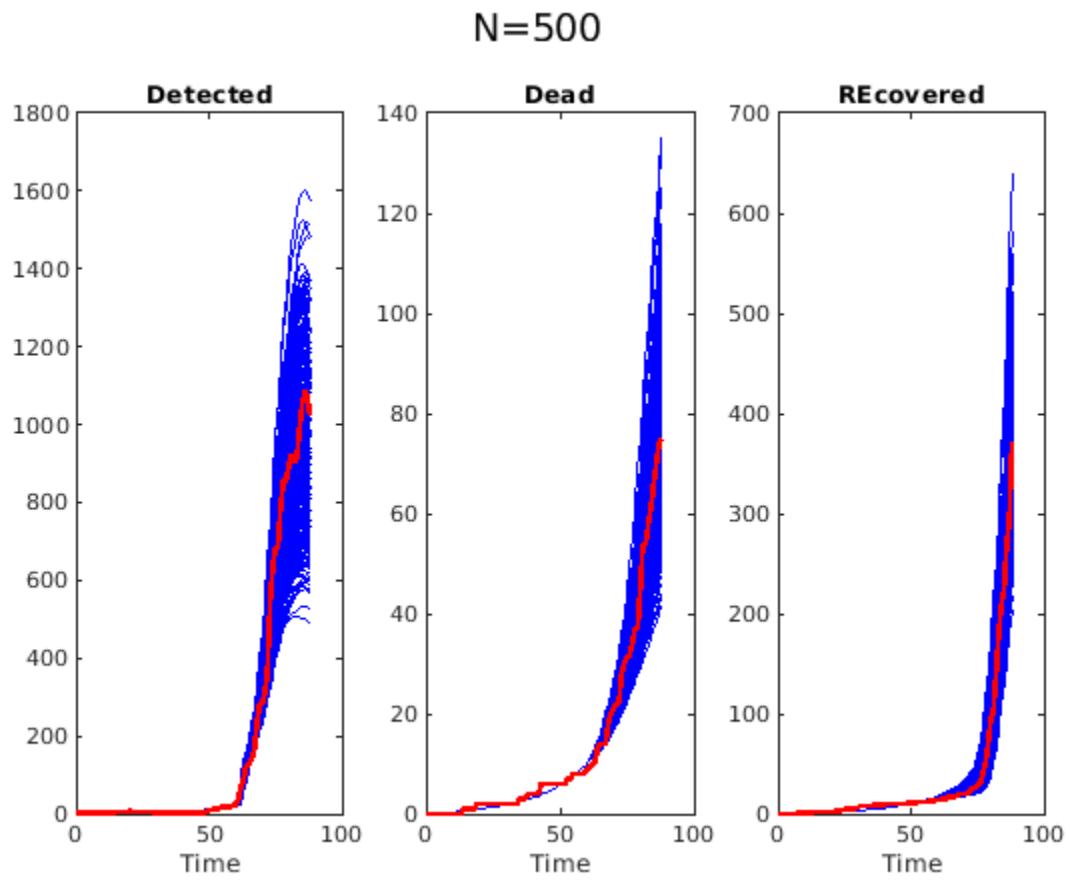
2.3. Identifiability analysis







2.4. Uncertainty analysis



Chapter 3. Extension number3

3.1. Basic information

The extension to be validated consists of the time series from the data89 to the 121. The status of the validation is: COMPLETED.

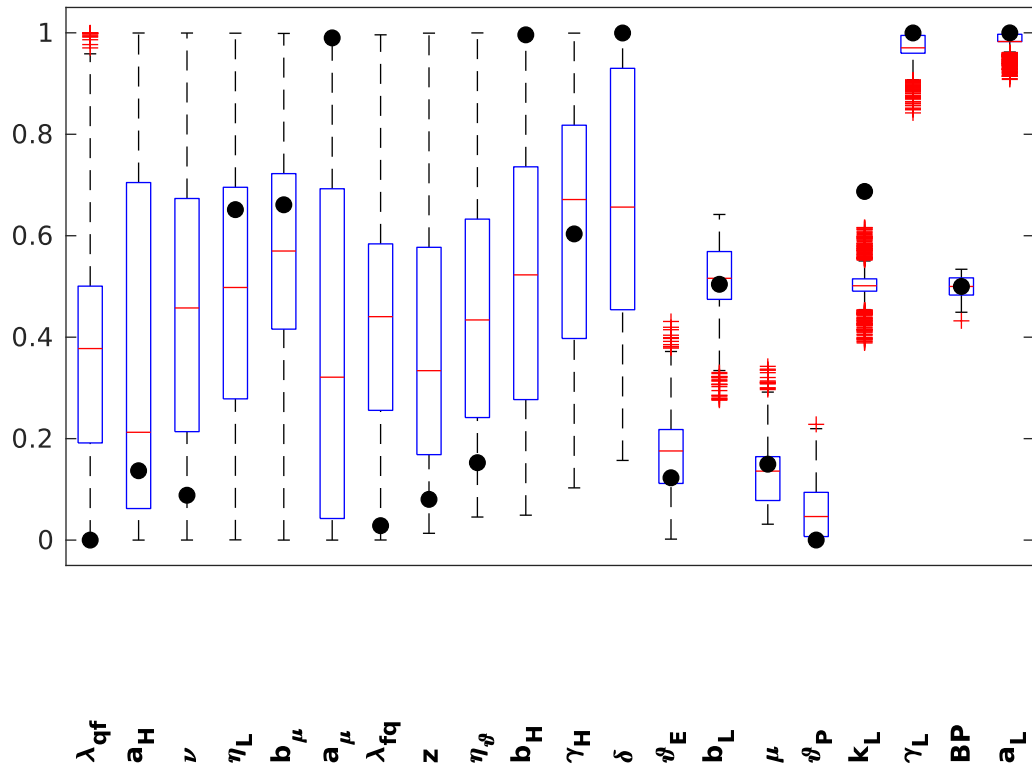
The number of estimations needed to perform the validation was1000.

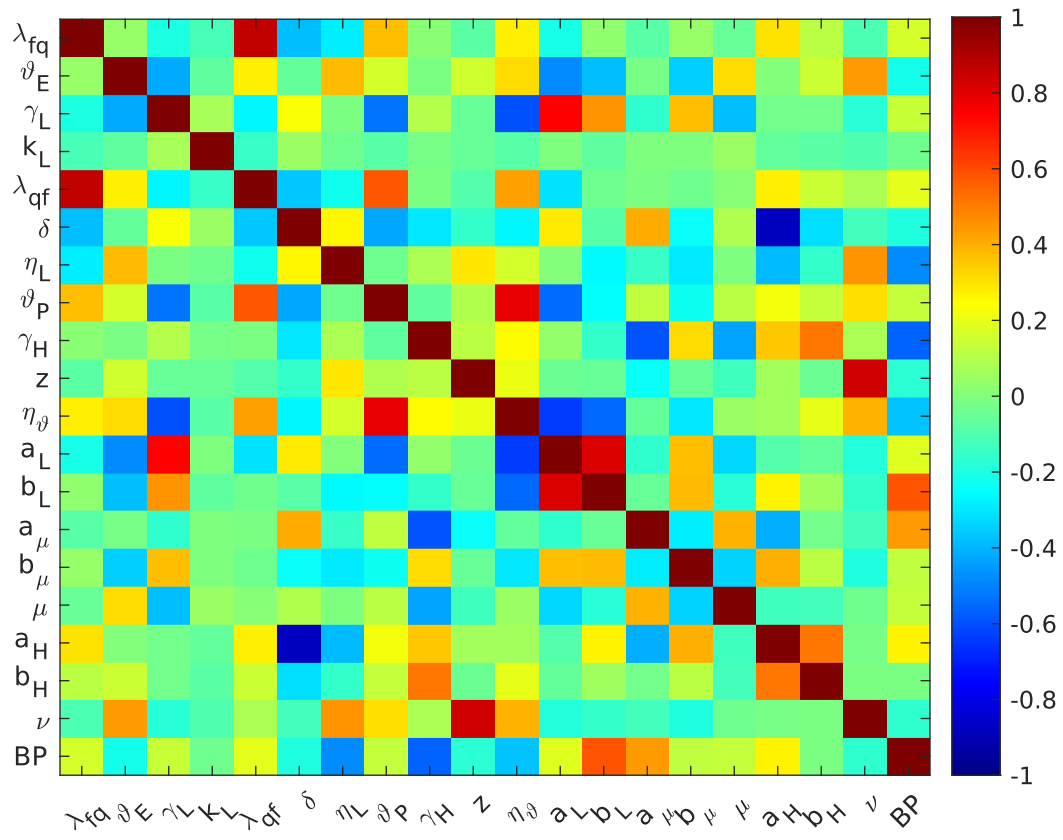
3.2. Estimated parameters with their intervals

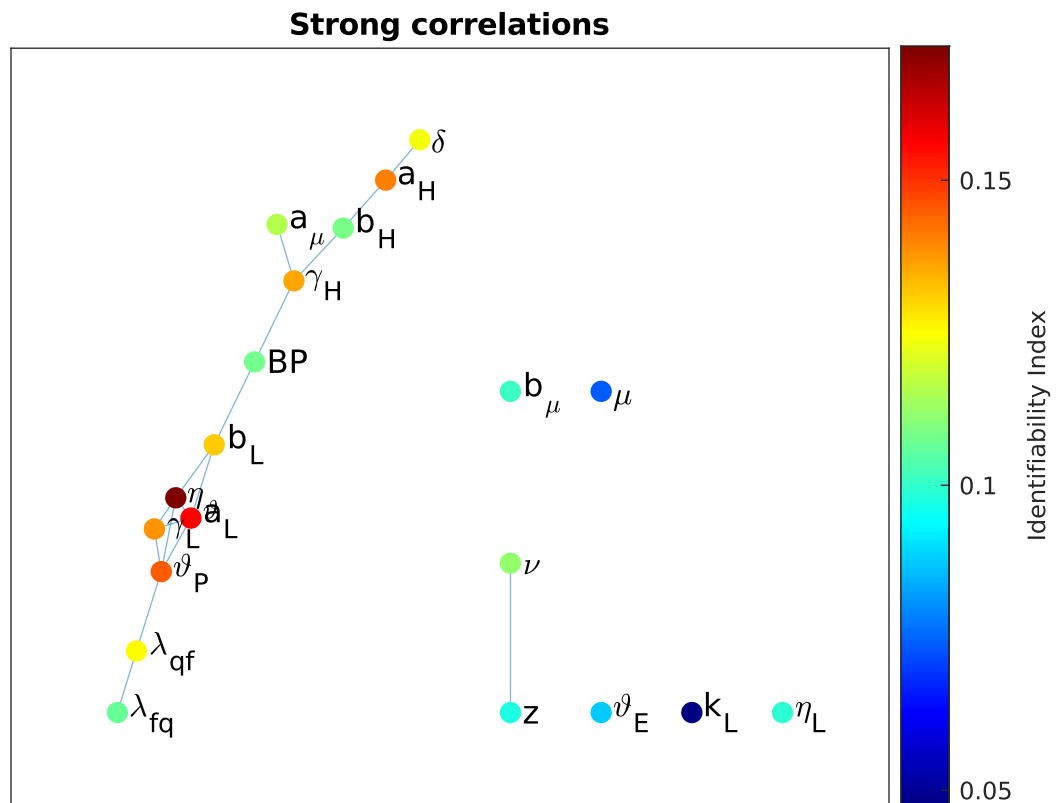
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4177'	'0.4633'	'0.4405'	'0.0285'	'0.1067'
ϑ_E	'0.1661'	'0.1854'	'0.1757'	'0.1229'	'0.0875'
γ_L	'0.9568'	'0.984'	'0.9704'	'0.9997'	'0.1382'
k_L	'5.4332'	'5.5914'	'5.5123'	'7.1855'	'0.0477'
λ_{qf}	'0.3565'	'0.3987'	'0.3776'	'0'	'0.1256'
δ	'0.0951'	'0.1018'	'0.0985'	'0.1499'	'0.1236'
η_L	'0.4726'	'0.5233'	'0.498'	'0.6514'	'0.0995'
ϑ_P	'0.0409'	'0.052'	'0.0465'	'0.0001'	'0.1451'
γ_H	'0.6481'	'0.6946'	'0.6713'	'0.6036'	'0.1357'
z	'9.3027'	'10.7374'	'10.0201'	'2.4092'	'0.0975'
η_{ϑ}	'0.4124'	'0.4556'	'0.434'	'0.1526'	'0.172'
a_L	'14.5815'	'14.9367'	'14.7591'	'14.9984'	'0.1563'
b_L	'8.0975'	'8.3529'	'8.2252'	'8.0598'	'0.1312'
a_{μ}	'5.0534'	'5.9385'	'5.496'	'14.86'	'0.1157'
b_{μ}	'8.6794'	'9.2767'	'8.9781'	'10.254'	'0.1016'
μ	'0.1278'	'0.1441'	'0.136'	'0.1496'	'0.0743'
a_H	'3.5327'	'4.4183'	'3.9755'	'2.9145'	'0.1407'
b_H	'7.9821'	'8.6573'	'8.3197'	'14.9443'	'0.1086'
ν	'216.383'	'241.2252'	'228.8041'	'44.2199'	'0.112'
BP	'91.4'	'91.6'	'91.5'	'91.4986'	'0.1083'

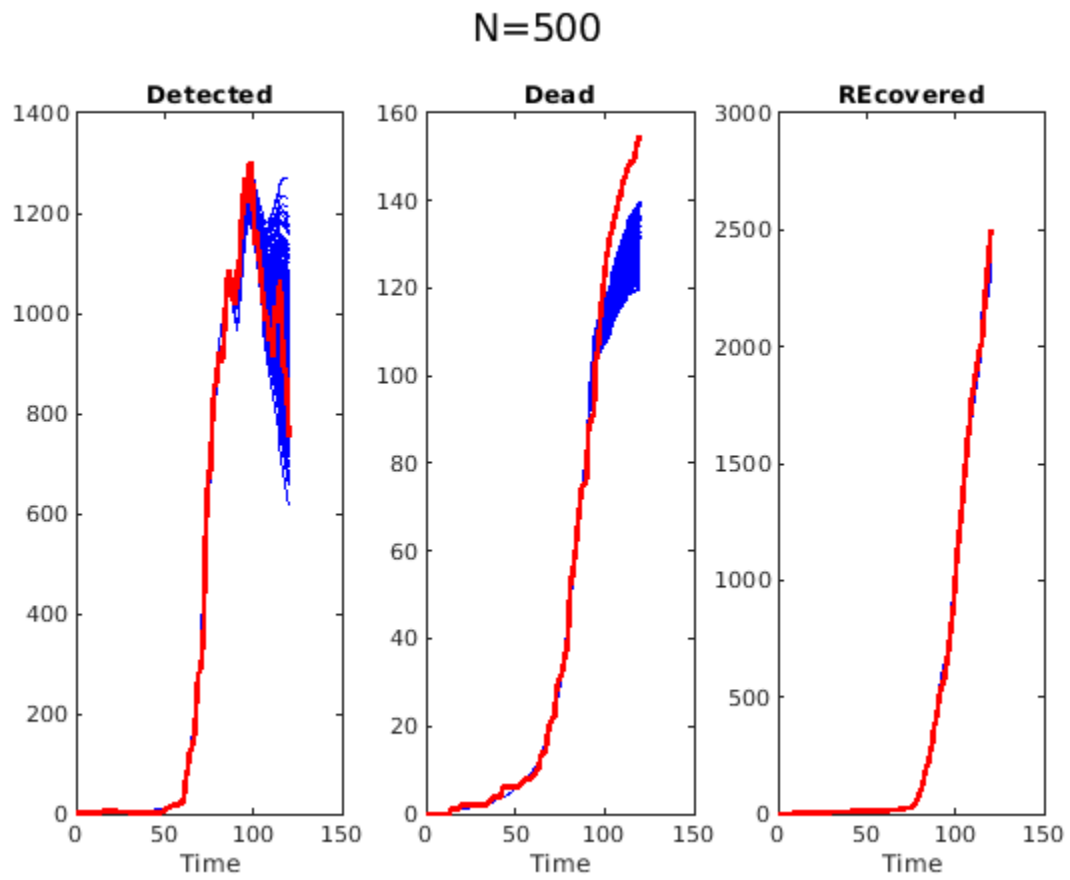
3.3. Identifiability analysis







3.4. Uncertainty analysis



Chapter 4. Extension number4

4.1. Basic information

The extension to be validated consists of the time series from the data121 to the 146. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

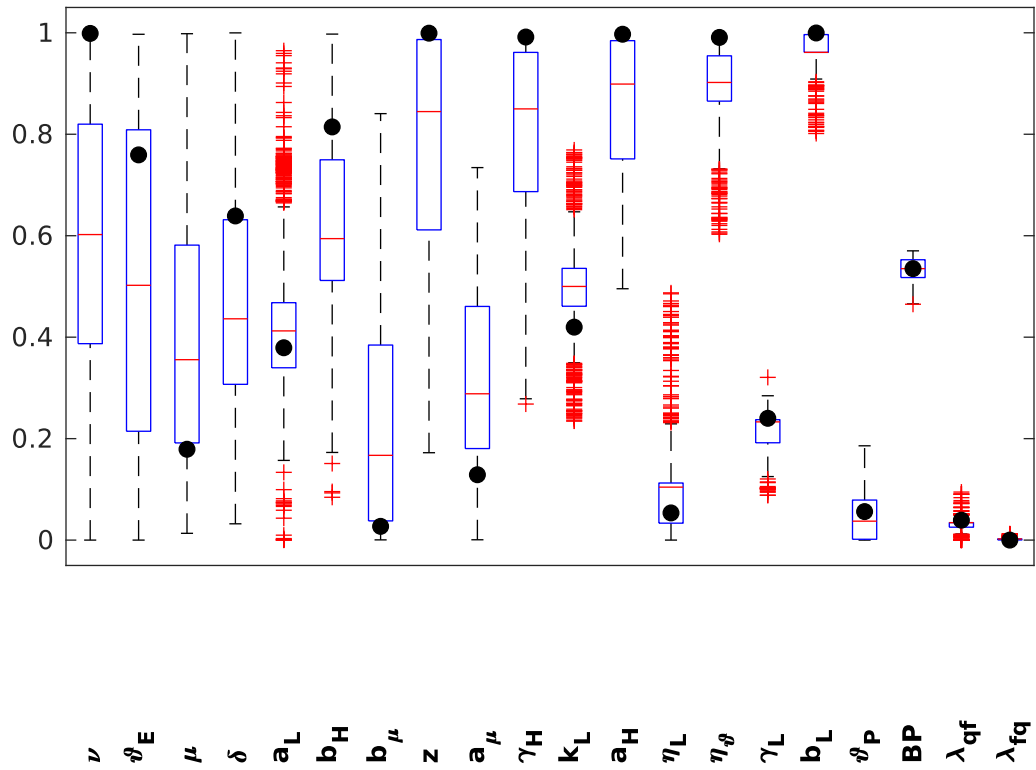
4.2. Estimated parameters with their intervals

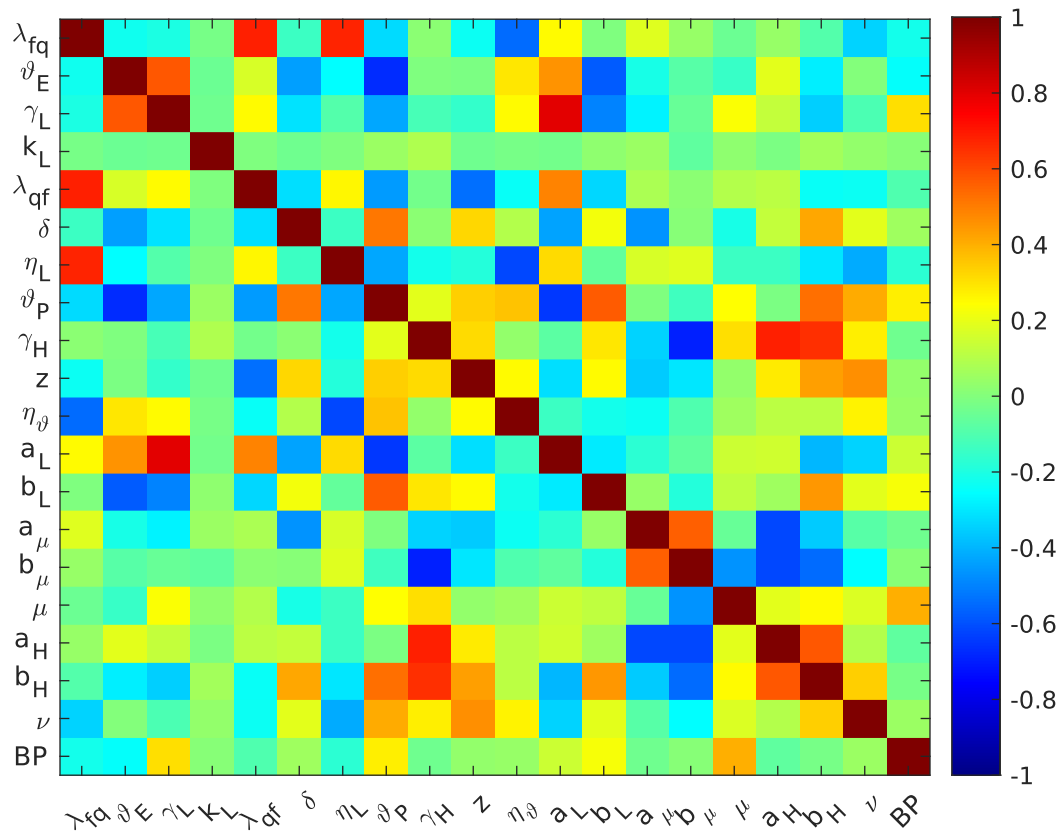
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

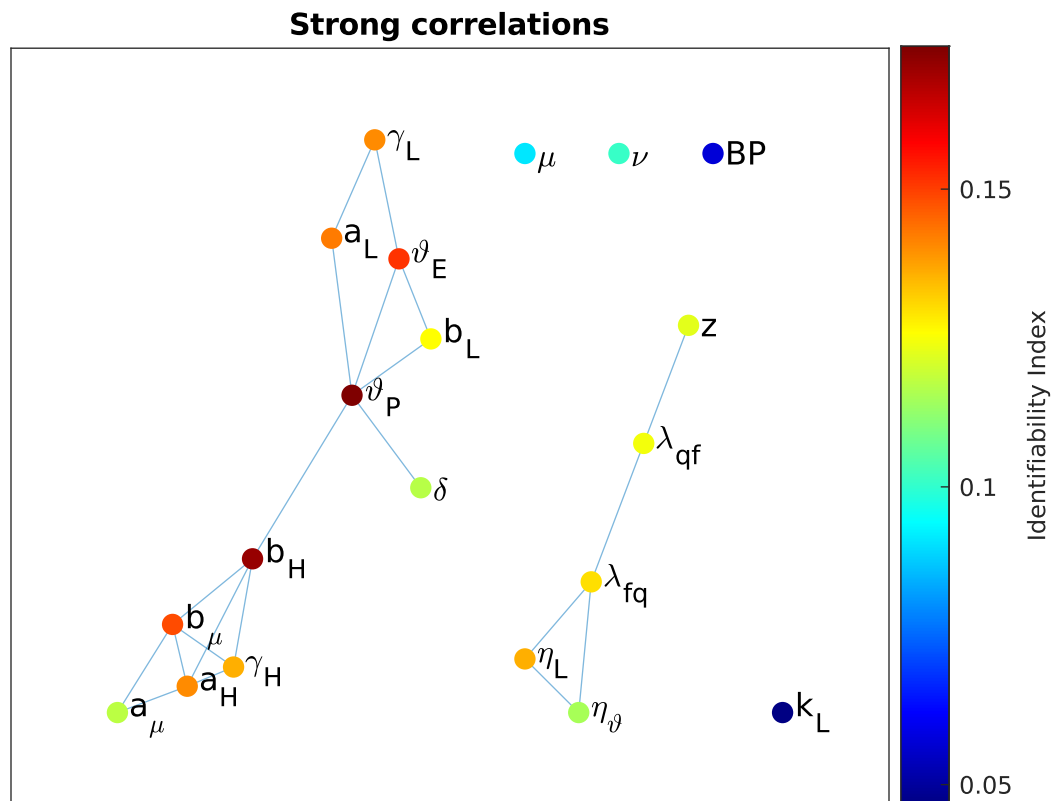
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'1'	'0.0023'	'0'	'0.1302'
ϑ_E	'0.6094'	'1'	'0.5022'	'0.7593'	'0.1516'
γ_L	'0.1051'	'0.2611'	'0.233'	'0.2401'	'0.1404'
k_L	'1'	'10'	'5.5'	'4.7779'	'0.0467'
λ_{qf}	'0'	'0.0481'	'0.0344'	'0.0393'	'0.1244'
δ	'0'	'0.15'	'0.0654'	'0.0958'	'0.1169'
η_L	'0'	'0.1205'	'0.1044'	'0.0536'	'0.1361'
ϑ_P	'0'	'0.1264'	'0.0373'	'0.0562'	'0.174'
γ_H	'0'	'1'	'0.8496'	'0.9916'	'0.1359'
z	'0'	'30'	'25.337'	'29.9769'	'0.1225'
η_{ϑ}	'0'	'1'	'0.9021'	'0.9909'	'0.1153'
a_L	'1.56'	'14.4624'	'6.7737'	'6.308'	'0.1425'
b_L	'4.5391'	'15'	'14.4596'	'14.9946'	'0.1262'
a_{μ}	'1'	'15'	'5.0379'	'2.8035'	'0.1176'
b_{μ}	'1'	'15'	'3.3391'	'1.3794'	'0.1486'
μ	'0'	'0.4029'	'0.3556'	'0.1791'	'0.0912'
a_H	'1'	'15'	'13.5828'	'14.9601'	'0.1403'
b_H	'1'	'15'	'9.3191'	'12.4023'	'0.1707'
ν	'344.6516'	'500'	'301.1344'	'499.382'	'0.1012'
BP	'119.2666'	'130.5006'	'119.5'	'119.5'	'0.0574'

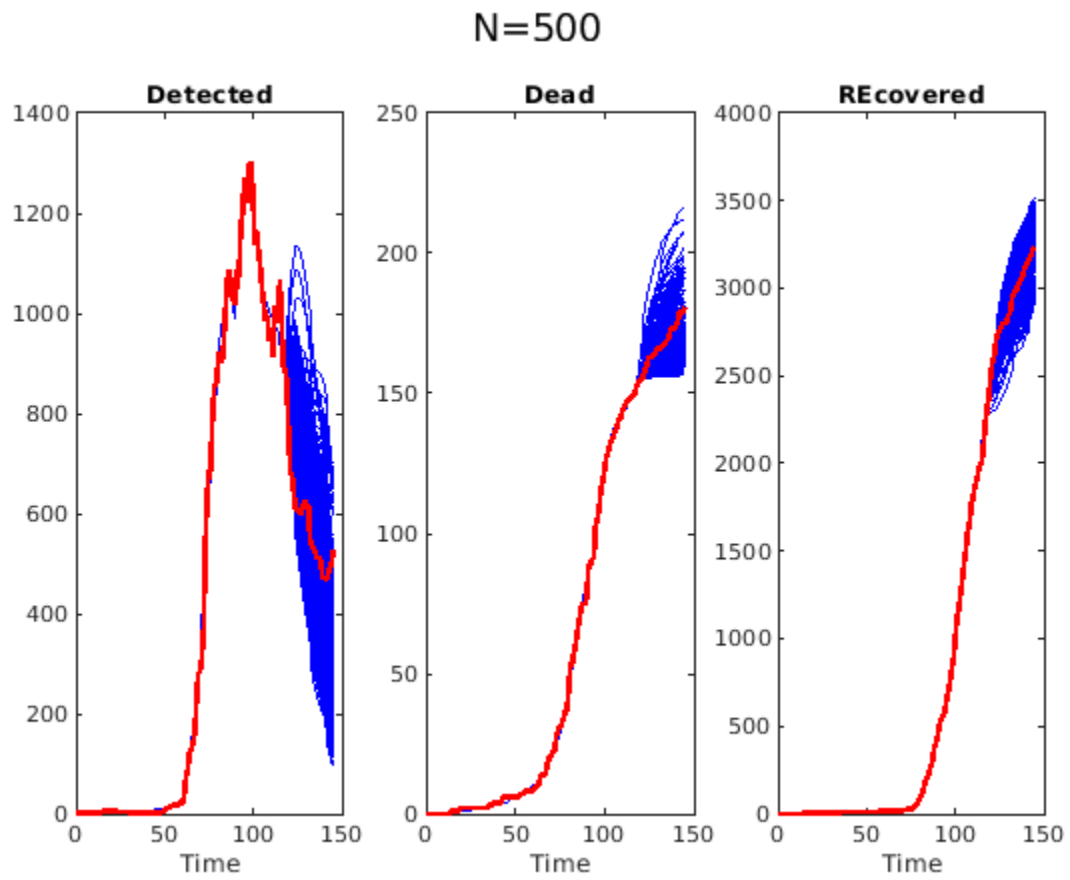
4.3. Identifiability analysys







4.4. Uncertainty analysis



Chapter 5. Extension number5

5.1. Basic information

The extension to be validated consists of the time series from the data146 to the 192. The status of the validation is: COMPLETED.

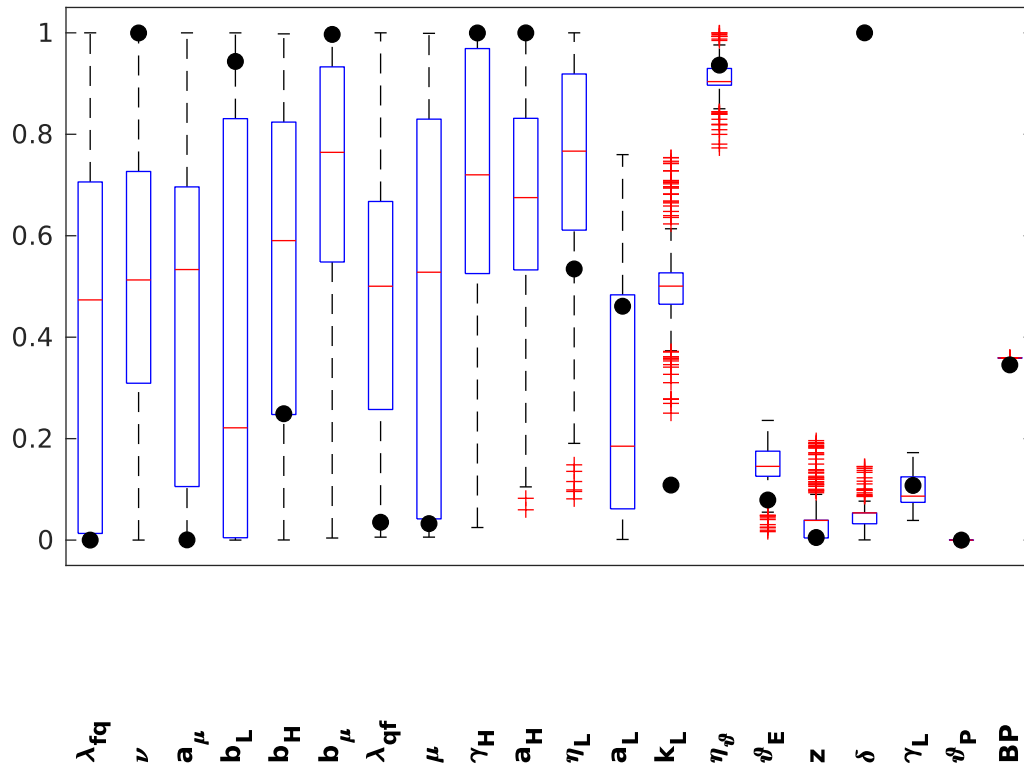
The number of estimations needed to perform the validation was1000.

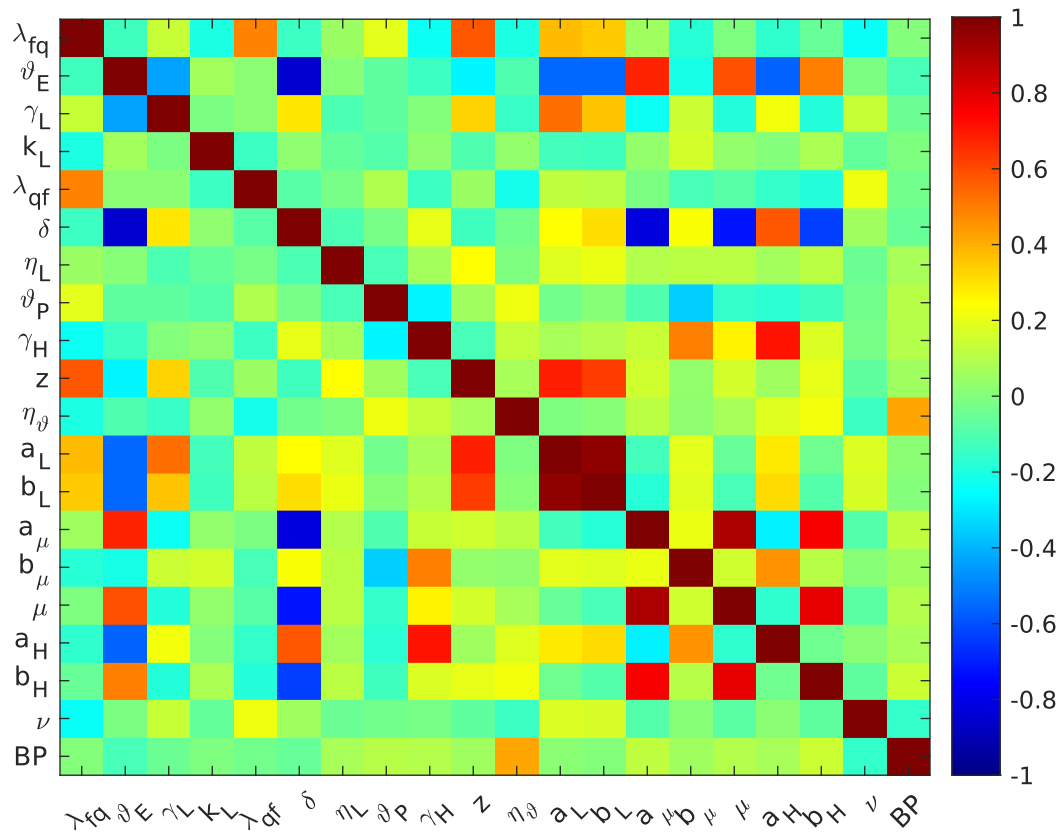
5.2. Estimated parameters with their intervals

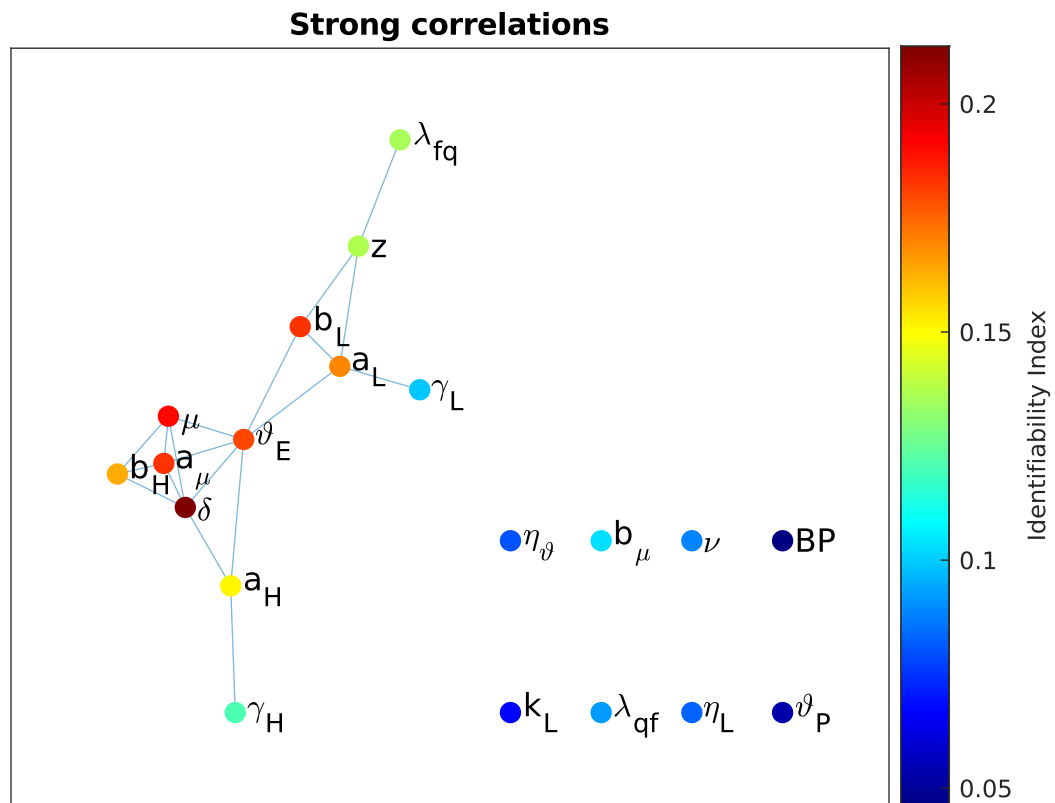
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.422'	'0.525'	'0.4735'	'0'	'0.1358'
ϑ_E	'0.1385'	'0.1521'	'0.1453'	'0.0791'	'0.1799'
γ_L	'0.07'	'0.1046'	'0.0873'	'0.1077'	'0.0996'
k_L	'5.2806'	'5.7311'	'5.5059'	'1.9762'	'0.0675'
λ_{qf}	'0.4615'	'0.5394'	'0.5005'	'0.0352'	'0.0923'
δ	'0'	'0.0169'	'0.0081'	'0.15'	'0.2126'
η_L	'0.731'	'0.8021'	'0.7666'	'0.5345'	'0.083'
ϑ_P	'0'	'0.0001'	'0'	'0'	'0.053'
γ_H	'0.679'	'0.7611'	'0.7201'	'0.9998'	'0.121'
z	'0.4425'	'1.9101'	'1.1763'	'0.1525'	'0.1368'
η_{ϑ}	'0.8772'	'0.9303'	'0.9037'	'0.9363'	'0.0808'
a_L	'3.1356'	'4.1124'	'3.624'	'7.4546'	'0.1696'
b_L	'3.2451'	'4.9527'	'4.0989'	'14.2102'	'0.1832'
a_{μ}	'7.8407'	'9.0927'	'8.4667'	'1.0062'	'0.1831'
b_{μ}	'11.2067'	'12.1963'	'11.7015'	'14.956'	'0.103'
μ	'0.4719'	'0.5843'	'0.5281'	'0.0325'	'0.1901'
a_H	'9.9902'	'10.9145'	'10.4523'	'14.9987'	'0.1514'
b_H	'8.6368'	'9.8938'	'9.2653'	'4.4877'	'0.1635'
ν	'235.8788'	'276.9563'	'256.4175'	'499.8636'	'0.0883'
BP	'146.465'	'146.5349'	'146.5'	'145.5237'	'0.0465'

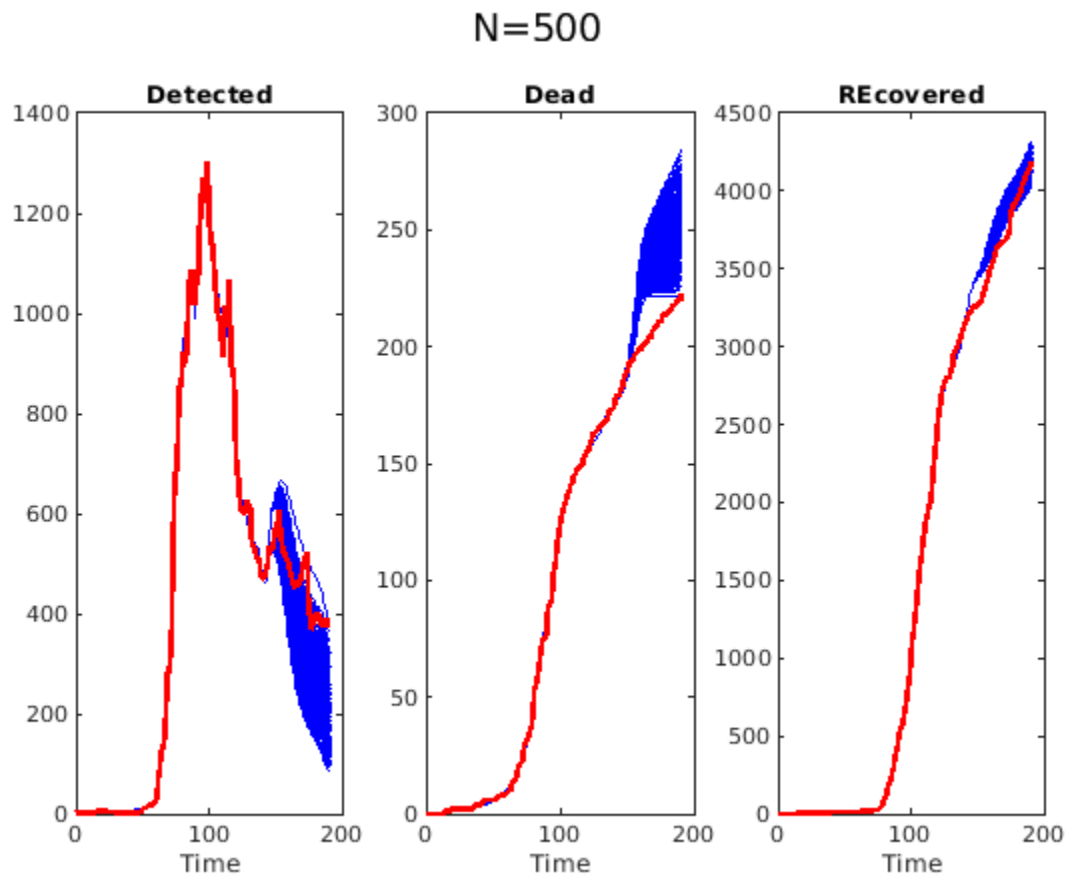
5.3. Identifiability analysys







5.4. Uncertainty analysis



Chapter 6. Extension number6

6.1. Basic information

The extension to be validated consists of the time series from the data192 to the 232. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

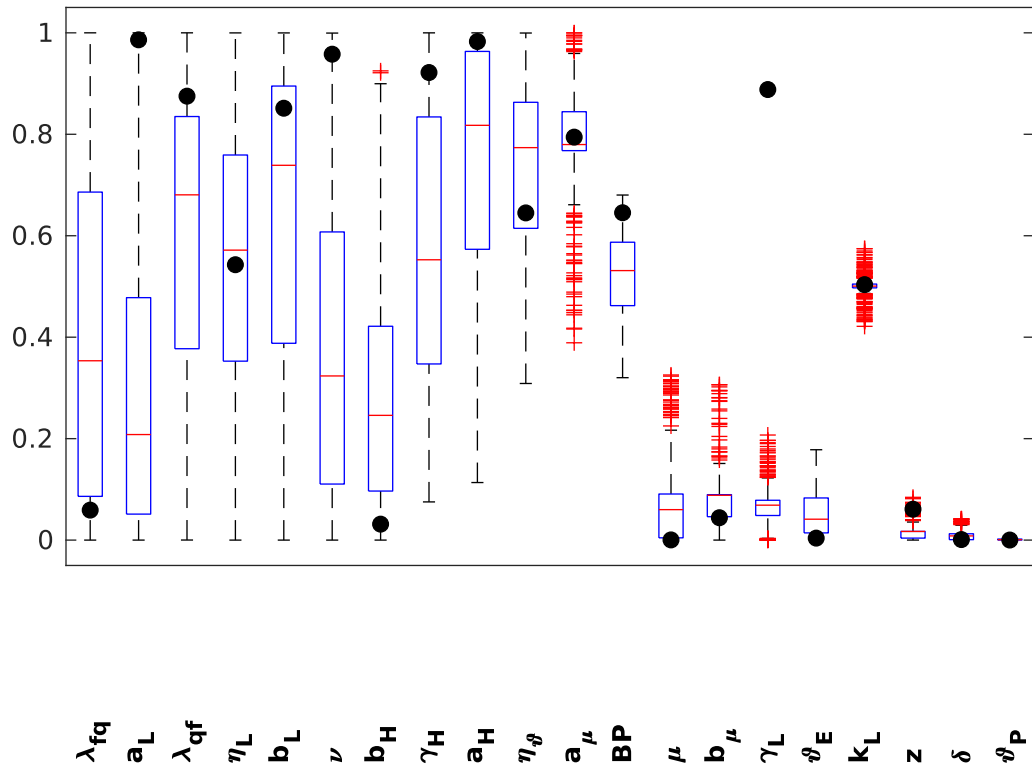
6.2. Estimated parameters with their intervals

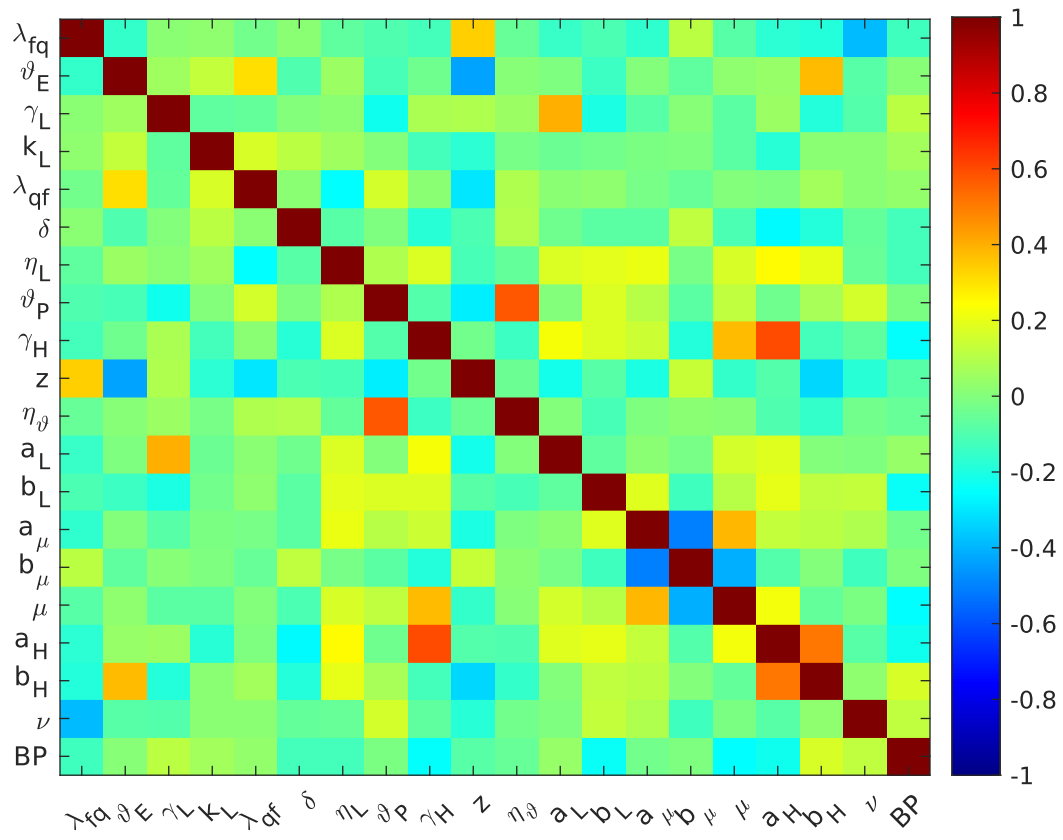
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

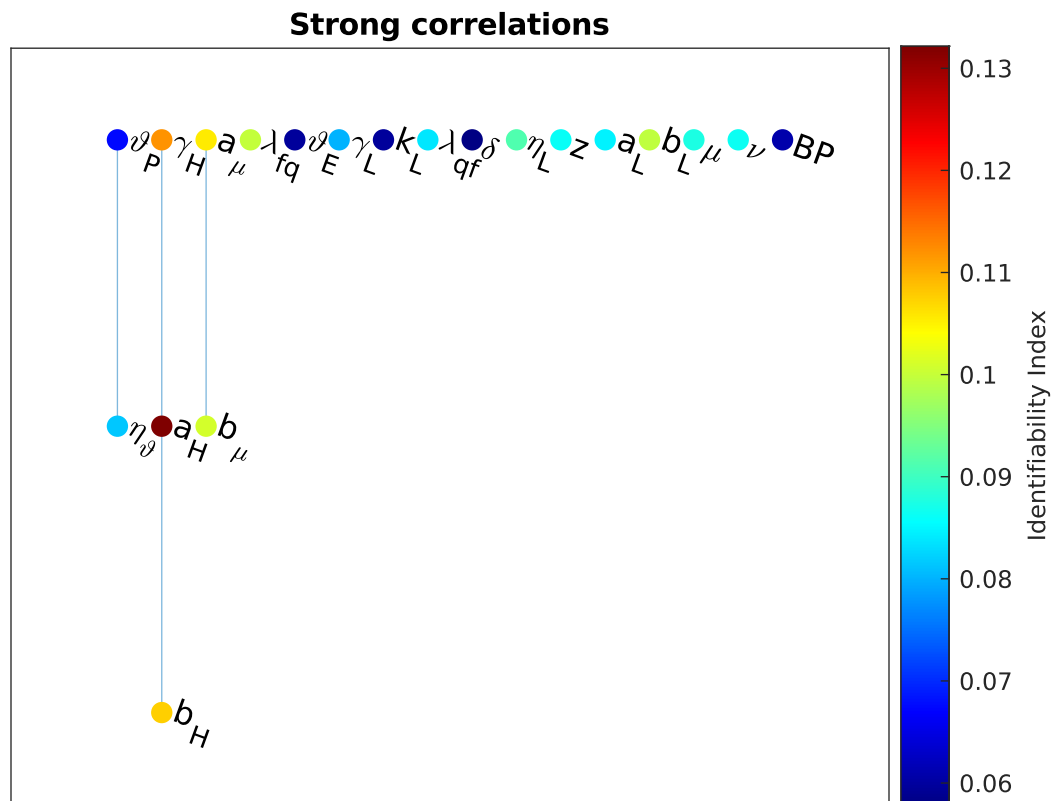
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0555'	'0.11'	'0.3535'	'0.0591'	'0.0998'
ϑ_E	'0.0013'	'0.0084'	'0.0412'	'0.0039'	'0.0597'
γ_L	'0.1546'	'1'	'0.0689'	'0.8882'	'0.0801'
k_L	'1.5357'	'8.7612'	'5.5062'	'5.5325'	'0.0599'
λ_{qf}	'0.4656'	'0.8978'	'0.6806'	'0.8752'	'0.0839'
δ	'0'	'0.0003'	'0.0012'	'0.0002'	'0.0579'
η_L	'0.2977'	'0.9095'	'0.5716'	'0.5429'	'0.0914'
ϑ_P	'0.0001'	'0.0002'	'0.0008'	'0.0001'	'0.0676'
γ_H	'0.1855'	'0.9283'	'0.5526'	'0.9217'	'0.112'
z	'1.6929'	'4.02'	'0.5132'	'1.8277'	'0.0863'
η_{ϑ}	'0.639'	'0.6984'	'0.7737'	'0.645'	'0.0815'
a_L	'10.9445'	'15'	'3.913'	'14.8073'	'0.0846'
b_L	'5.1279'	'13.2442'	'11.3439'	'12.9191'	'0.0997'
a_{μ}	'1.5544'	'14.3277'	'11.9167'	'12.1215'	'0.1058'
b_{μ}	'1.4361'	'12.0124'	'2.237'	'1.6175'	'0.101'
μ	'0'	'0.0008'	'0.0601'	'0.0004'	'0.0876'
a_H	'9.4904'	'14.764'	'12.447'	'14.76'	'0.1322'
b_H	'1'	'4.0288'	'4.4427'	'1.4404'	'0.1078'
ν	'292.7052'	'489.4345'	'161.8007'	'478.9439'	'0.0865'
BP	'201.151'	'207.5465'	'191.6906'	'201.4986'	'0.0609'

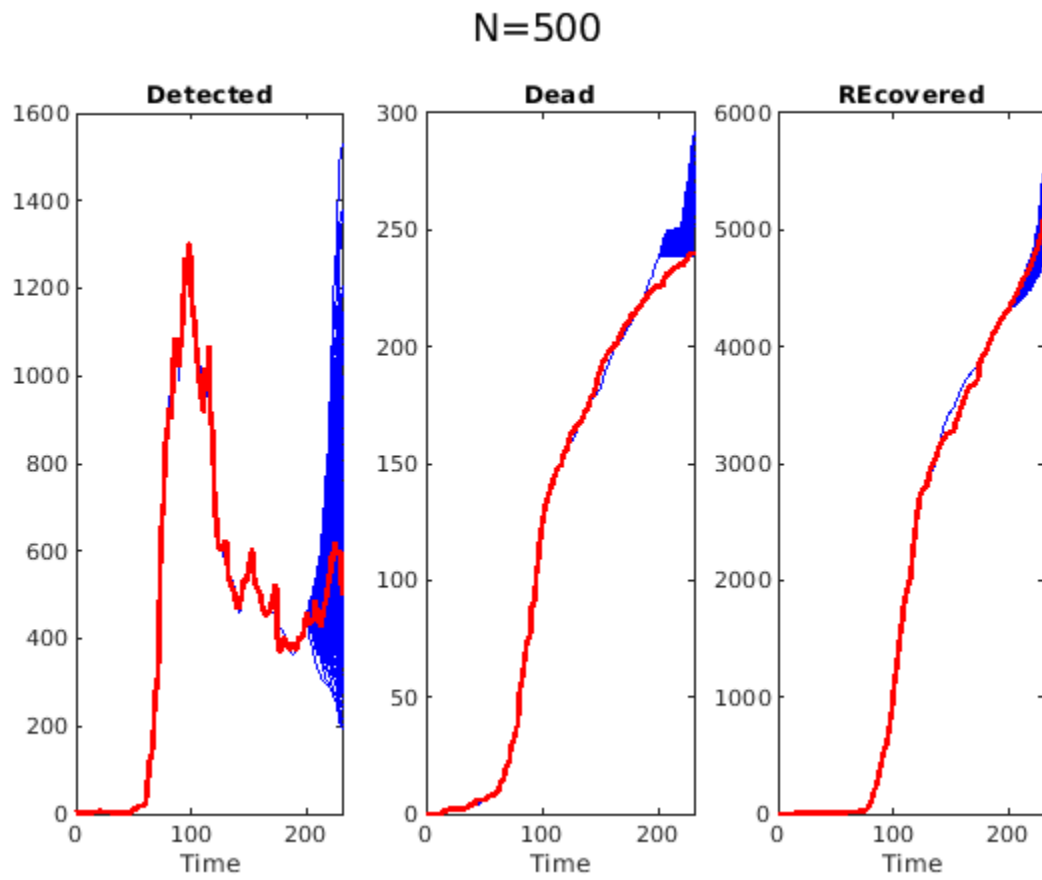
6.3. Identifiability analysis







6.4. Uncertainty analysis



Chapter 7. Extension number7

7.1. Basic information

The extension to be validated consists of the time series from the data232 to the 276. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

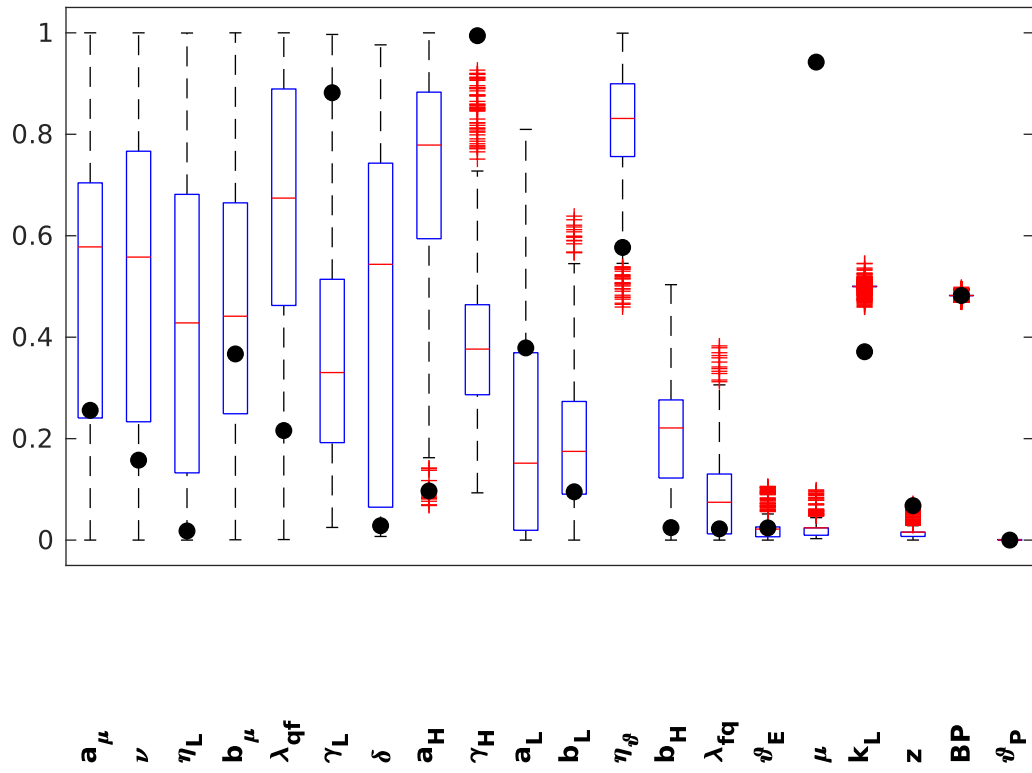
7.2. Estimated parameters with their intervals

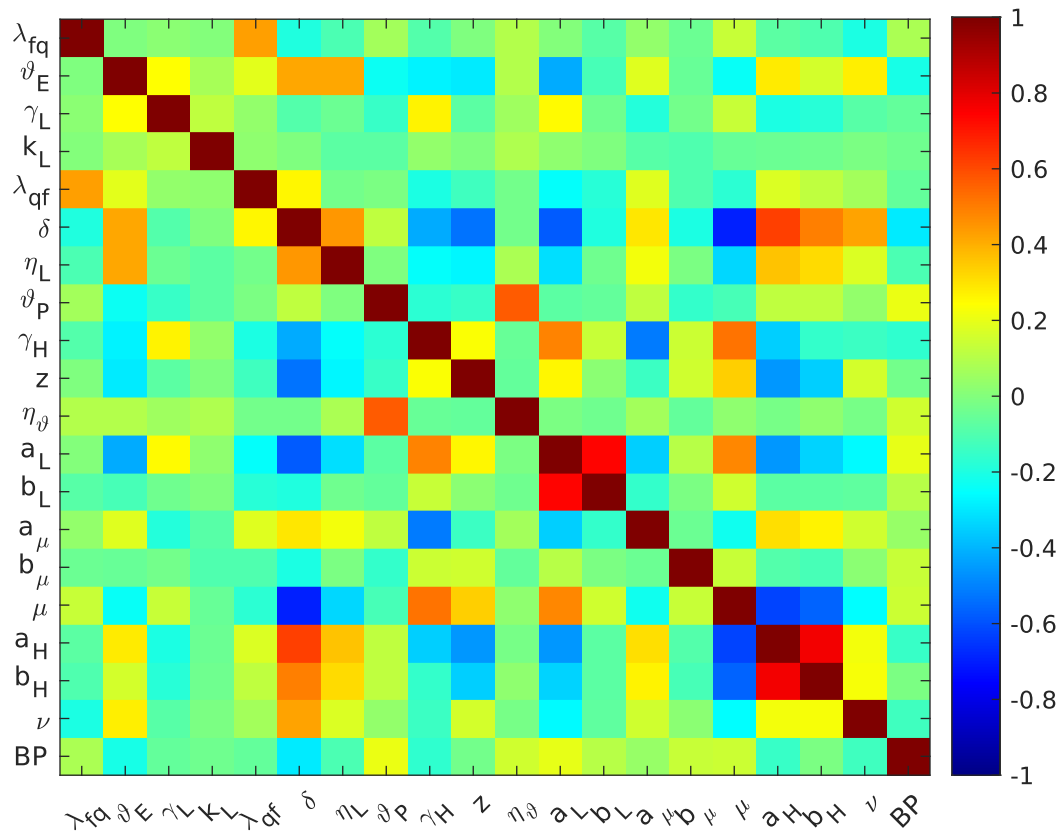
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

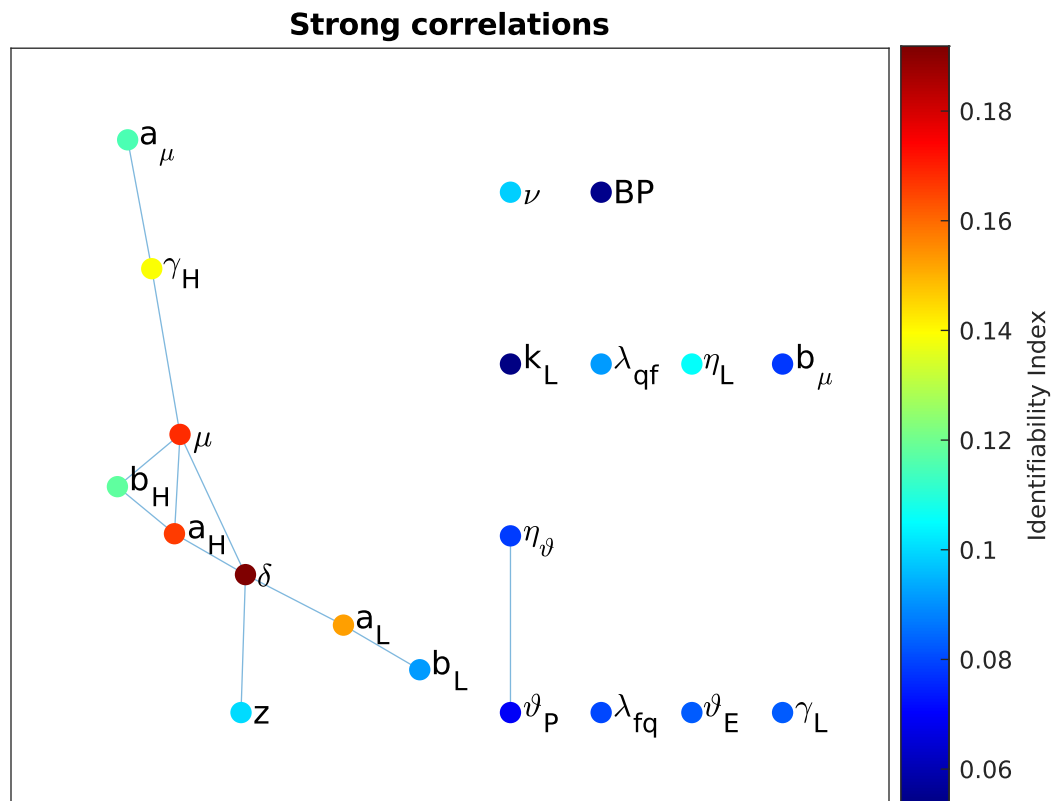
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0185'	'0.0416'	'0.0746'	'0.0222'	'0.0801'
ϑ_E	'0.024'	'0.0332'	'0.0217'	'0.0241'	'0.083'
γ_L	'0.2778'	'0.9533'	'0.3303'	'0.8819'	'0.0832'
k_L	'1.2031'	'9.1225'	'5.4997'	'4.3419'	'0.0536'
λ_{qf}	'0.185'	'0.4901'	'0.6742'	'0.2159'	'0.0918'
δ	'0.0001'	'0.0056'	'0.0815'	'0.0043'	'0.1918'
η_L	'0.001'	'0.0405'	'0.4282'	'0.018'	'0.1059'
ϑ_P	'0'	'0'	'0.0004'	'0'	'0.0694'
γ_H	'0.1679'	'1'	'0.3765'	'0.9944'	'0.139'
z	'1.9938'	'2.922'	'0.4711'	'2.0354'	'0.1003'
η_{ϑ}	'0.568'	'0.7305'	'0.8312'	'0.5769'	'0.0785'
a_L	'6.2165'	'9.5645'	'3.123'	'6.3044'	'0.1528'
b_L	'2.2092'	'5.5529'	'3.4481'	'2.3333'	'0.0917'
a_{μ}	'3.7716'	'11.7764'	'9.0918'	'4.5818'	'0.1157'
b_{μ}	'1.7998'	'12.592'	'7.1787'	'6.1377'	'0.078'
μ	'0.2047'	'1'	'0.0241'	'0.9423'	'0.1681'
a_H	'1'	'11.5719'	'11.9027'	'2.3563'	'0.1663'
b_H	'1'	'14.44'	'4.0953'	'1.3442'	'0.1182'
ν	'76.0668'	'111.2062'	'278.9557'	'78.7893'	'0.0985'
BP	'230.837'	'234.5814'	'232.5'	'232.5'	'0.0551'

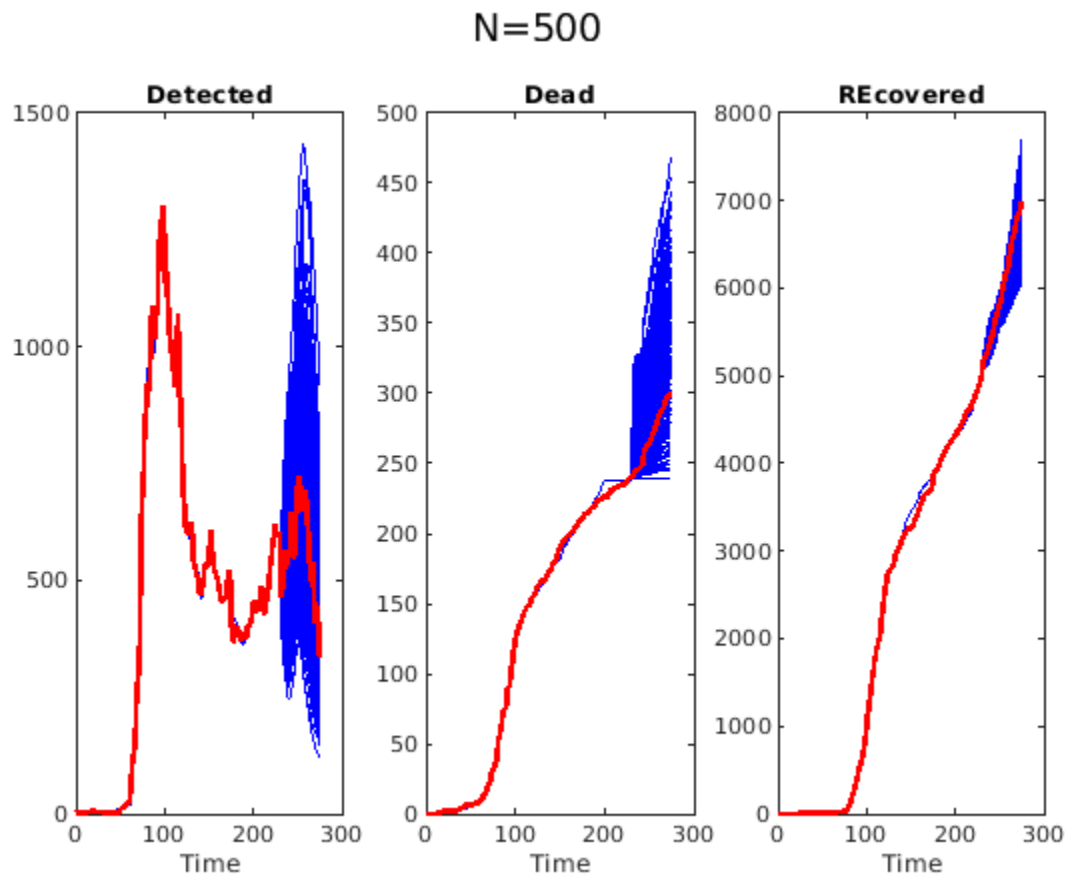
7.3. Identifiability analysis







7.4. Uncertainty analysis



Chapter 8. Extension number8

8.1. Basic information

The extension to be validated consists of the time series from the data276 to the 296. The status of the validation is: COMPLETED.

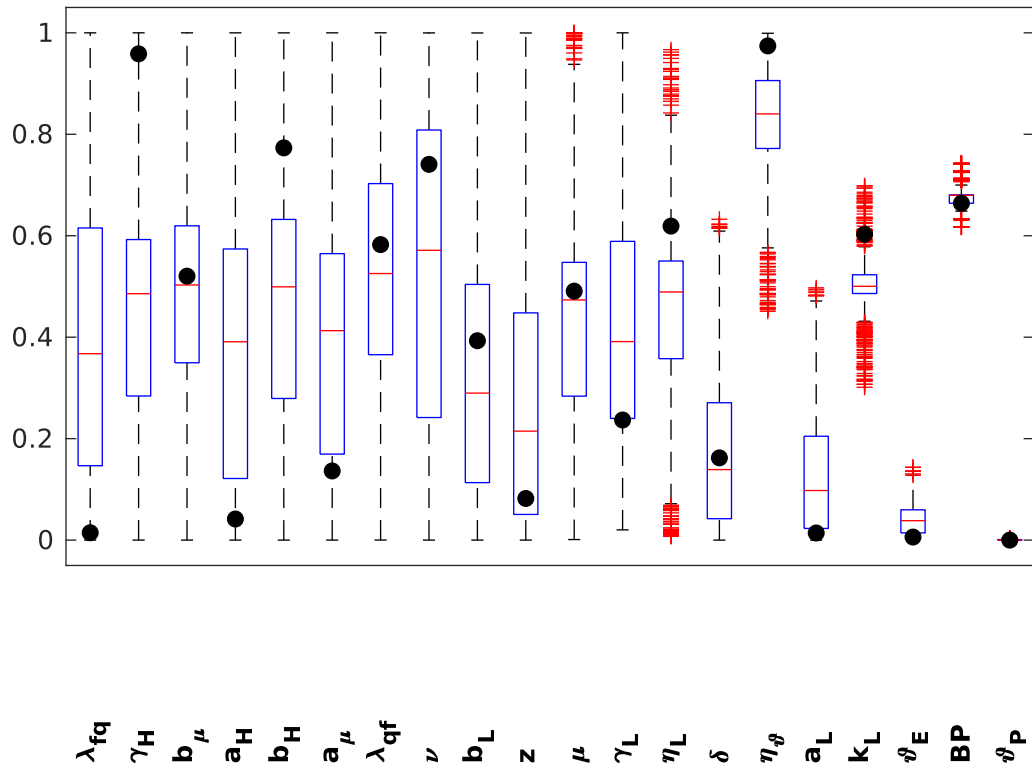
The number of estimations needed to perform the validation was1000.

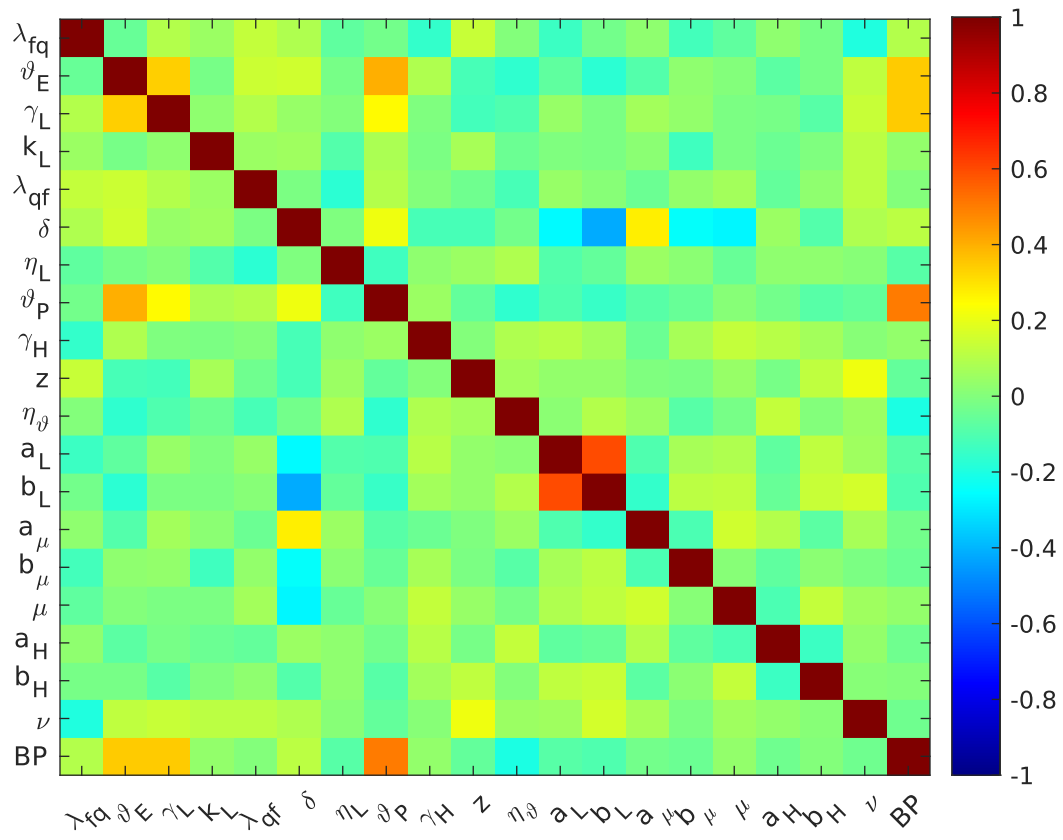
8.2. Estimated parameters with their intervals

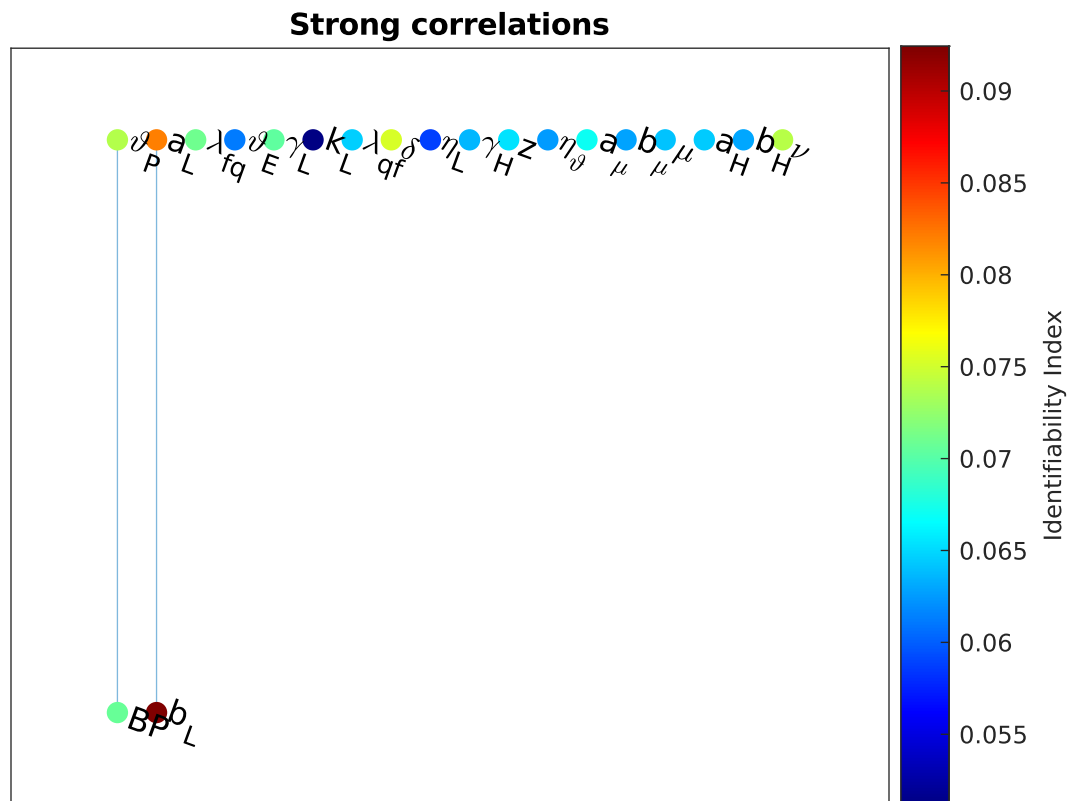
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.3403'	'0.3946'	'0.3674'	'0.0145'	'0.071'
ϑ_E	'0.0322'	'0.0443'	'0.0383'	'0.006'	'0.0612'
γ_L	'0.3689'	'0.4138'	'0.3913'	'0.2368'	'0.0704'
k_L	'5.366'	'5.6401'	'5.5031'	'6.426'	'0.0512'
λ_{qf}	'0.5015'	'0.5495'	'0.5255'	'0.5825'	'0.0646'
δ	'0.0182'	'0.0235'	'0.0208'	'0.0243'	'0.0753'
η_L	'0.4686'	'0.5098'	'0.4892'	'0.619'	'0.0588'
ϑ_P	'0'	'0.0091'	'0.0007'	'0'	'0.0738'
γ_H	'0.4621'	'0.5093'	'0.4857'	'0.9586'	'0.0636'
z	'5.726'	'7.162'	'6.444'	'2.4622'	'0.0655'
η_{ϑ}	'0.8214'	'0.8585'	'0.84'	'0.9742'	'0.0625'
a_L	'2.1145'	'2.6221'	'2.3683'	'1.1966'	'0.0821'
b_L	'4.7227'	'5.391'	'5.0568'	'6.5025'	'0.0924'
a_{μ}	'6.4588'	'7.1014'	'6.7801'	'2.9081'	'0.0671'
b_{μ}	'7.7349'	'8.3469'	'8.0409'	'8.2842'	'0.0629'
μ	'0.4517'	'0.4952'	'0.4735'	'0.4908'	'0.0641'
a_H	'6.1278'	'6.8194'	'6.4736'	'1.5825'	'0.0644'
b_H	'7.6637'	'8.3159'	'7.9898'	'11.8254'	'0.063'
ν	'270.9743'	'300.3245'	'285.6494'	'370.3672'	'0.074'
BP	'275.1183'	'275.8817'	'275.5'	'274.5'	'0.0708'

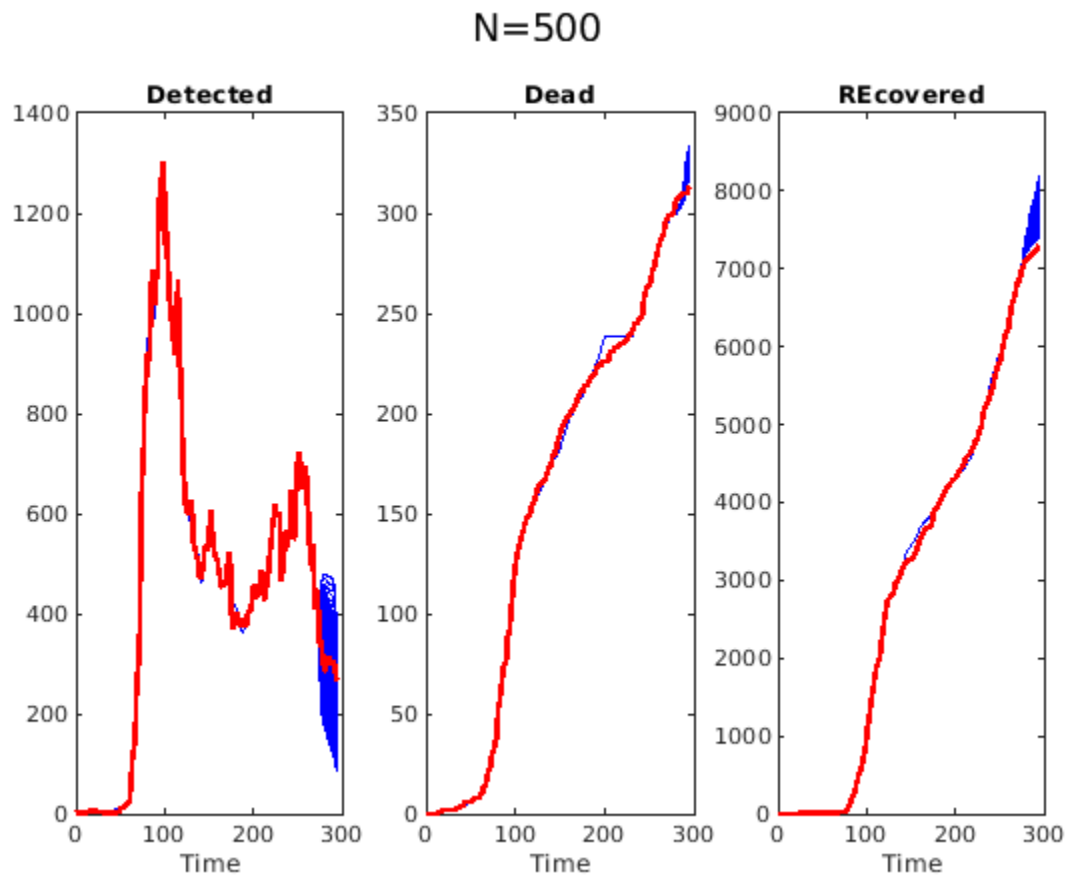
8.3. Identifiability analysis







8.4. Uncertainty analysis



Chapter 9. Extension number9

9.1. Basic information

The extension to be validated consists of the time series from the data296 to the 328. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

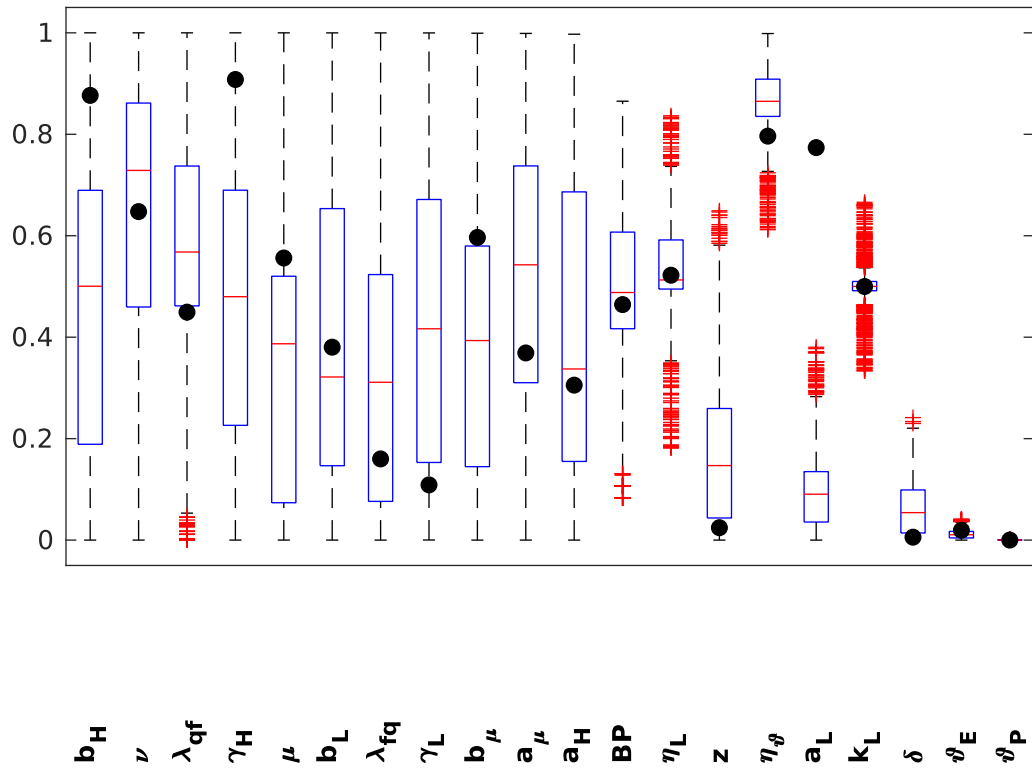
9.2. Estimated parameters with their intervals

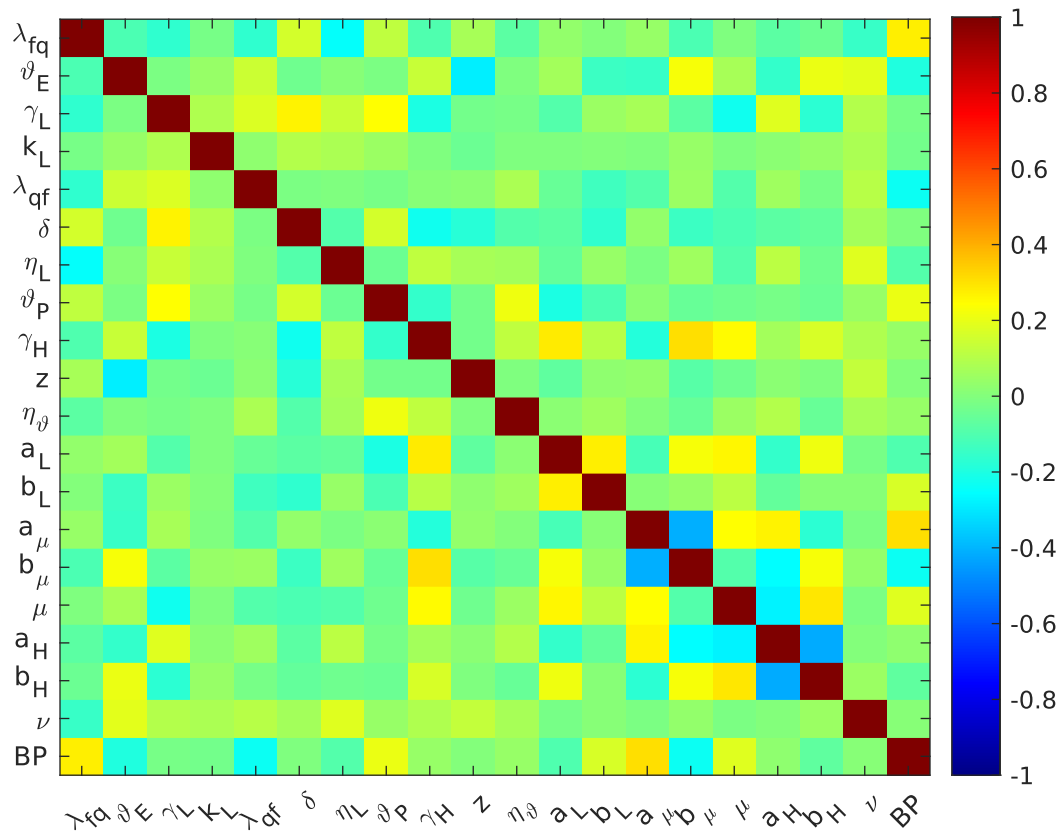
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

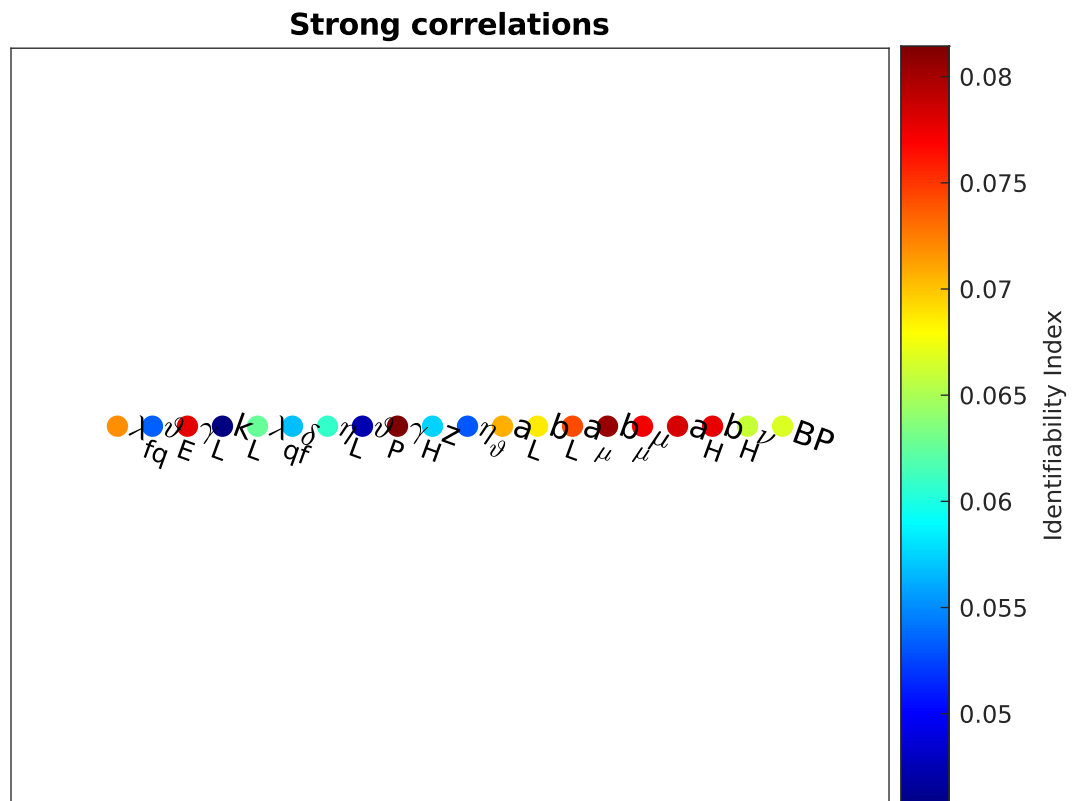
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0487'	'1'	'0.3112'	'0.16'	'0.0719'
ϑ_E	'0.0121'	'0.0268'	'0.0105'	'0.0193'	'0.0534'
γ_L	'0.0028'	'0.1395'	'0.4166'	'0.1089'	'0.0777'
k_L	'1'	'10'	'5.5003'	'5.4992'	'0.0457'
λ_{qf}	'0'	'1'	'0.5679'	'0.4494'	'0.0626'
δ	'0'	'0.0019'	'0.0081'	'0.0009'	'0.0568'
η_L	'0'	'0.95'	'0.5129'	'0.5222'	'0.0608'
ϑ_P	'0'	'0.0001'	'0.0002'	'0.0001'	'0.0473'
γ_H	'0'	'0.95'	'0.4798'	'0.908'	'0.0814'
z	'0'	'1.6511'	'4.4112'	'0.7338'	'0.0575'
η_{ϑ}	'0.7786'	'1'	'0.8649'	'0.7964'	'0.0532'
a_L	'1'	'15'	'2.2667'	'11.8322'	'0.0708'
b_L	'1'	'15'	'5.5019'	'6.3244'	'0.0687'
a_{μ}	'1'	'14.44'	'8.5972'	'6.165'	'0.0743'
b_{μ}	'1.35'	'15'	'6.5072'	'9.3529'	'0.0806'
μ	'0'	'1'	'0.387'	'0.5561'	'0.0773'
a_H	'1.28'	'15'	'5.7232'	'5.2767'	'0.0783'
b_H	'1'	'15'	'8.0067'	'13.2734'	'0.0777'
ν	'102.9057'	'500'	'364.3835'	'323.7897'	'0.0661'
BP	'291.8833'	'306.5794'	'296.4981'	'295.5'	'0.0667'

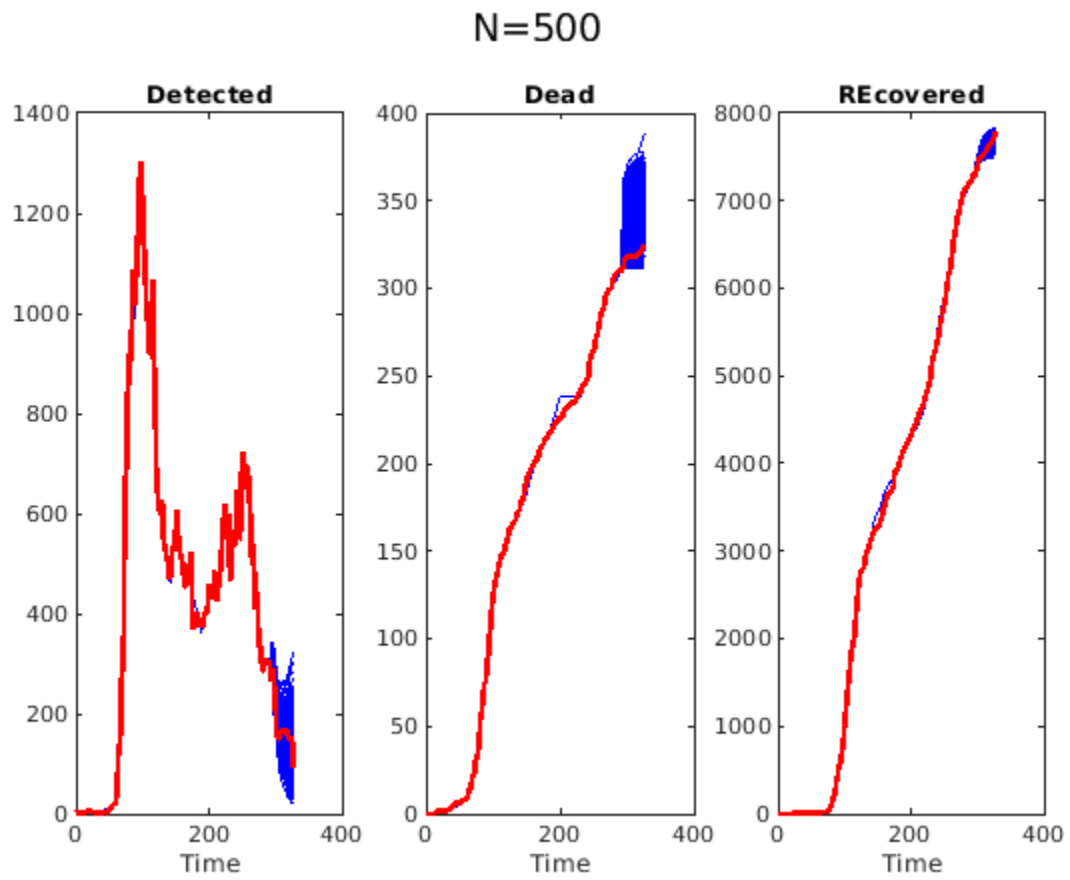
9.3. Identifiability analysis







9.4. Uncertainty analysis



Chapter 10. Extension number10

10.1. Basic information

The extension to be validated consists of the time series from the data328 to the 349. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

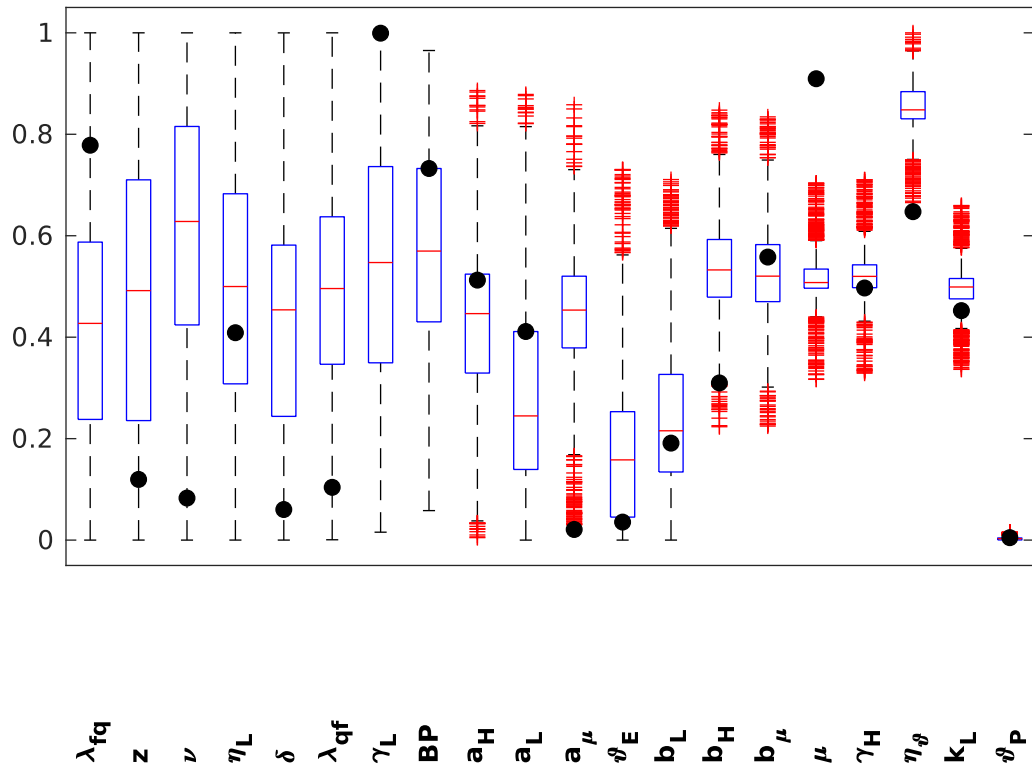
10.2. Estimated parameters with their intervals

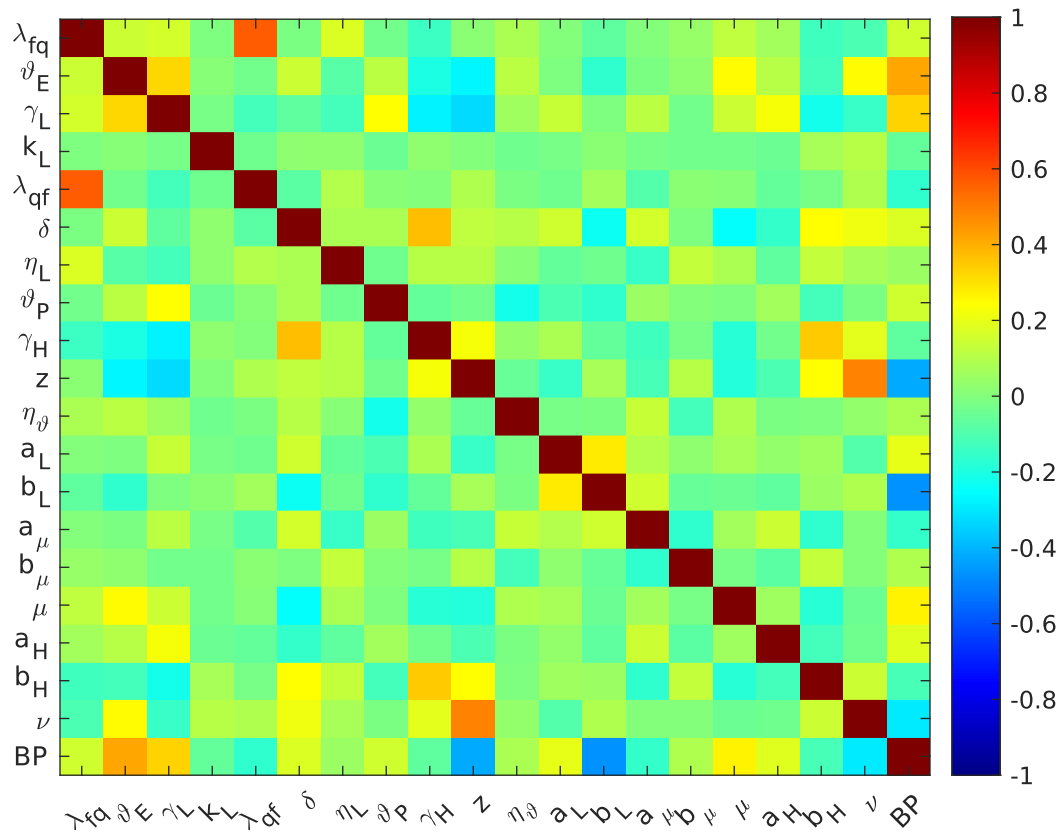
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

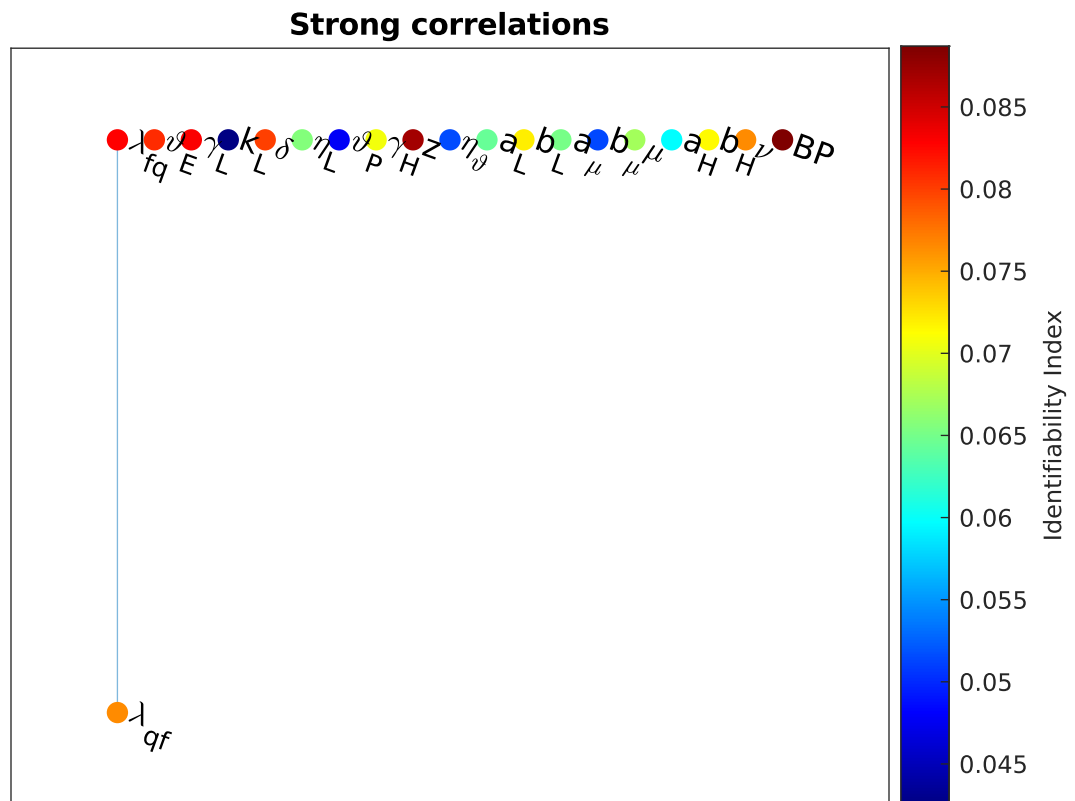
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.3836'	'1'	'0.4272'	'0.7784'	'0.0828'
ϑ_E	'0.0199'	'0.0799'	'0.1581'	'0.0355'	'0.0808'
γ_L	'0.605'	'1'	'0.5472'	'0.9993'	'0.083'
k_L	'1'	'9.2944'	'5.4908'	'5.0712'	'0.0425'
λ_{qf}	'0'	'0.2112'	'0.4959'	'0.104'	'0.0765'
δ	'0.0004'	'0.0203'	'0.0681'	'0.009'	'0.0799'
η_L	'0'	'0.9199'	'0.4999'	'0.4088'	'0.0658'
ϑ_P	'0.0036'	'0.007'	'0.0029'	'0.0048'	'0.048'
γ_H	'0.025'	'1'	'0.5199'	'0.497'	'0.0708'
z	'3.029'	'4.7294'	'14.7542'	'3.588'	'0.087'
η_{ϑ}	'0.6222'	'0.7117'	'0.8481'	'0.6474'	'0.0517'
a_L	'5.8256'	'9.5279'	'4.4276'	'6.757'	'0.0644'
b_L	'2.2826'	'5.0591'	'4.017'	'3.6766'	'0.072'
a_{μ}	'1'	'12.844'	'7.3481'	'1.293'	'0.0651'
b_{μ}	'1'	'15'	'8.2847'	'8.8111'	'0.0514'
μ	'0.019'	'0.95'	'0.5077'	'0.9095'	'0.0672'
a_H	'1'	'13.6'	'7.2506'	'8.175'	'0.0597'
b_H	'1.28'	'14.4512'	'8.4563'	'5.3373'	'0.0715'
ν	'34.758'	'68.7794'	'314.0551'	'41.4388'	'0.0765'
BP	'327.444'	'331.4316'	'320.5'	'327.5'	'0.0887'

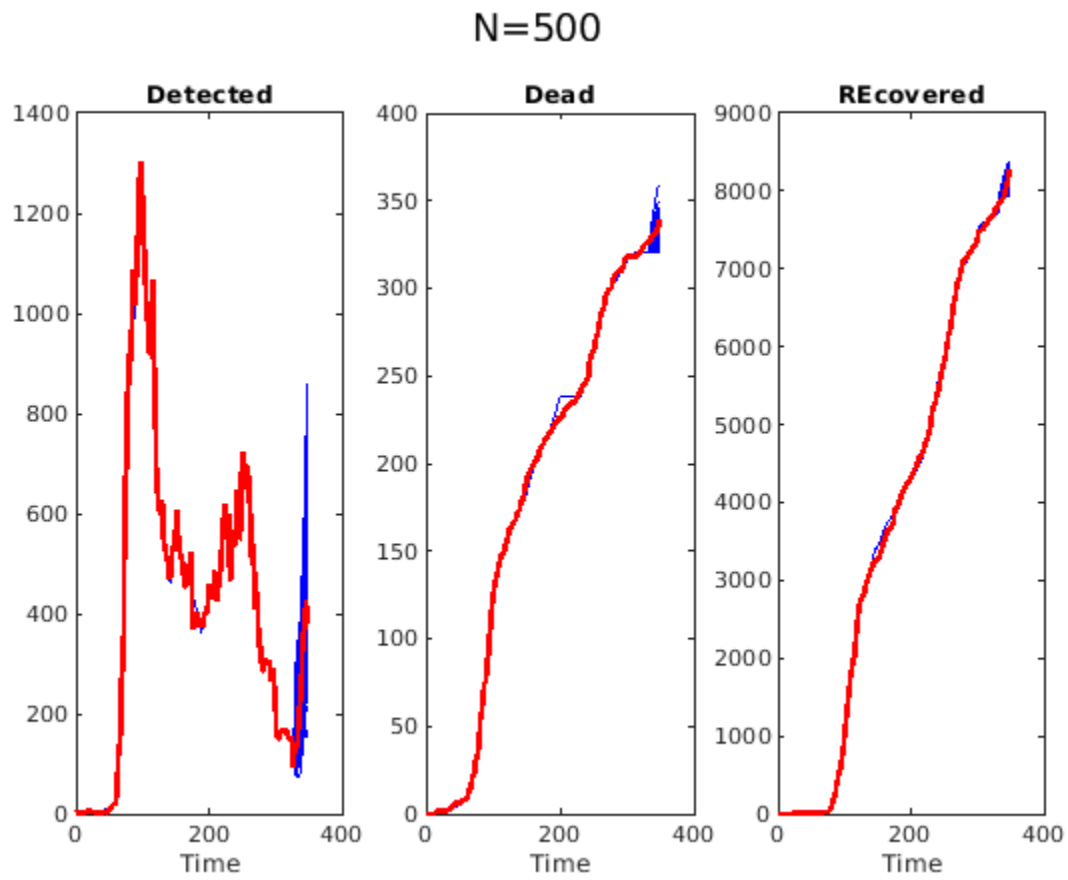
10.3. Identifiability analysis







10.4. Uncertainty analysis



Chapter 11. Extension number11

11.1. Basic information

The extension to be validated consists of the time series from the data349 to the 379. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

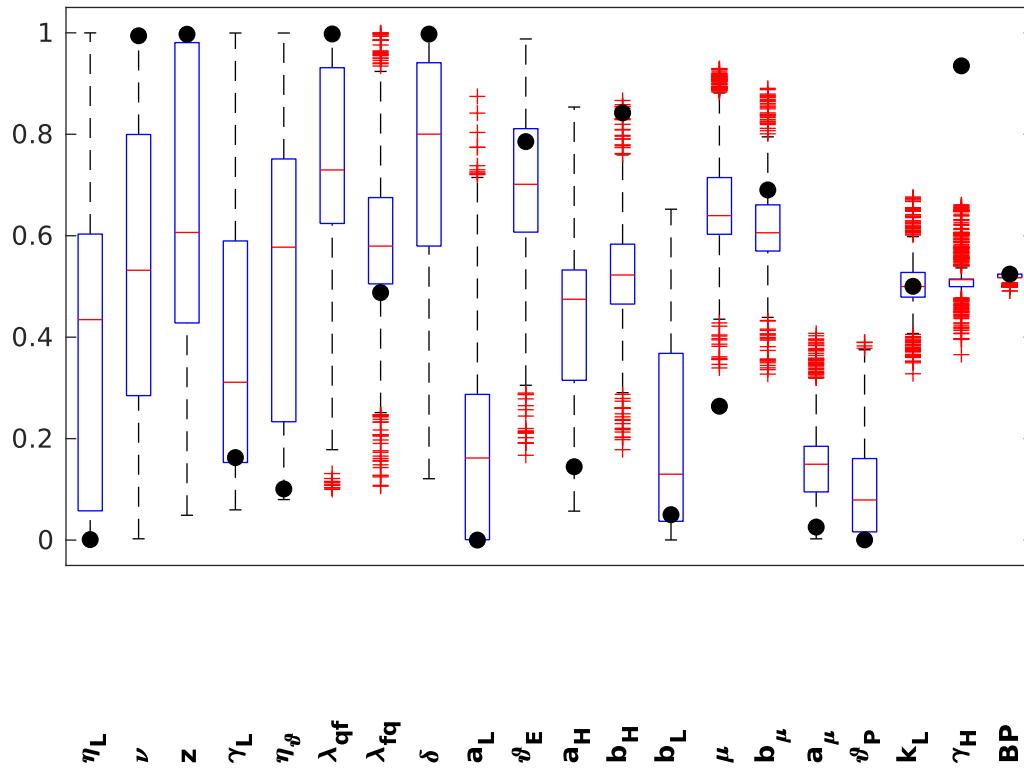
11.2. Estimated parameters with their intervals

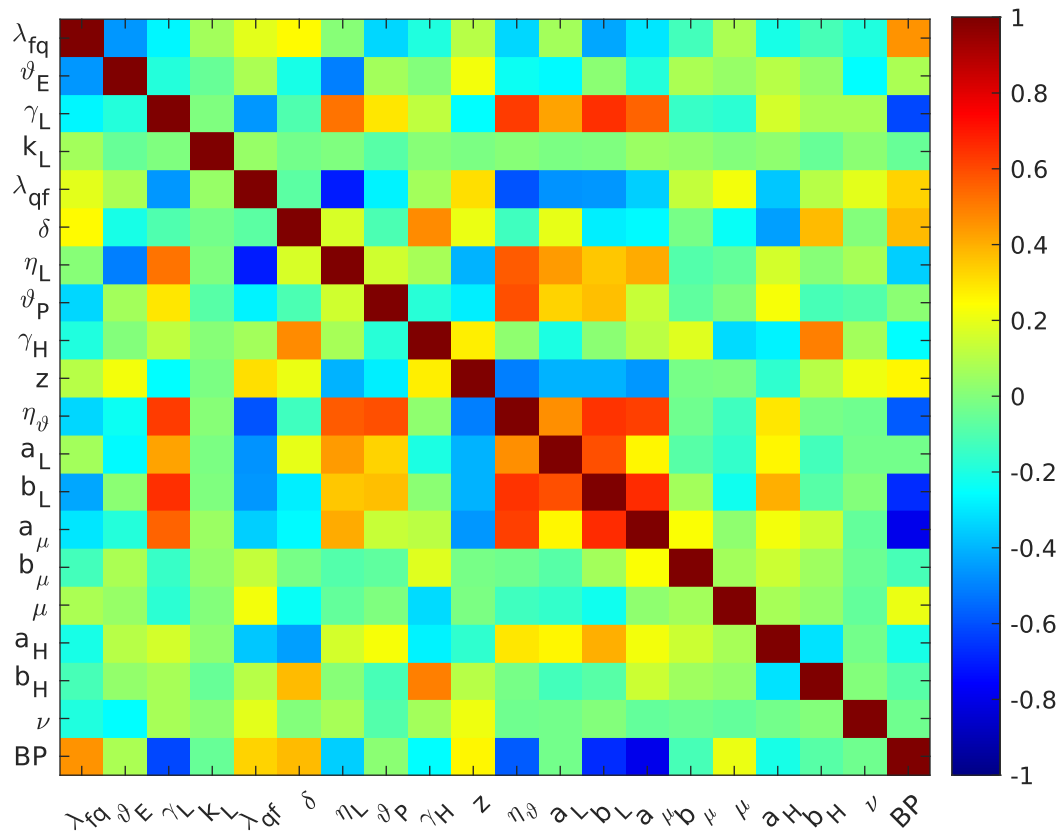
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

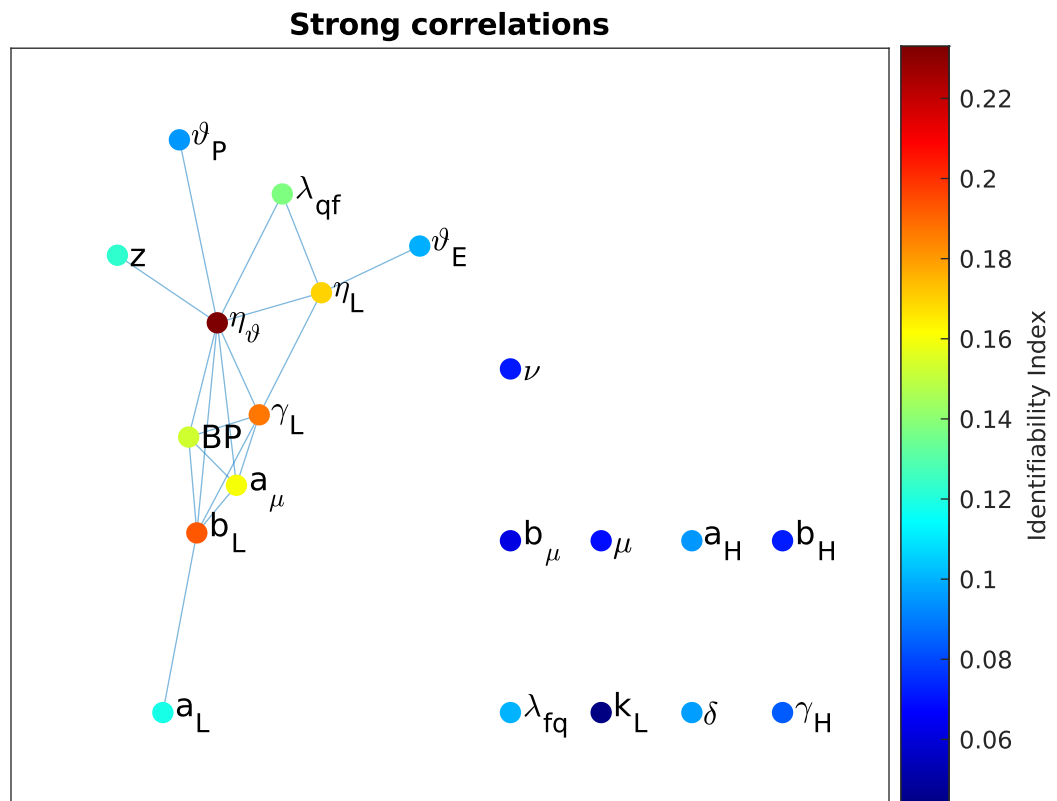
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4185'	'0.563'	'0.5795'	'0.488'	'0.1006'
ϑ_E	'0.6573'	'0.7877'	'0.7013'	'0.7855'	'0.0996'
γ_L	'0.1305'	'0.1629'	'0.3112'	'0.1626'	'0.1867'
k_L	'1'	'10'	'5.4991'	'5.5025'	'0.0438'
λ_{qf}	'0.983'	'0.998'	'0.7297'	'0.9977'	'0.1383'
δ	'0'	'0.15'	'0.12'	'0.1496'	'0.0969'
η_L	'0.0001'	'0.0022'	'0.4346'	'0.001'	'0.1699'
ϑ_P	'0'	'0.194'	'0.0792'	'0.0005'	'0.0951'
γ_H	'0'	'1'	'0.5134'	'0.9349'	'0.0844'
z	'21.7441'	'30'	'18.1945'	'29.9157'	'0.1236'
η_{ϑ}	'0.0045'	'0.2269'	'0.5774'	'0.1008'	'0.233'
a_L	'1'	'2.4708'	'3.2674'	'1.0005'	'0.1186'
b_L	'1.6017'	'2.8657'	'2.819'	'1.7009'	'0.193'
a_{μ}	'1'	'15'	'3.0943'	'1.3592'	'0.16'
b_{μ}	'1.336'	'14.44'	'9.482'	'10.6635'	'0.062'
μ	'0.0148'	'0.5648'	'0.6396'	'0.2639'	'0.0693'
a_H	'1'	'15'	'7.647'	'3.0243'	'0.0953'
b_H	'1.35'	'14.454'	'8.3167'	'12.7916'	'0.0721'
ν	'390.2756'	'500'	'265.9702'	'497.1057'	'0.0719'
BP	'342.5225'	'349.6128'	'349.2171'	'349.4989'	'0.1528'

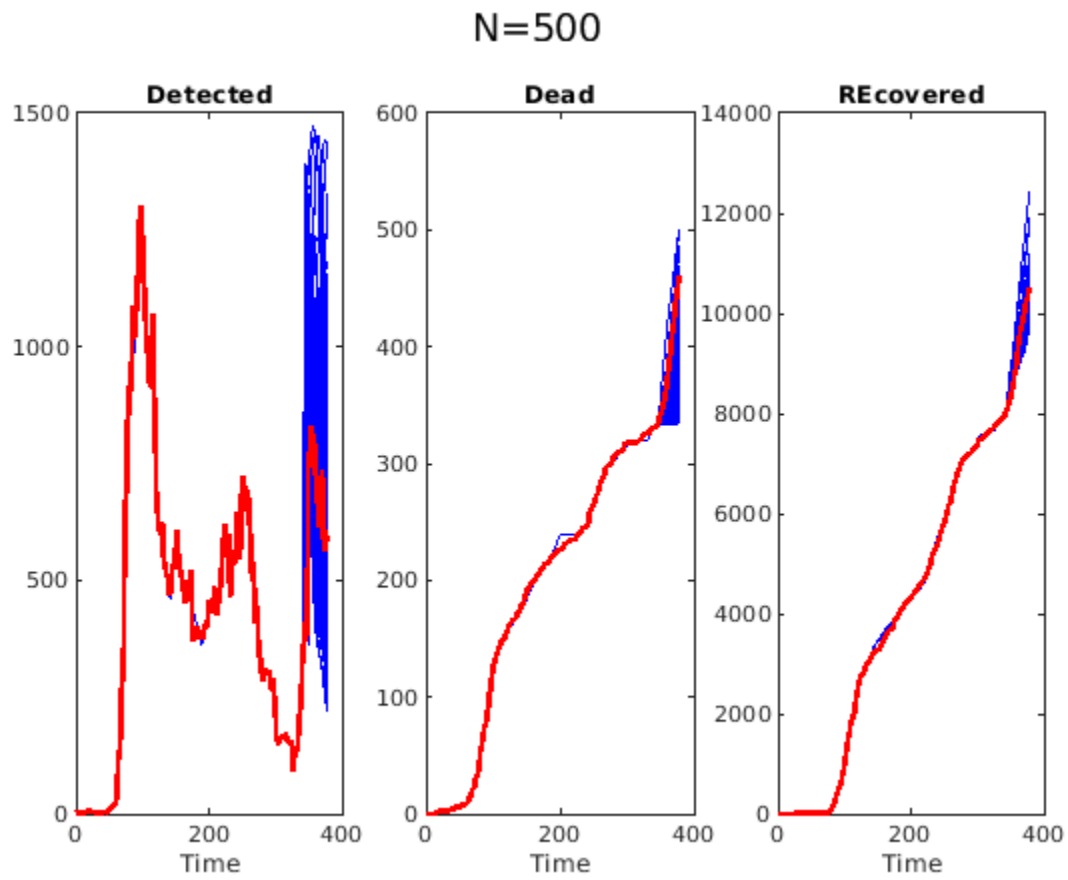
11.3. Identifiability analysis







11.4. Uncertainty analysys



Chapter 12. Extension number12

12.1. Basic information

The extension to be validated consists of the time series from the data379 to the 428. The status of the validation is: COMPLETED.

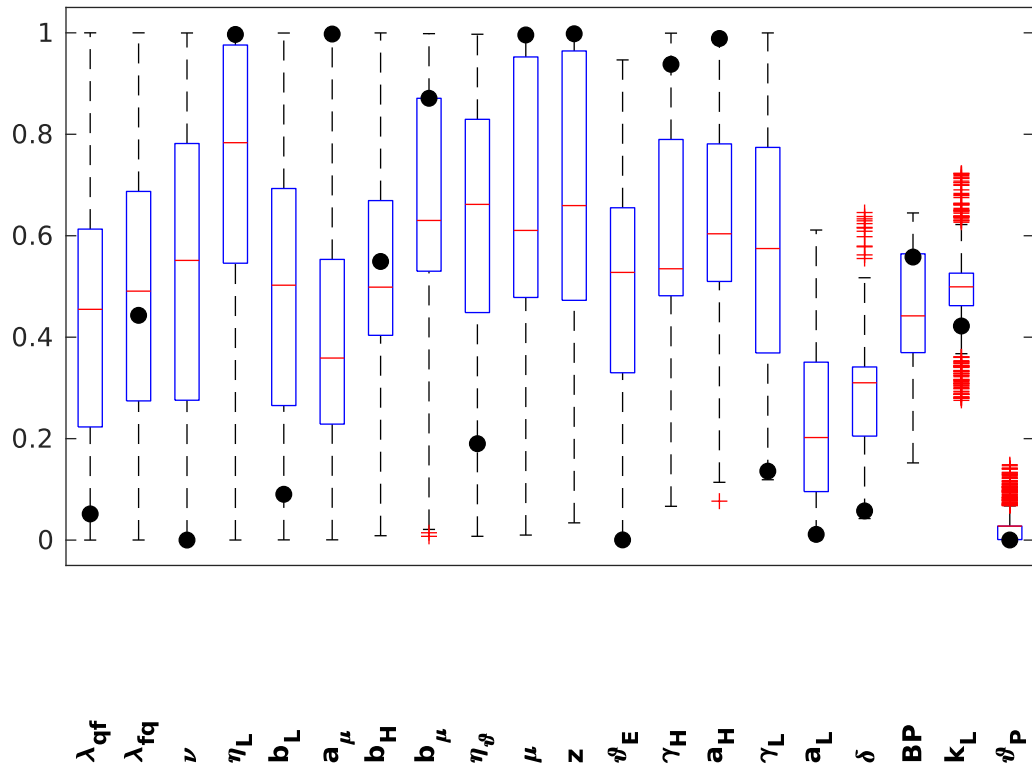
The number of estimations needed to perform the validation was1000.

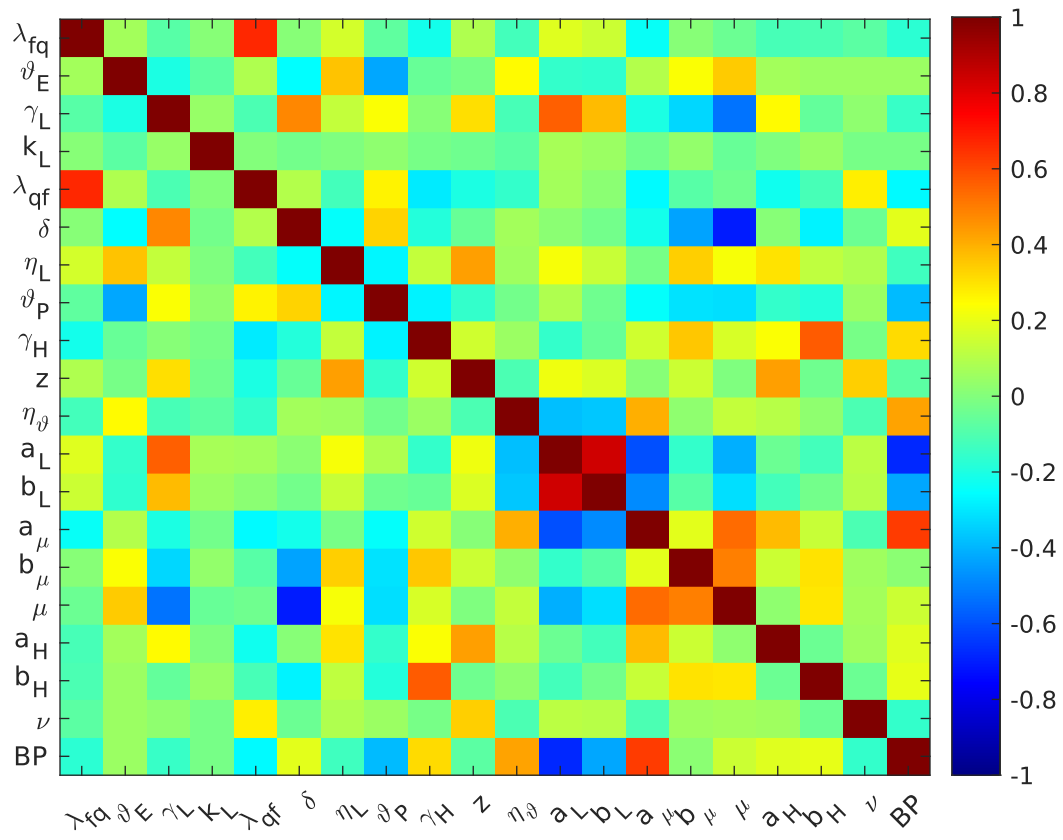
12.2. Estimated parameters with their intervals

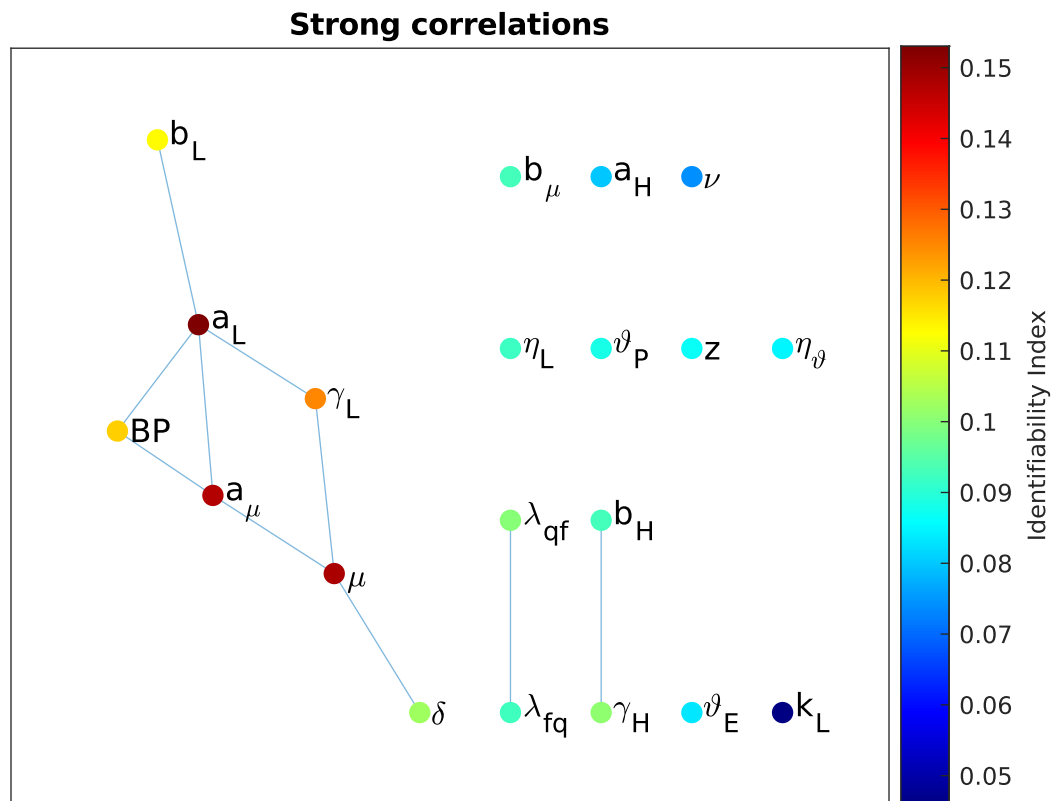
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.4682'	'0.5133'	'0.4908'	'0.4431'	'0.0925'
ϑ_E	'0.507'	'0.5484'	'0.5277'	'0.0004'	'0.0835'
γ_L	'0.5519'	'0.5976'	'0.5747'	'0.1359'	'0.1251'
k_L	'5.3783'	'5.6084'	'5.4933'	'4.7984'	'0.046'
λ_{qf}	'0.434'	'0.4758'	'0.4549'	'0.0516'	'0.1'
δ	'0.0437'	'0.0495'	'0.0466'	'0.0086'	'0.1026'
η_L	'0.7601'	'0.8067'	'0.7834'	'0.9968'	'0.0923'
ϑ_P	'0.0127'	'0.0425'	'0.0276'	'0.0002'	'0.0884'
γ_H	'0.5136'	'0.5556'	'0.5346'	'0.938'	'0.101'
z	'19.0489'	'20.5173'	'19.7831'	'29.9447'	'0.0866'
η_{ϑ}	'0.6393'	'0.6843'	'0.6618'	'0.1901'	'0.085'
a_L	'3.6245'	'4.0364'	'3.8305'	'1.1579'	'0.153'
b_L	'7.6668'	'8.4026'	'8.0347'	'2.2644'	'0.1131'
a_{μ}	'5.6975'	'6.3511'	'6.0243'	'14.9665'	'0.1475'
b_{μ}	'9.5253'	'10.1181'	'9.8217'	'13.1933'	'0.0931'
μ	'0.5853'	'0.6356'	'0.6105'	'0.9958'	'0.1482'
a_H	'9.192'	'9.7124'	'9.4522'	'14.8442'	'0.0801'
b_H	'7.6834'	'8.2787'	'7.9811'	'8.6899'	'0.0929'
ν	'262.2771'	'289.085'	'275.681'	'0.0353'	'0.0744'
BP	'378.7864'	'380.2136'	'379.5'	'387.5002'	'0.1178'

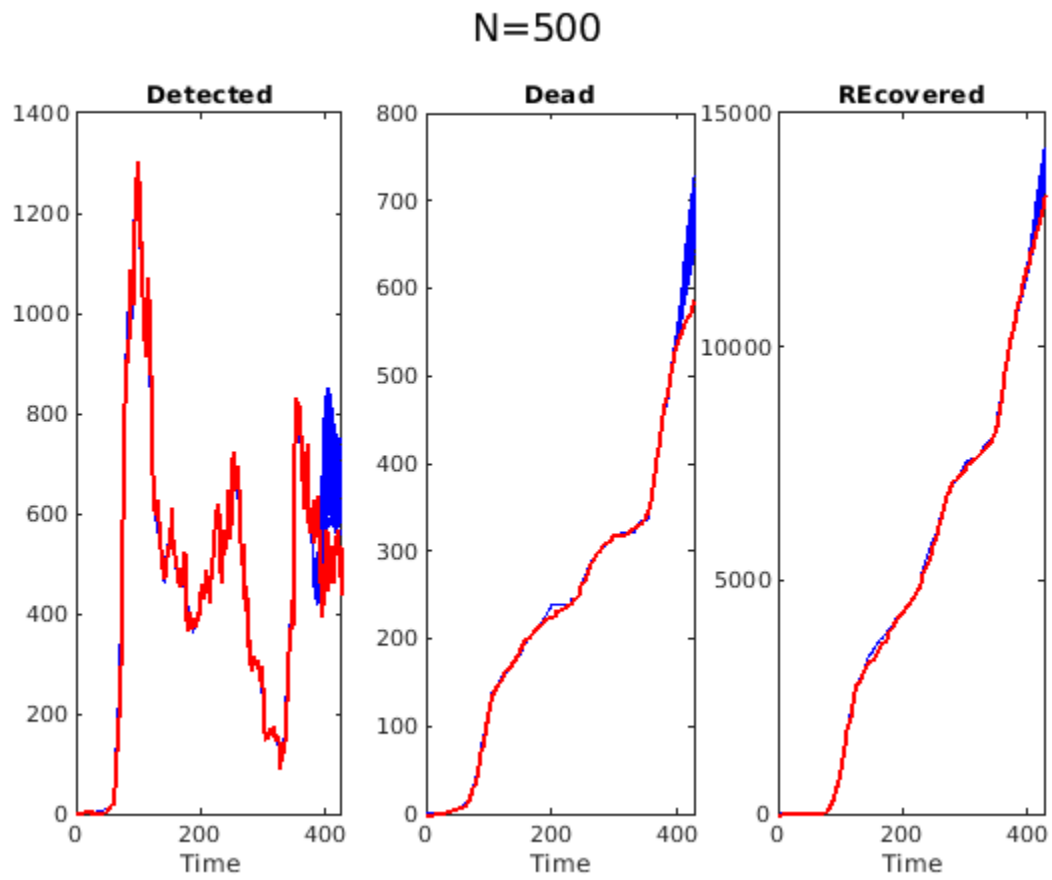
12.3. Identifiability analysis







12.4. Uncertainty analysis



Chapter 13. Extension number13

13.1. Basic information

The extension to be validated consists of the time series from the data428 to the 501. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

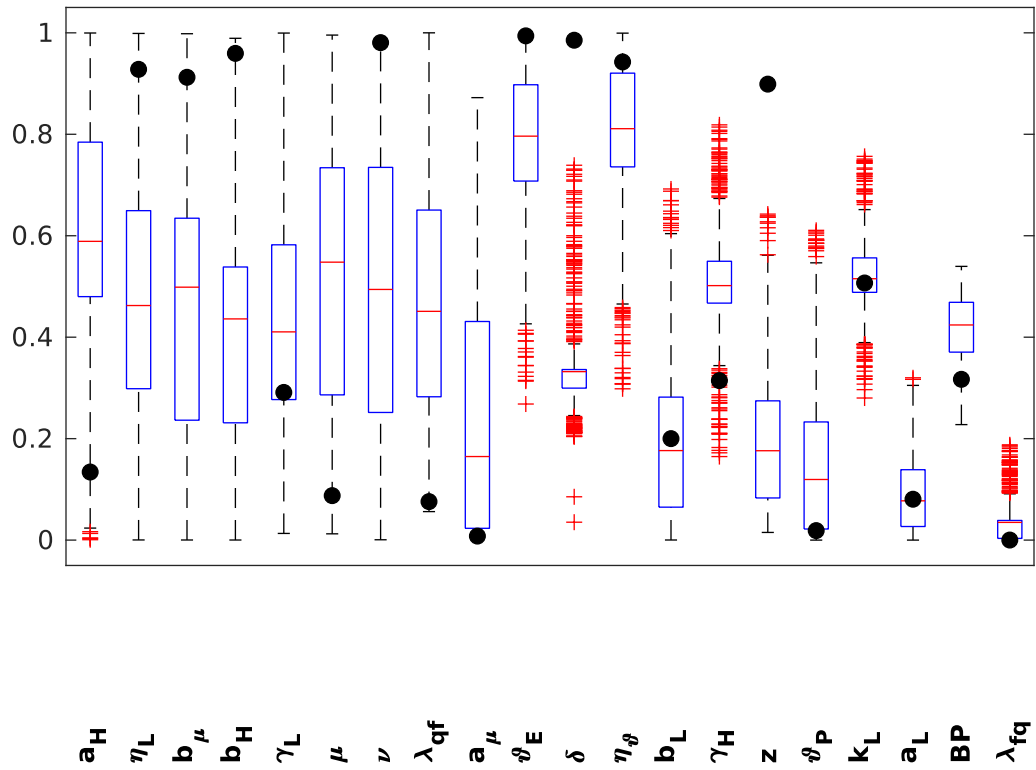
13.2. Estimated parameters with their intervals

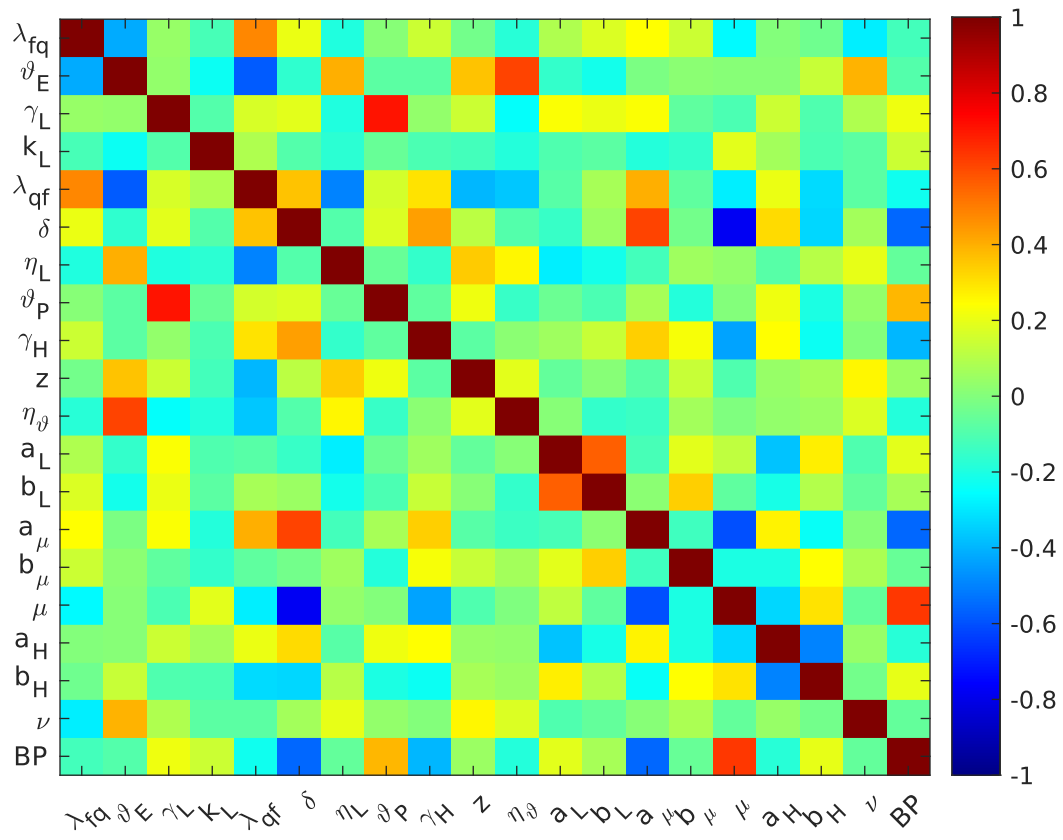
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

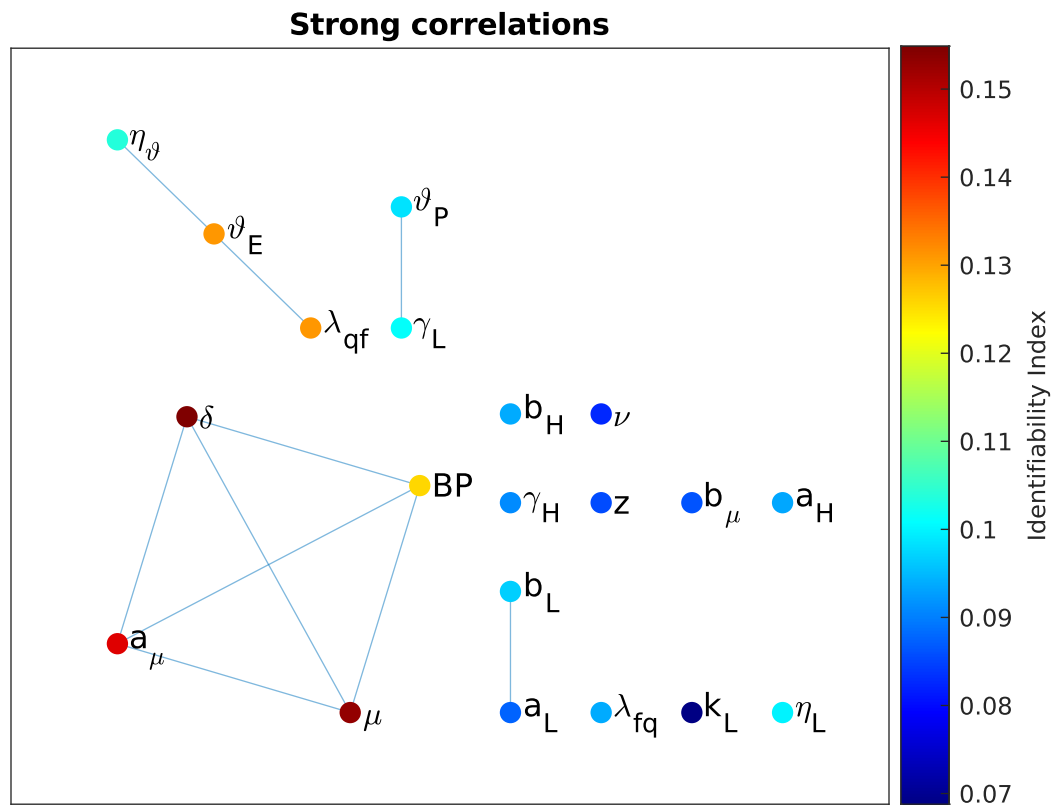
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0002'	'0.0349'	'0.0001'	'0.0938'
ϑ_E	'0.9918'	'0.9967'	'0.7963'	'0.994'	'0.1312'
γ_L	'0.2697'	'0.3205'	'0.4105'	'0.2911'	'0.1013'
k_L	'1.9266'	'8.3283'	'5.6374'	'5.5616'	'0.0688'
λ_{qf}	'0.073'	'0.0901'	'0.451'	'0.0759'	'0.131'
δ	'0.0425'	'0.15'	'0.0498'	'0.1478'	'0.1549'
η_L	'0.6808'	'0.9465'	'0.4624'	'0.928'	'0.0998'
ϑ_P	'0.0131'	'0.0296'	'0.1195'	'0.0187'	'0.0987'
γ_H	'0.026'	'0.6507'	'0.5017'	'0.3144'	'0.091'
z	'20.0641'	'27.442'	'5.2855'	'26.9658'	'0.0856'
η_{ϑ}	'0.7485'	'0.9664'	'0.811'	'0.9426'	'0.104'
a_L	'1.8328'	'2.3361'	'2.0839'	'2.1281'	'0.0878'
b_L	'3.4706'	'6.28'	'3.4704'	'3.8005'	'0.0969'
a_{μ}	'1'	'13.6'	'3.306'	'1.1106'	'0.1467'
b_{μ}	'1.266'	'14.3'	'7.9803'	'13.7727'	'0.0864'
μ	'0.0202'	'0.1762'	'0.5479'	'0.0877'	'0.1529'
a_H	'1.28'	'15'	'9.2451'	'2.8788'	'0.0936'
b_H	'1.28'	'15'	'7.1047'	'14.4331'	'0.0938'
ν	'324.0329'	'492.0563'	'247.0657'	'490.3422'	'0.0826'
BP	'414.398'	'420.7985'	'426.5'	'414.5'	'0.1258'

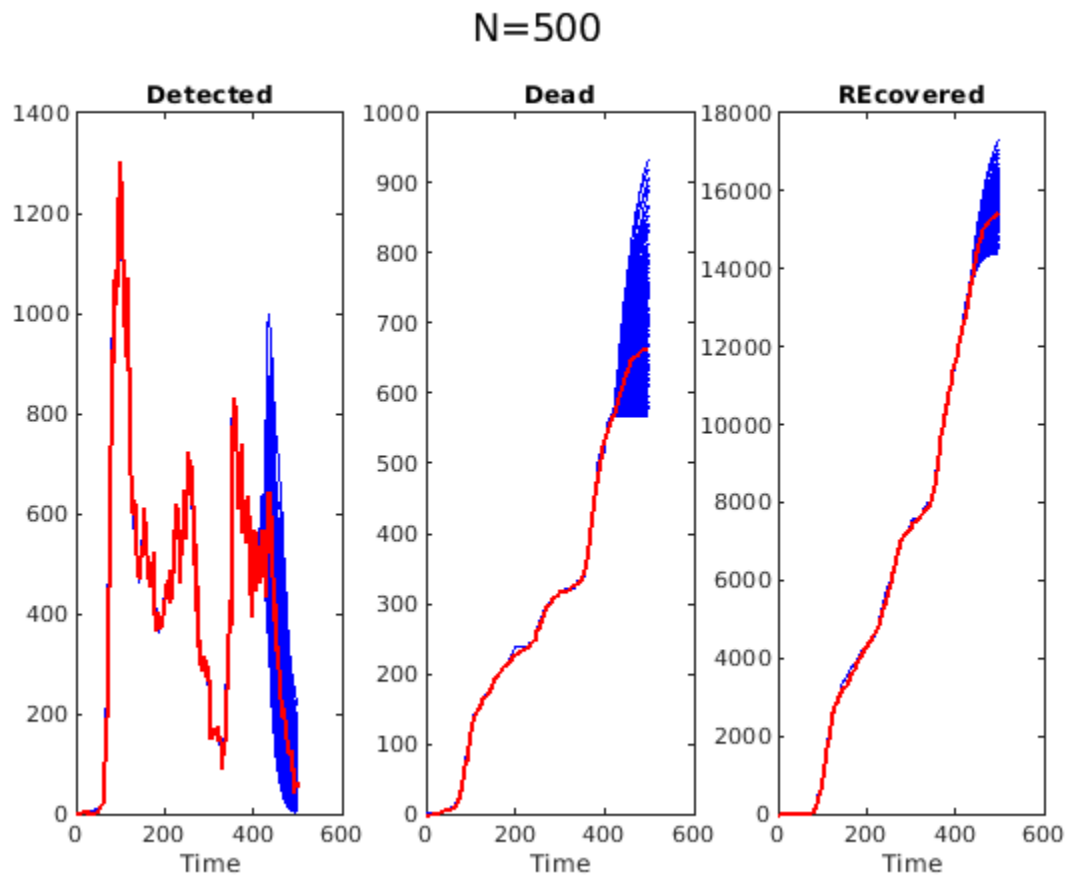
13.3. Identifiability analysis







13.4. Uncertainty analysis



Chapter 14. Extension number14

14.1. Basic information

The extension to be validated consists of the time series from the data501 to the 679. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.

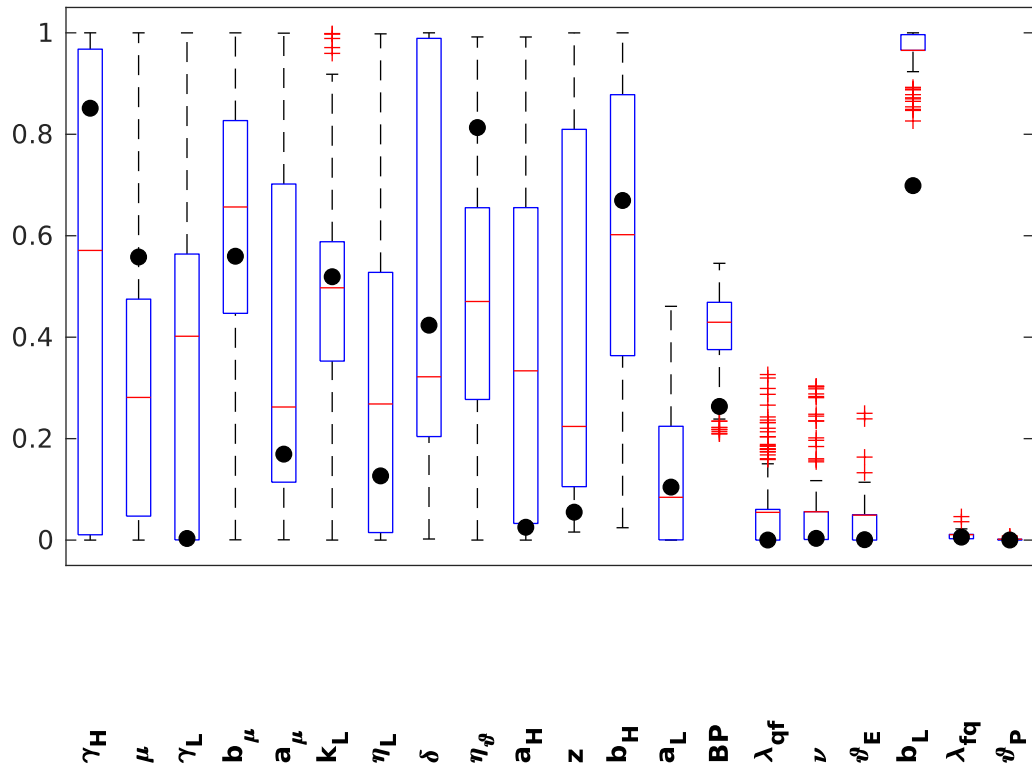
14.2. Estimated parameters with their intervals

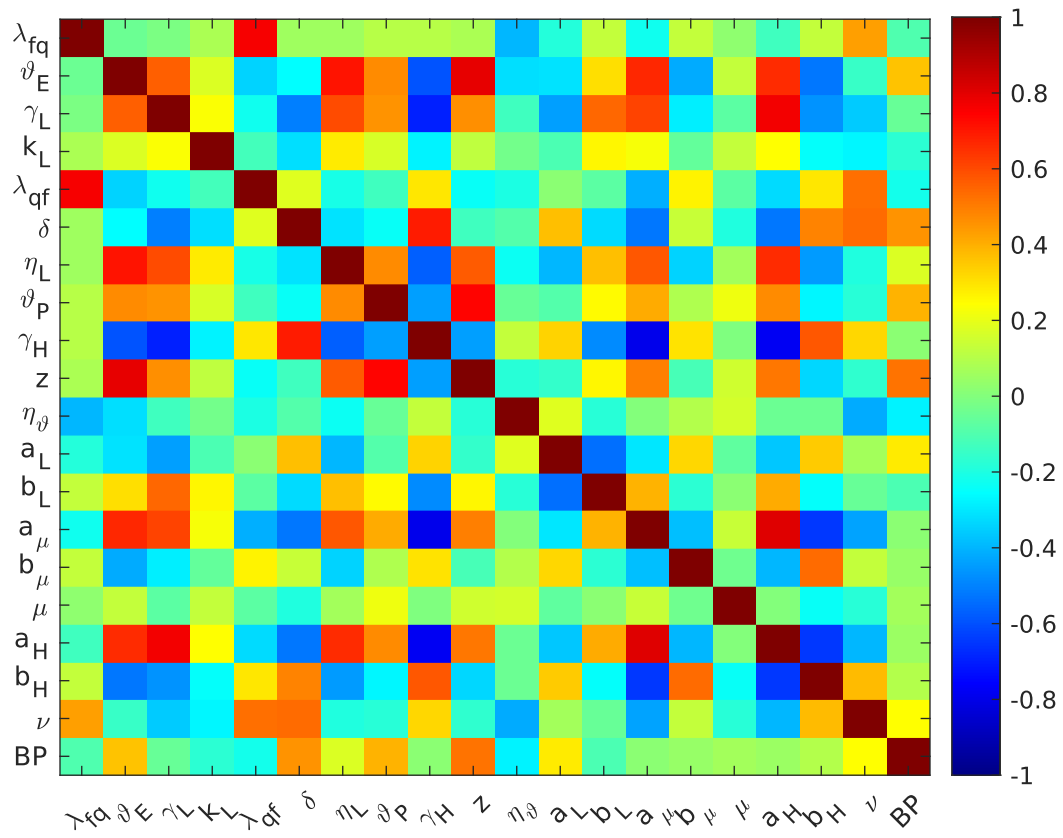
It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

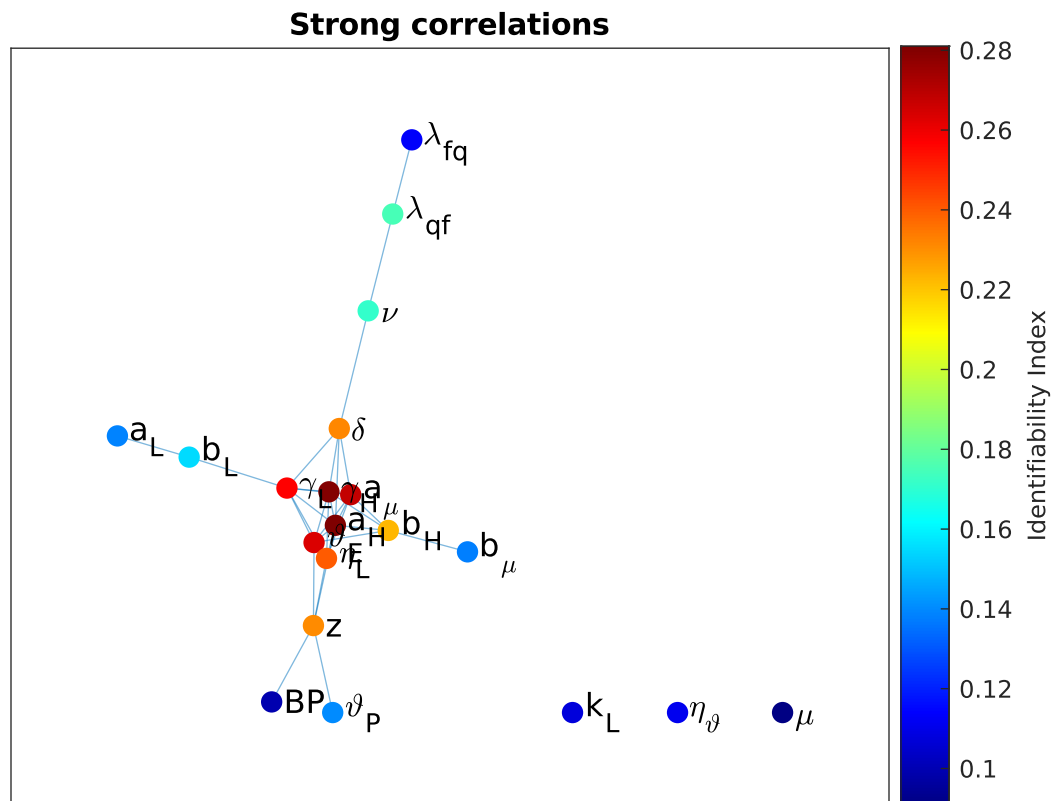
Due to a deviation from the median the CSB method was activated to obtain the parameter intervals.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0053'	'0.006'	'0.0107'	'0.0058'	'0.1139'
ϑ_E	'0'	'0.0018'	'0.05'	'0.0008'	'0.2639'
γ_L	'0'	'0.0072'	'0.4019'	'0.0032'	'0.2567'
k_L	'1.4763'	'9.1'	'5.4764'	'5.6726'	'0.1075'
λ_{qf}	'0'	'0.0003'	'0.0605'	'0.0001'	'0.1751'
δ	'0.0071'	'0.1323'	'0.0483'	'0.0635'	'0.2315'
η_L	'0.1147'	'0.1342'	'0.2683'	'0.1266'	'0.24'
ϑ_P	'0.0001'	'0.0002'	'0.0017'	'0.0002'	'0.1401'
γ_H	'0.4464'	'1'	'0.571'	'0.8514'	'0.28'
z	'1.6003'	'1.7023'	'6.7219'	'1.652'	'0.231'
η_{ϑ}	'0.8018'	'0.8573'	'0.4704'	'0.8133'	'0.1113'
a_L	'1.35'	'15'	'2.1981'	'2.4627'	'0.1386'
b_L	'1'	'13.768'	'14.5159'	'10.783'	'0.1554'
a_{μ}	'3.0728'	'10.6422'	'4.6733'	'3.3726'	'0.2683'
b_{μ}	'1'	'13.6'	'10.1936'	'8.8343'	'0.1385'
μ	'0'	'0.855'	'0.2812'	'0.5581'	'0.0911'
a_H	'1.0319'	'2.5945'	'5.6716'	'1.3545'	'0.281'
b_H	'2.8045'	'13.67'	'9.4288'	'10.3729'	'0.2229'
ν	'1.5912'	'3.7006'	'28.0625'	'1.7114'	'0.1719'
BP	'490.5071'	'497.5403'	'531.5'	'491.5'	'0.0999'

14.3. Identifiability analysis







14.4. Uncertainty analysis

