Validation process forSINCELEJO

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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 108. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was5000.

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	'0.0053'	'0.0087'	'0.0575'	'0.0062'	'0.0889'
P_0	'0.0001'	'0.0004'	'0.0195'	'0.0003'	'0.0718'
\lambda_{fq}	'0.1523'	'0.155'	'0.5541'	'0.155'	'0.1397'
\vartheta_E	'0.0016'	'0.0064'	'0.0077'	'0.0032'	'0.1106'
\gamma_L	'0.3645'	'0.9285'	'0.3875'	'0.925'	'0.1395'
k_L	'1'	'7.0529'	'5.5391'	'4.7375'	'0.0888'
\lambda_{qf}	'0.0187'	'0.0196'	'0.3653'	'0.0195'	'0.1341'
\delta	'0.0066'	'0.0088'	'0.0265'	'0.0072'	'0.1666'
\eta_L	'0.9334'	'0.9777'	'0.5373'	'0.9704'	'0.1276'
\vartheta_P	'0'	'0.0001'	'0.0018'	'0'	'0.1116'
\gamma_H	'0.1551'	'0.2027'	'0.2786'	'0.2'	'0.1421'
z	'28.7785'	'30'	'6.5895'	'29.9024'	'0.1341'
\eta_\vartheta	'0.6051'	'0.6372'	'0.7347'	'0.6132'	'0.1156'
a_L	'11.3595'	'15'	'12.034'	'14.7222'	'0.0975'
b_L	'1.5673'	'2.444'	'2.3729'	'1.8443'	'0.1082'
a_\mu	'3.3308'	'3.7794'	'3.7892'	'3.6367'	'0.1042'
b_\mu	'4.1725'	'5.8058'	'9.7133'	'4.34'	'0.148'
\mu	'0.5947'	'0.9792'	'0.618'	'0.9773'	'0.1477'
a_H	'1.0243'	'1.9725'	'2.0675'	'1.0732'	'0.0971'
b_H	'7.1626'	'14.209'	'8.5063'	'9.3669'	'0.1239'
\nu	'0.2997'	'0.7036'	'19.2876'	'0.4684'	'0.099'

1.3. Identifiability analisys

Strong correlations

1.4. Uncertainty analisys

N=500
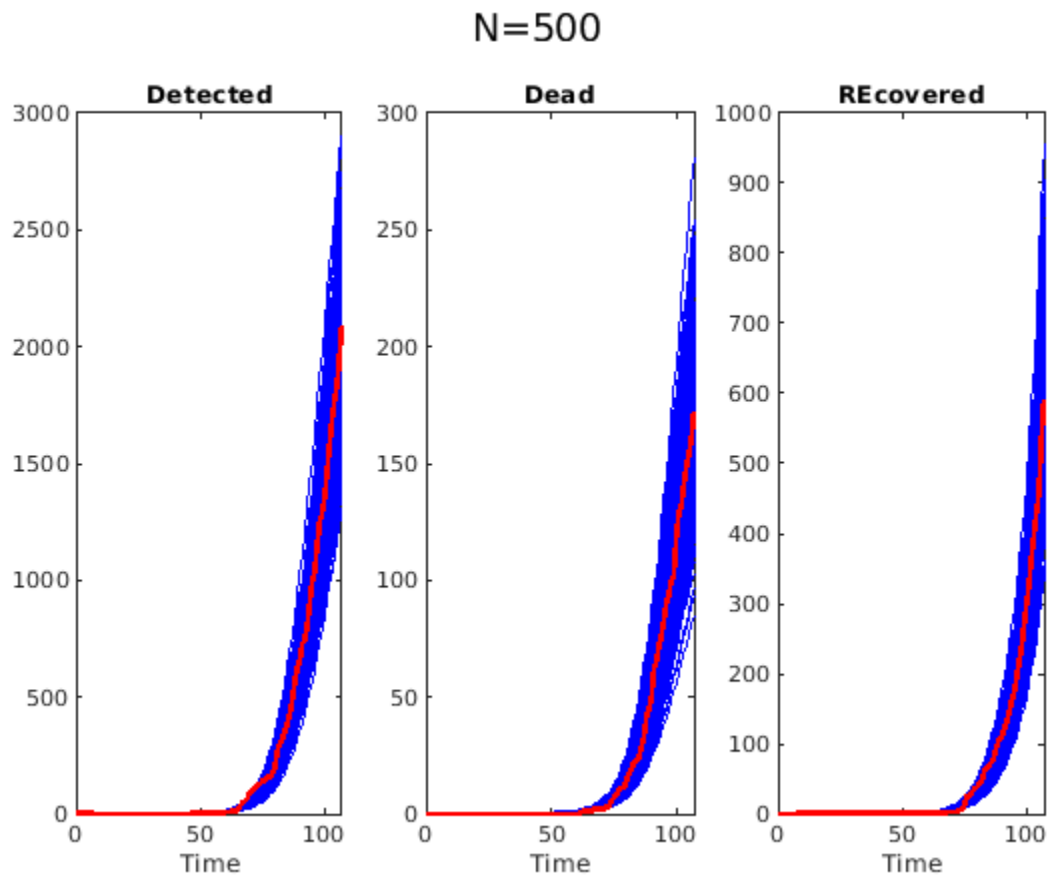
Chapter 2. Extension number2

2.1. Basic information

The extension to be validated consists of the time series from the data108 to the 133. The status of the validation is: COMPLETED.

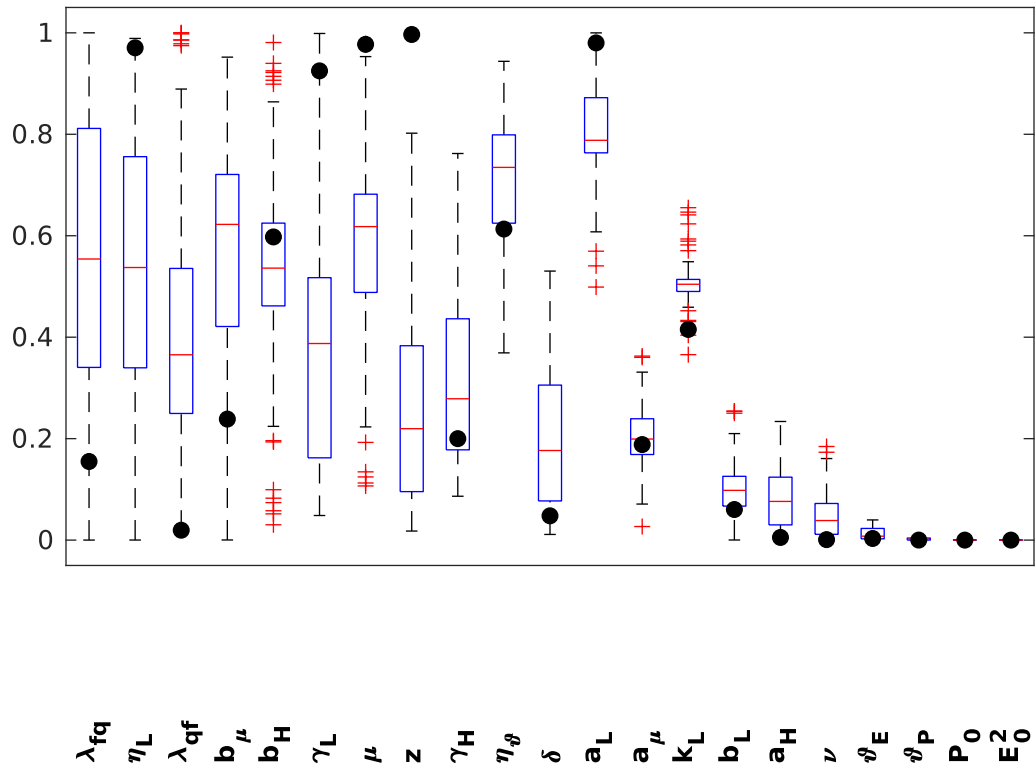The number of estimations needed to perform the validation was3000.

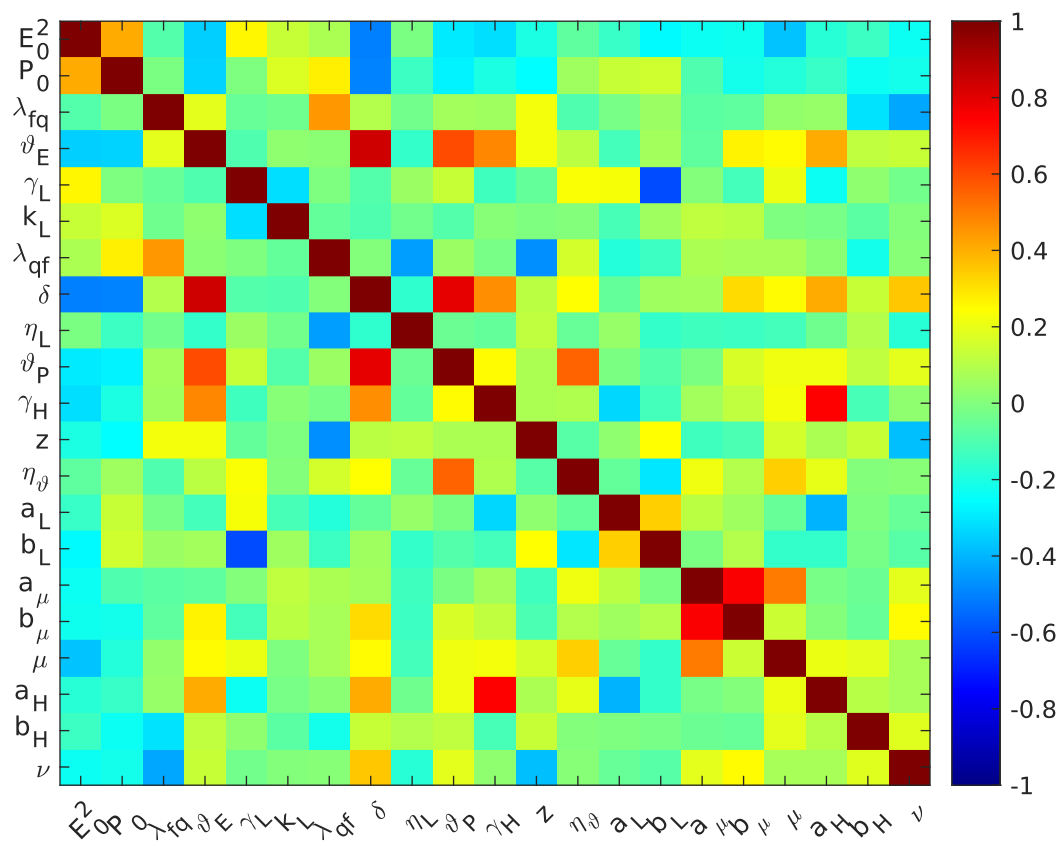## 2.2. Estimated parameters with their intervals

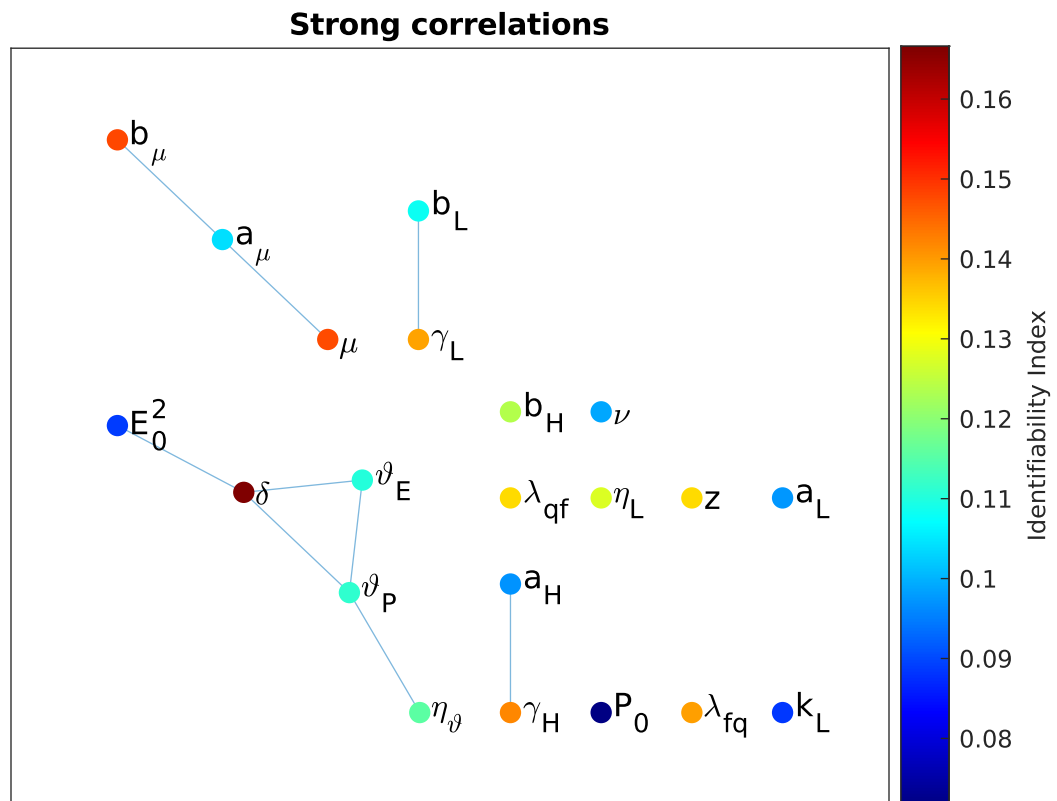It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.038'	'0.0022'	'0.0139'	'0.1122'
\vartheta_E	'0.0252'	'0.0343'	'0.0298'	'0.0359'	'0.1156'
\gamma_L	'0.0168'	'0.2185'	'0.1177'	'0.1088'	'0.1998'
k_L	'5.1522'	'5.8467'	'5.4995'	'4.2268'	'0.1021'
\lambda_{qf}	'0.0676'	'0.1657'	'0.1167'	'0.1583'	'0.1486'
\delta	'0.002'	'0.0028'	'0.0024'	'0.0017'	'0.0963'
\eta_L	'0.6747'	'0.8041'	'0.7394'	'0.5904'	'0.1478'
\vartheta_P	'0.0002'	'0.0004'	'0.0003'	'0.0006'	'0.0881'
\gamma_H	'0.3904'	'0.5538'	'0.4721'	'0.5073'	'0.1629'
z	'20.2722'	'24.3474'	'22.3098'	'23.6058'	'0.1371'
\eta_\vartheta	'0.8163'	'0.9004'	'0.8584'	'0.9329'	'0.1152'
a_L	'9.3384'	'12.1115'	'10.725'	'12.1755'	'0.197'
b_L	'1.2089'	'3.2137'	'2.2113'	'9.5028'	'0.1252'
a_\mu	'3.2247'	'3.9288'	'3.5767'	'3.8413'	'0.1132'
b_\mu	'7.3442'	'9.6175'	'8.4808'	'12.9565'	'0.1659'
\mu	'0.3433'	'0.4946'	'0.4189'	'0.2315'	'0.1305'
a_H	'5.5209'	'7.5562'	'6.5385'	'10.4298'	'0.1392'
b_H	'8.0533'	'10.0818'	'9.0675'	'6.7662'	'0.1114'
\nu	'20.2184'	'30.1905'	'25.2045'	'29.6242'	'0.0767'
BP	'106.936'	'108.064'	'107.5'	'108.5'	'0.0765'

2.3. Identifiability analisys

Strong correlations

2.4. Uncertainty analisys

N=500
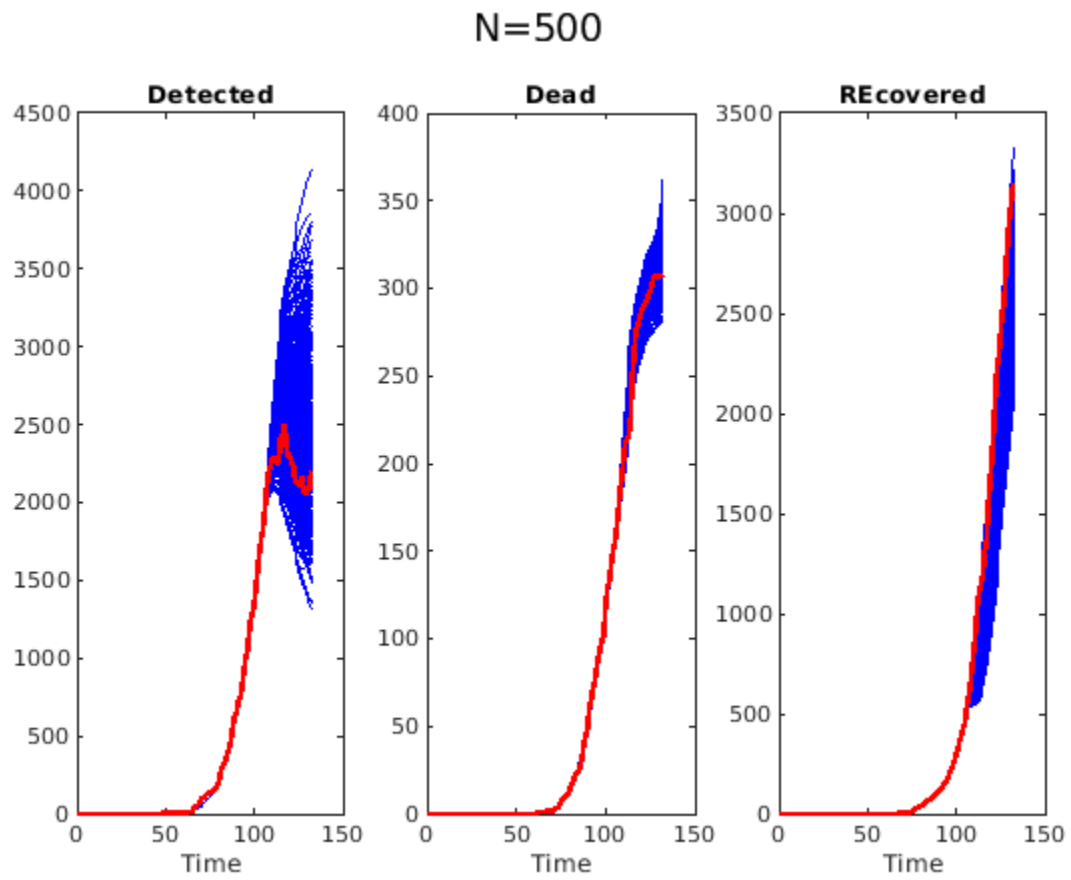
Chapter 3. Extension number3

3.1. Basic information

The extension to be validated consists of the time series from the data133 to the 162. The status of the validation is: COMPLETED.
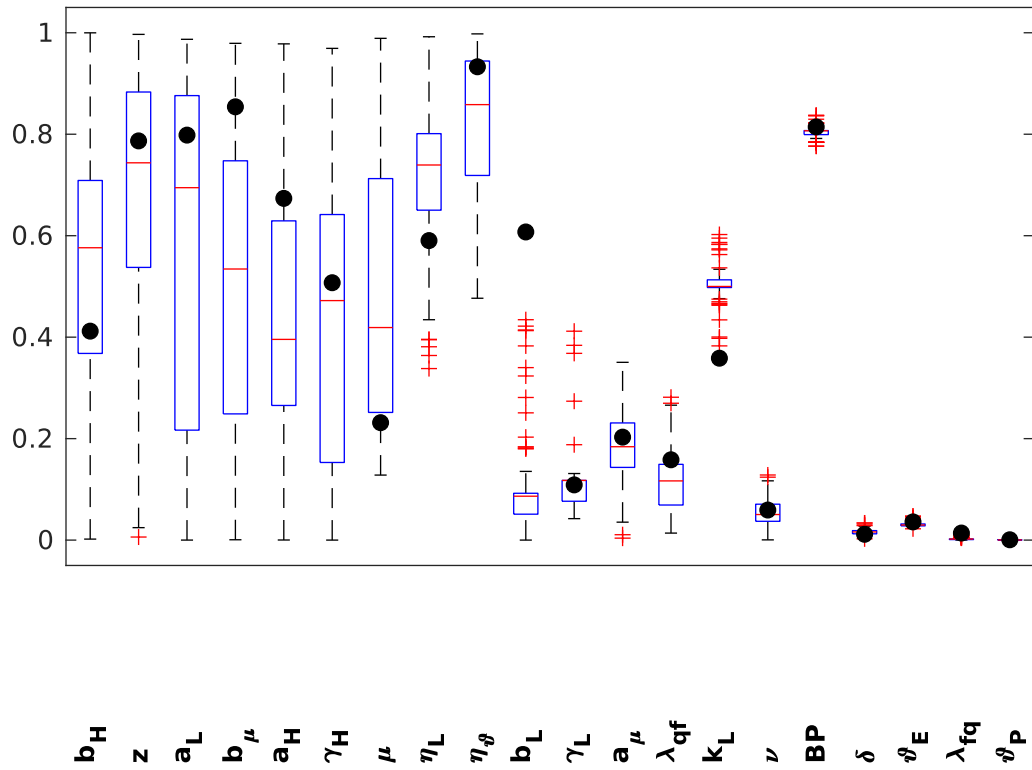
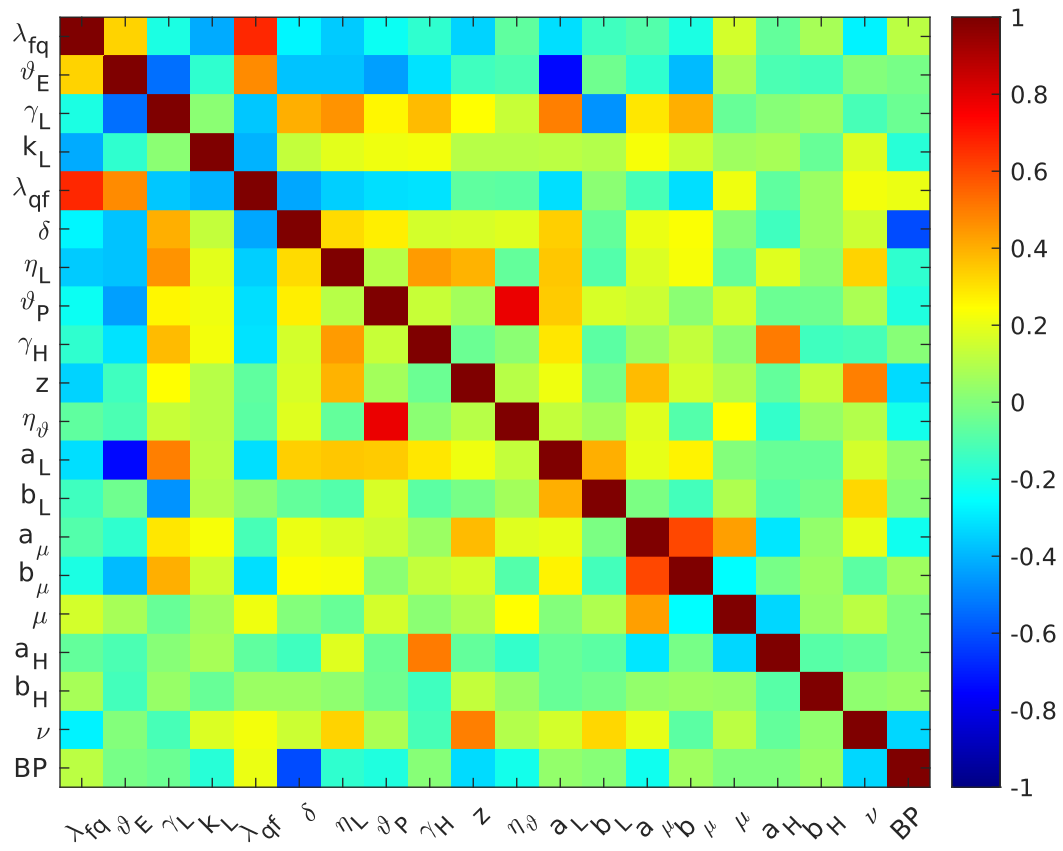The number of estimations needed to perform the validation was1000.

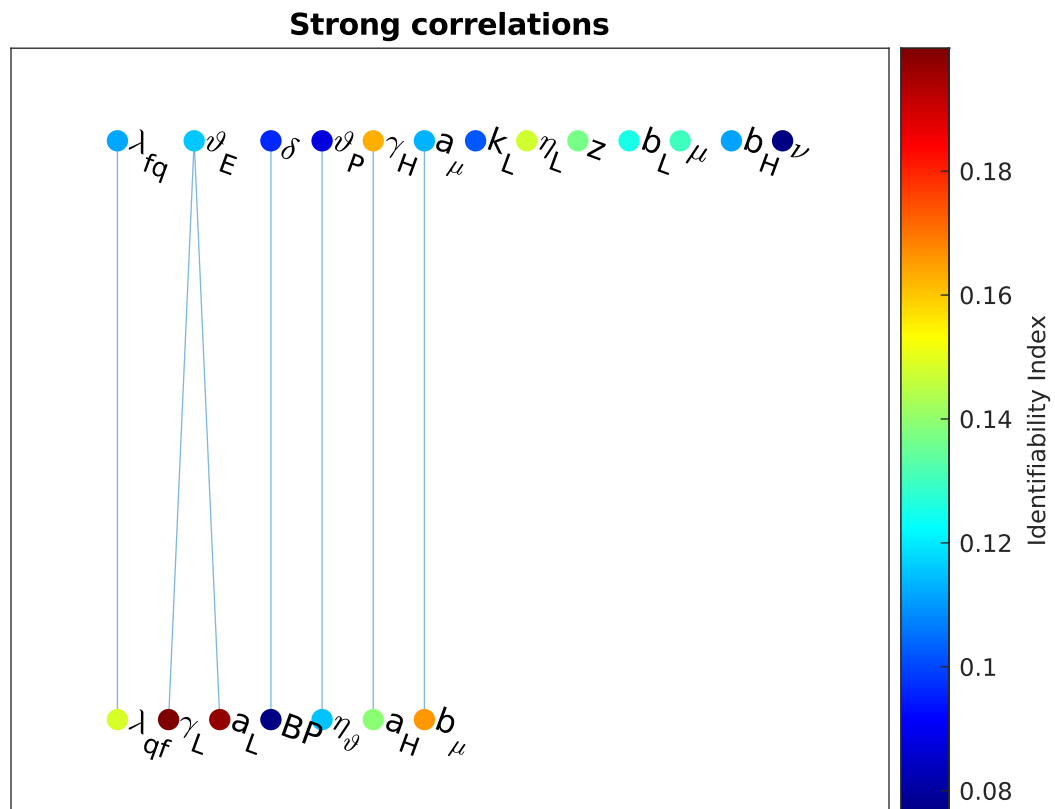## 3.2. Estimated parameters with their intervals

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

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0001'	'0.4985'	'0'	'0.0685'
\vartheta_E	'0'	'0.0163'	'0.0155'	'0.0073'	'0.0965'
\gamma_L	'0'	'0.0004'	'0.1098'	'0.0002'	'0.1088'
k_L	'1'	'10'	'5.5003'	'5.6172'	'0.0493'
\lambda_{qf}	'0'	'1'	'0.5008'	'0.481'	'0.0721'
\delta	'0'	'0.0798'	'0.0318'	'0.0744'	'0.0679'
\eta_L	'0'	'1'	'0.4999'	'0.8066'	'0.0619'
\vartheta_P	'0'	'0'	'0.0003'	'0'	'0.0584'
\gamma_H	'0.392'	'1'	'0.505'	'0.7593'	'0.0717'
z	'0'	'30'	'14.9713'	'29.2588'	'0.0695'
\eta_\vartheta	'0.5063'	'1'	'0.8147'	'0.9244'	'0.0924'
a_L	'1'	'15'	'3.1774'	'6.1432'	'0.0912'
b_L	'1'	'15'	'3.3293'	'13.6011'	'0.0963'
a_\mu	'1.8698'	'13.7526'	'4.7601'	'2.7752'	'0.0953'
b_\mu	'1'	'11.387'	'7.9484'	'2.7728'	'0.0669'
\mu	'0'	'0.6758'	'0.3401'	'0.3004'	'0.0912'
a_H	'1'	'4.0873'	'3.2309'	'1.4961'	'0.0867'
b_H	'1'	'15'	'8.565'	'14.7732'	'0.0756'
\nu	'27.952'	'500'	'249.2863'	'37.2022'	'0.0746'
BP	'128.9368'	'162'	'135.5'	'134.5'	'0.0991'

3.3. Identifiability analisys

Strong correlations

3.4. Uncertainty analisys

N=500
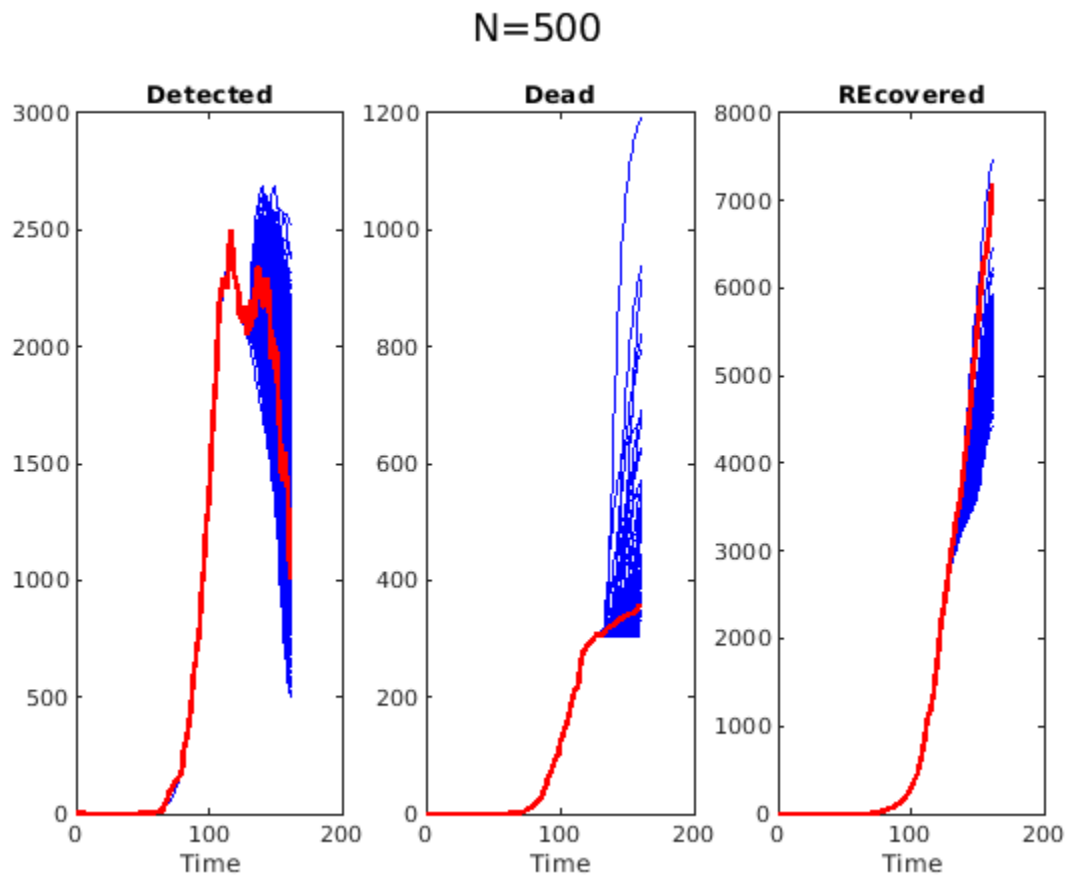
Chapter 4. Extension number4

4.1. Basic information

The extension to be validated consists of the time series from the data162 to the 190. The status of the validation is: COMPLETED.

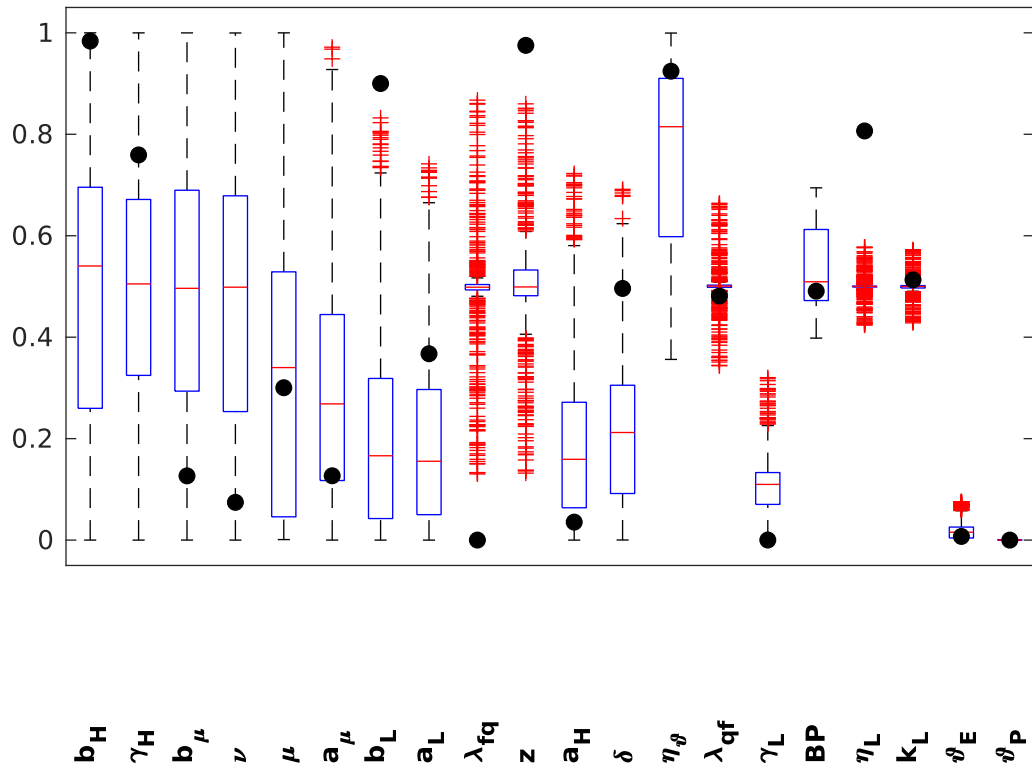The number of estimations needed to perform the validation was1000.

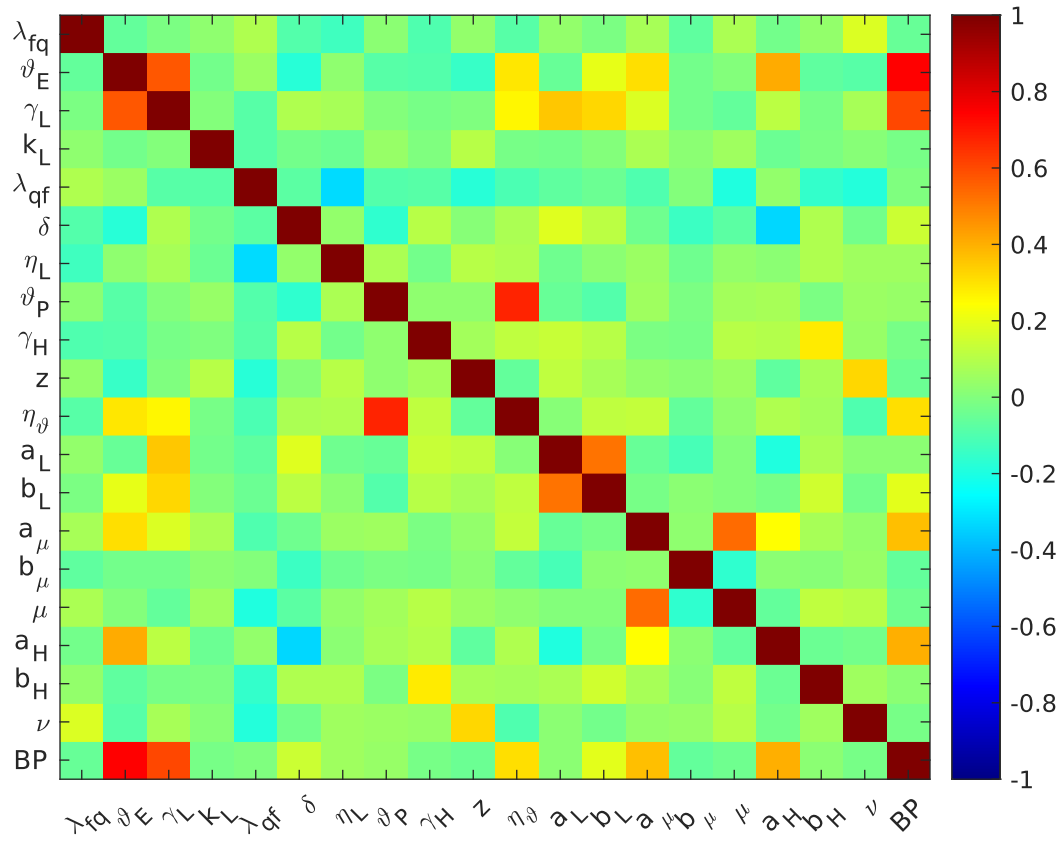## 4.2. Estimated parameters with their intervals

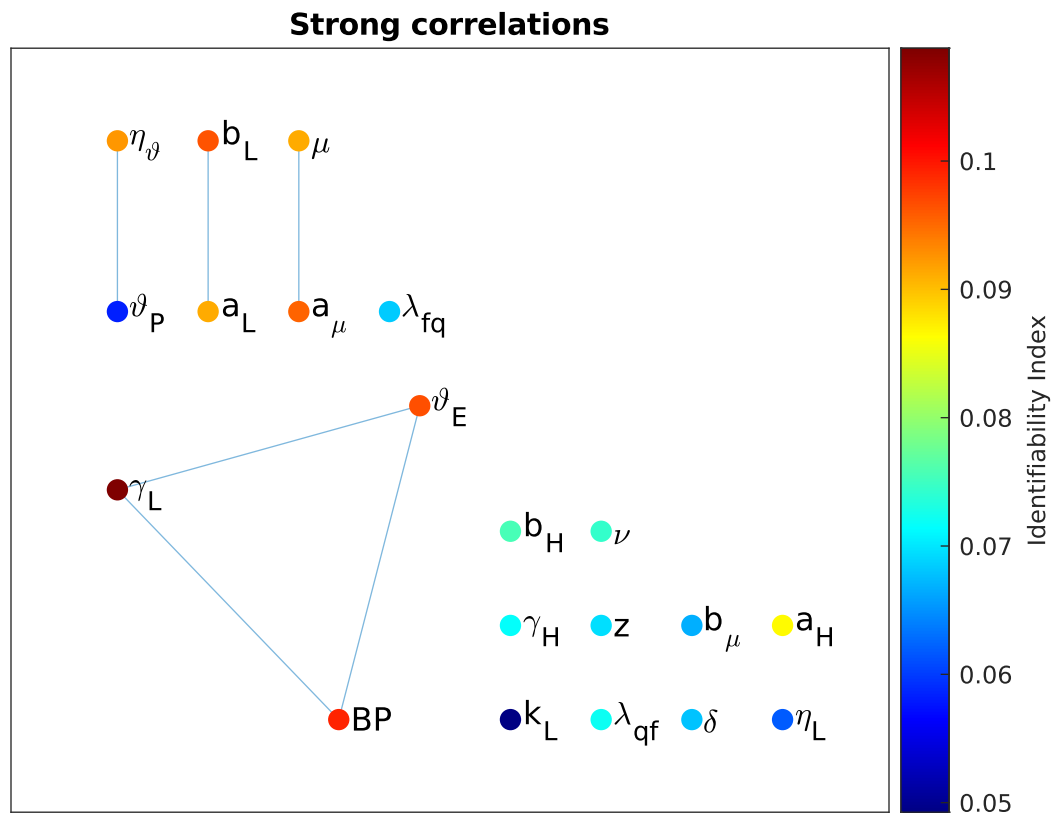It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.1733'	'0.2327'	'0.203'	'0.0023'	'0.0853'
\vartheta_E	'0.0827'	'0.0938'	'0.0882'	'0.043'	'0.0789'
\gamma_L	'0.4699'	'0.5235'	'0.4967'	'0.9988'	'0.0846'
k_L	'5.3349'	'5.6652'	'5.5001'	'5.5243'	'0.0537'
\lambda_{qf}	'0.6006'	'0.6465'	'0.6235'	'0.6762'	'0.0699'
\delta	'0.0485'	'0.0602'	'0.0543'	'0.0718'	'0.1241'
\eta_L	'0.5272'	'0.5767'	'0.5519'	'0.8121'	'0.074'
\vartheta_P	'0'	'0'	'0'	'0.0001'	'0.0577'
\gamma_H	'0.3155'	'0.3889'	'0.3522'	'0.3528'	'0.0967'
z	'18.1116'	'19.7738'	'18.9427'	'29.6498'	'0.0845'
\eta_\vartheta	'0.8369'	'0.878'	'0.8575'	'0.8473'	'0.0659'
a_L	'5.867'	'6.7514'	'6.3092'	'14.8792'	'0.0855'
b_L	'3.0225'	'3.4619'	'3.2422'	'1.7138'	'0.0779'
a_\mu	'2.9012'	'3.6789'	'3.2901'	'1.0746'	'0.0845'
b_\mu	'8.6841'	'9.6163'	'9.1502'	'14.3997'	'0.0892'
\mu	'0'	'0.031'	'0.009'	'0.0107'	'0.0732'
a_H	'9.8403'	'10.6796'	'10.26'	'13.1819'	'0.0831'
b_H	'8.8909'	'9.7388'	'9.3149'	'12.2924'	'0.0817'
\nu	'169.9423'	'195.5654'	'182.7538'	'78.5295'	'0.0735'
BP	'161.4411'	'161.5589'	'161.5'	'161.5'	'0.0402'

4.3. Identifiability analisys

Strong correlations

4.4. Uncertainty analisys

N=500
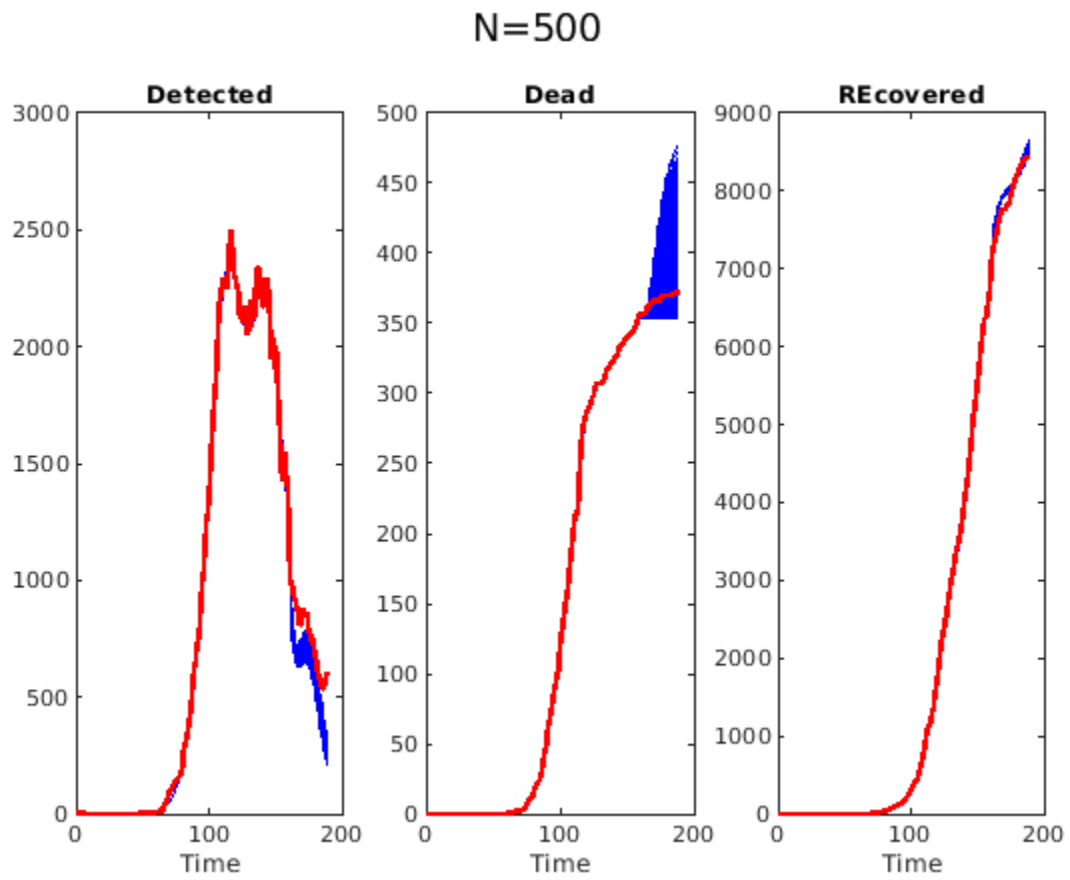
Chapter 5. Extension number5

5.1. Basic information

The extension to be validated consists of the time series from the data190 to the 225. The status of the validation is: COMPLETED.
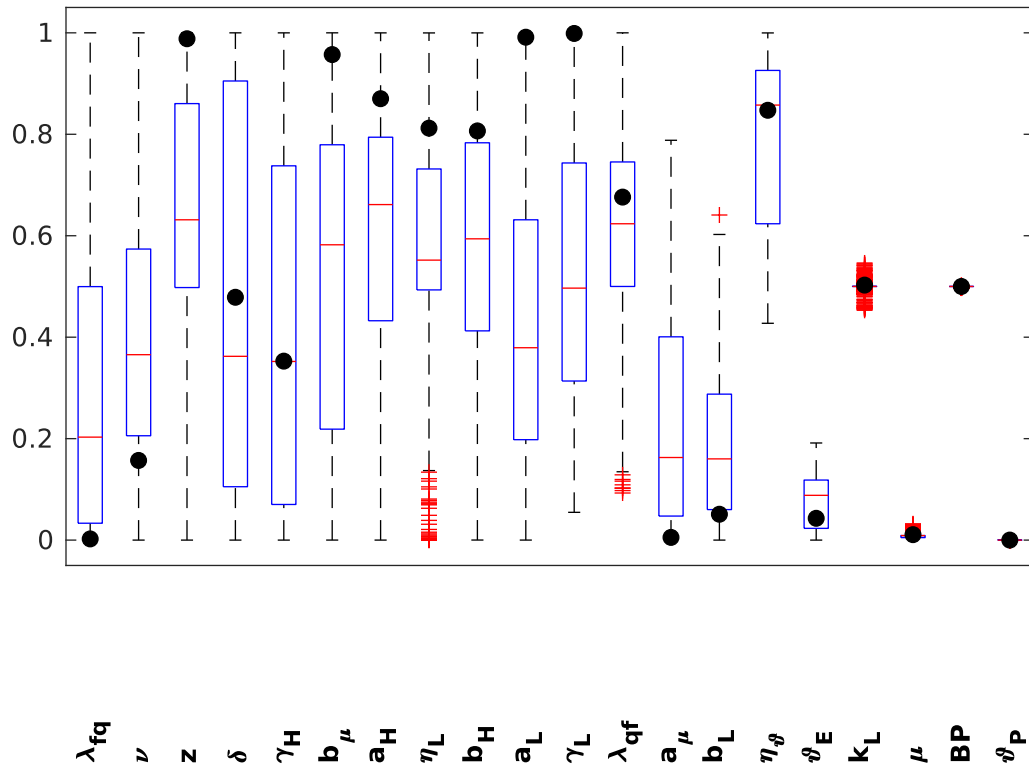
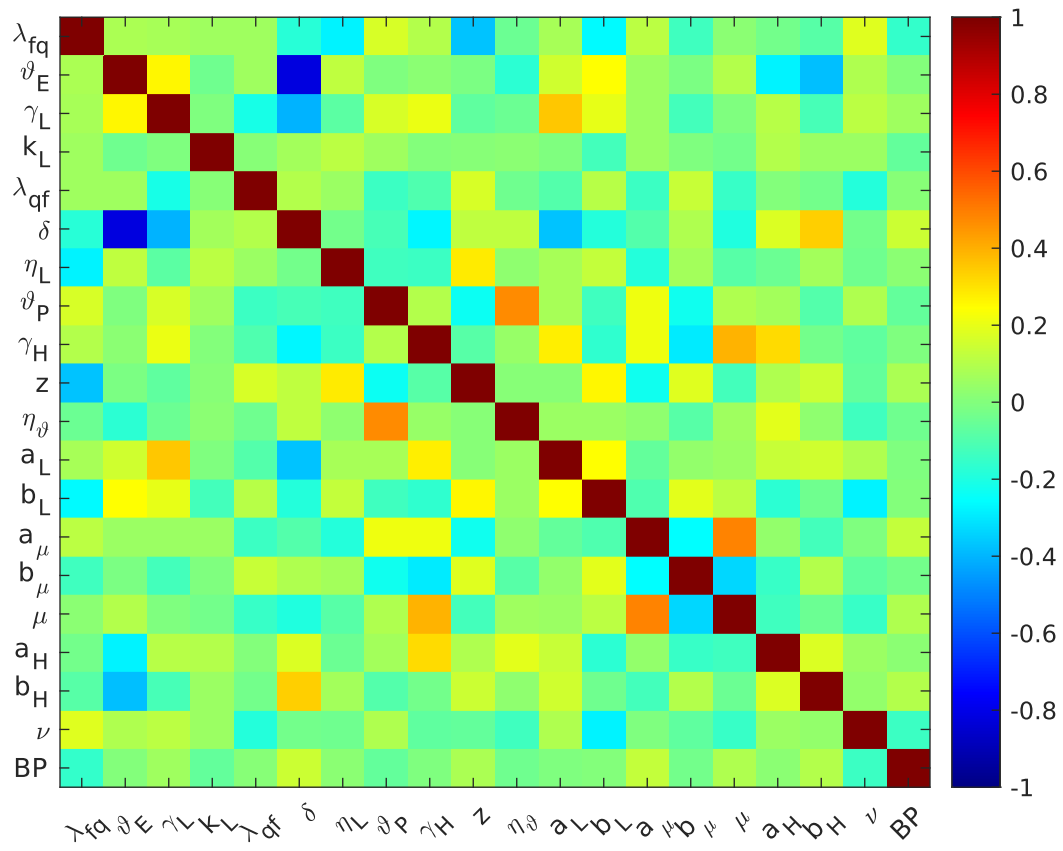The number of estimations needed to perform the validation was1000.

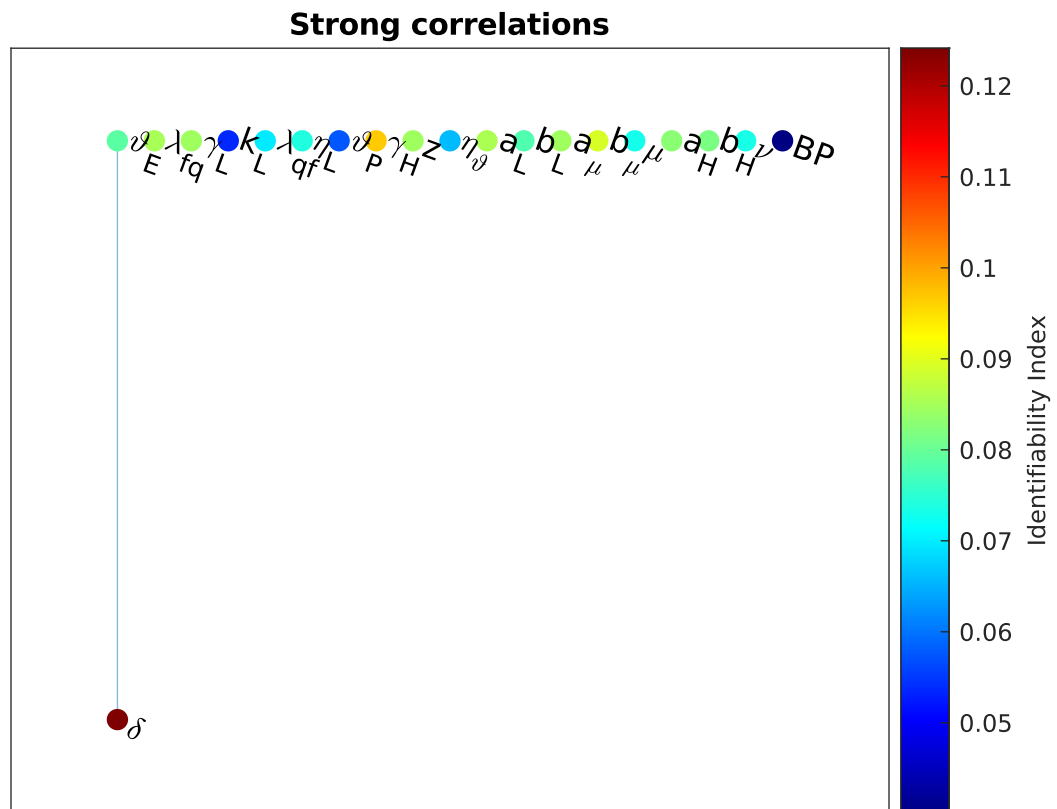## 5.2. Estimated parameters with their intervals

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

	Rango		Nominal	Mejor	Index
λ_{fq}	'0'	'0.0563'	'0.0165'	'0'	'0.0773'
ϑ_E	'0.0305'	'0.0363'	'0.0334'	'0.0714'	'0.0569'
γ_L	'0.1258'	'0.187'	'0.1564'	'0.0499'	'0.0864'
k_L	'5.3094'	'5.6908'	'5.5001'	'6.3061'	'0.0553'
λ_{qf}	'0.6031'	'0.6776'	'0.6404'	'0.0642'	'0.0859'
δ	'0.032'	'0.0376'	'0.0348'	'0'	'0.1264'
η_L	'0.5132'	'0.5875'	'0.5503'	'0.7985'	'0.0805'
ϑ_P	'0'	'0.0001'	'0'	'0'	'0.0515'
γ_H	'0.3588'	'0.4372'	'0.398'	'0.9903'	'0.136'
z	'18.6912'	'21.2197'	'19.9554'	'28.6921'	'0.1012'
η_{ϑ}	'0.8462'	'0.8976'	'0.8719'	'0.724'	'0.069'
a_L	'1.1473'	'2.0871'	'1.6172'	'2.3153'	'0.0978'
b_L	'1.2319'	'2.3266'	'1.7793'	'1.0081'	'0.0911'
a_{μ}	'7.5769'	'8.7571'	'8.167'	'10.769'	'0.0939'
b_{μ}	'3.7149'	'4.9507'	'4.3328'	'14.308'	'0.0968'
μ	'0'	'0.0326'	'0.0017'	'0.0001'	'0.0816'
a_H	'7.1032'	'8.3714'	'7.7373'	'7.4819'	'0.1043'
b_H	'1'	'1.9028'	'1.3197'	'14.9886'	'0.1315'
ν	'116.0455'	'149.72'	'132.8828'	'122.1393'	'0.0812'
BP	'190.3615'	'190.6385'	'190.5'	'190.4999'	'0.0458'

5.3. Identifiability analisys

Strong correlations

5.4. Uncertainty analisys

N=500
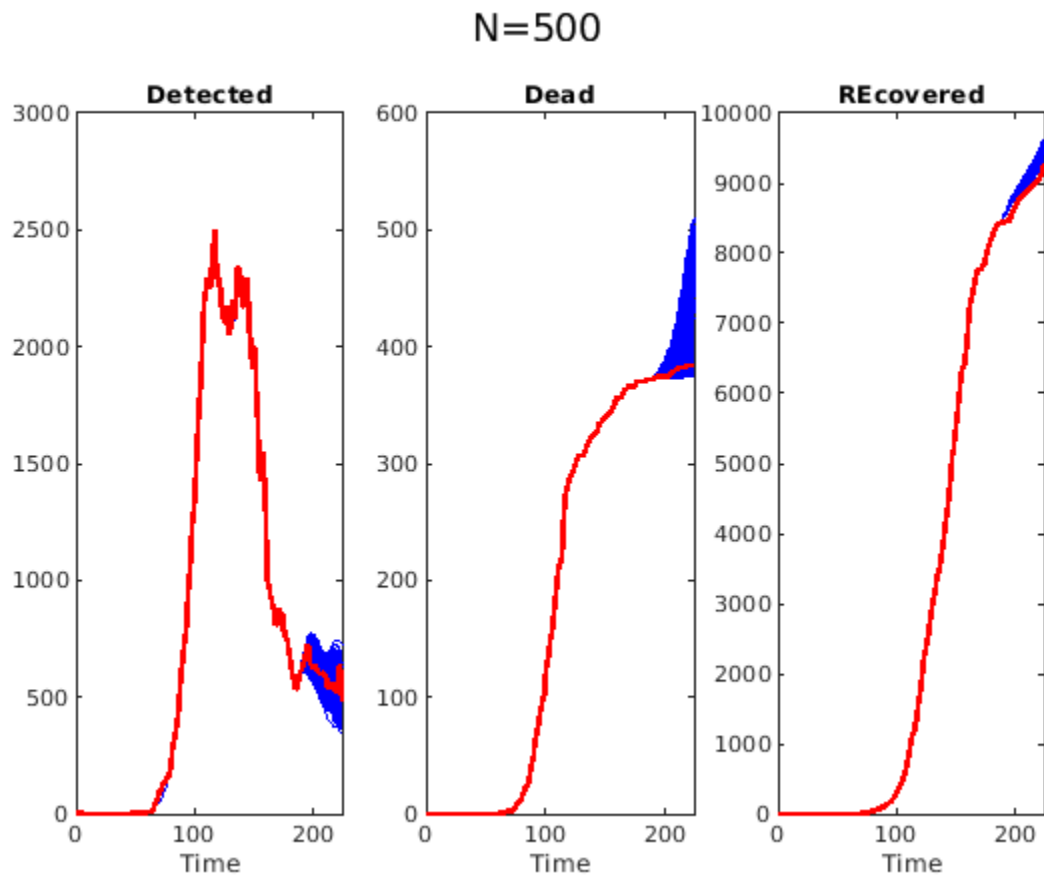
Chapter 6. Extension number6

6.1. Basic information

The extension to be validated consists of the time series from the data225 to the 304. The status of the validation is: COMPLETED.
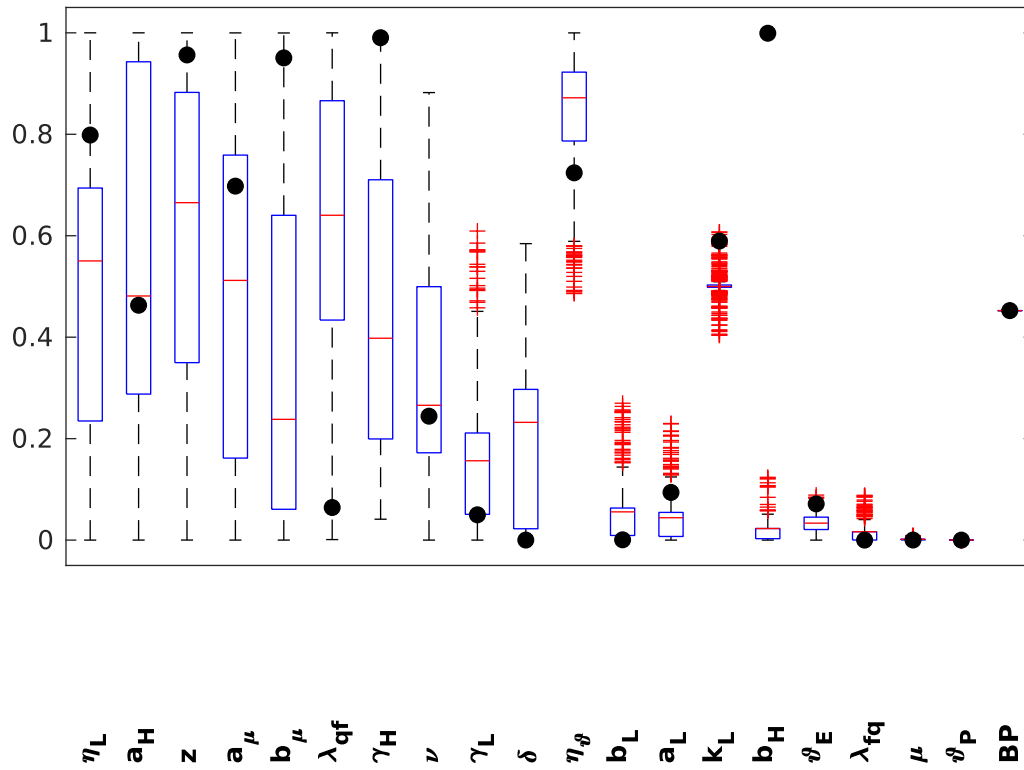
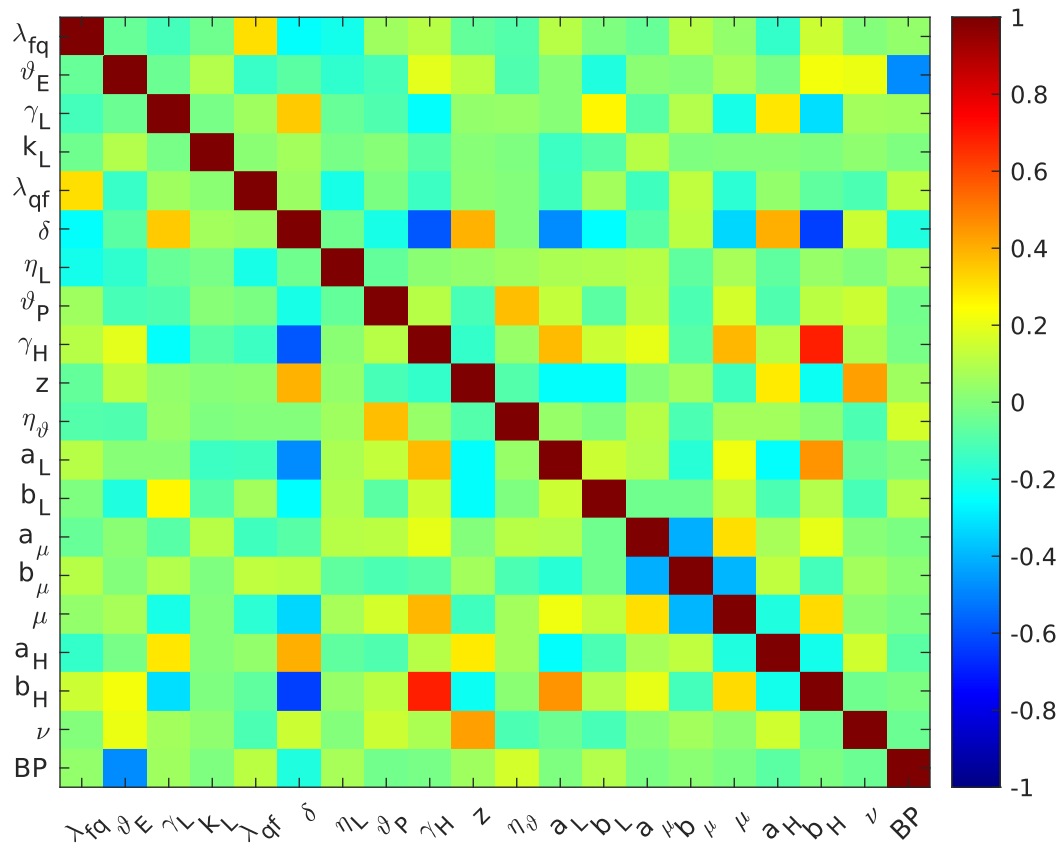The number of estimations needed to perform the validation was1000.

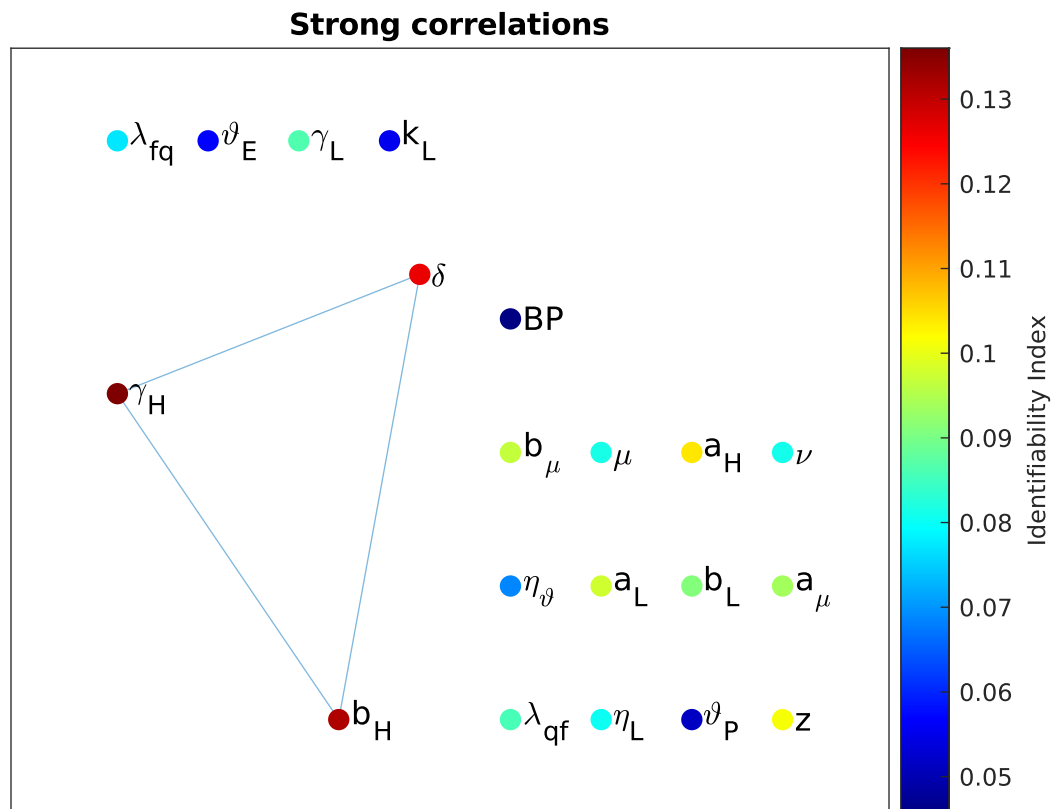## 6.2. Estimated parameters with their intervals

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0.0605'	'0.0109'	'0.0058'	'0.0992'
\vartheta_E	'0.0384'	'0.0631'	'0.0507'	'0.03'	'0.107'
\gamma_L	'0.2709'	'0.3847'	'0.3278'	'0.3277'	'0.1182'
k_L	'5.1968'	'5.8025'	'5.4996'	'5.5815'	'0.0725'
\lambda_{qf}	'0.3117'	'0.4914'	'0.4016'	'0.0428'	'0.1597'
\delta	'0.0887'	'0.1087'	'0.0987'	'0.0838'	'0.1878'
\eta_L	'0.1985'	'0.3142'	'0.2563'	'0.2508'	'0.1039'
\vartheta_P	'0'	'0.0001'	'0'	'0.0009'	'0.0749'
\gamma_H	'0.5514'	'0.6602'	'0.6058'	'0.6791'	'0.1209'
z	'4.293'	'8.8892'	'6.5911'	'29.9649'	'0.1512'
\eta_\vartheta	'0.7605'	'0.8607'	'0.8106'	'0.872'	'0.1115'
a_L	'6.2856'	'8.5962'	'7.4409'	'14.9953'	'0.1544'
b_L	'1.4344'	'2.703'	'2.0687'	'7.4174'	'0.1176'
a_\mu	'8.4412'	'10.4726'	'9.4569'	'14.4537'	'0.133'
b_\mu	'7.1652'	'9.1771'	'8.1712'	'14.2685'	'0.1371'
\mu	'0'	'0.0549'	'0.0036'	'0.0023'	'0.1278'
a_H	'11.4642'	'13.674'	'12.5691'	'14.9961'	'0.184'
b_H	'1'	'2.1078'	'1.2496'	'1.0004'	'0.1573'
\nu	'91.8141'	'111.2254'	'101.5198'	'127.3543'	'0.0941'
BP	'224.2842'	'224.7158'	'224.5'	'224.4998'	'0.0564'

6.3. Identifiability analisys

Strong correlations

6.4. Uncertainty analisys

N=500
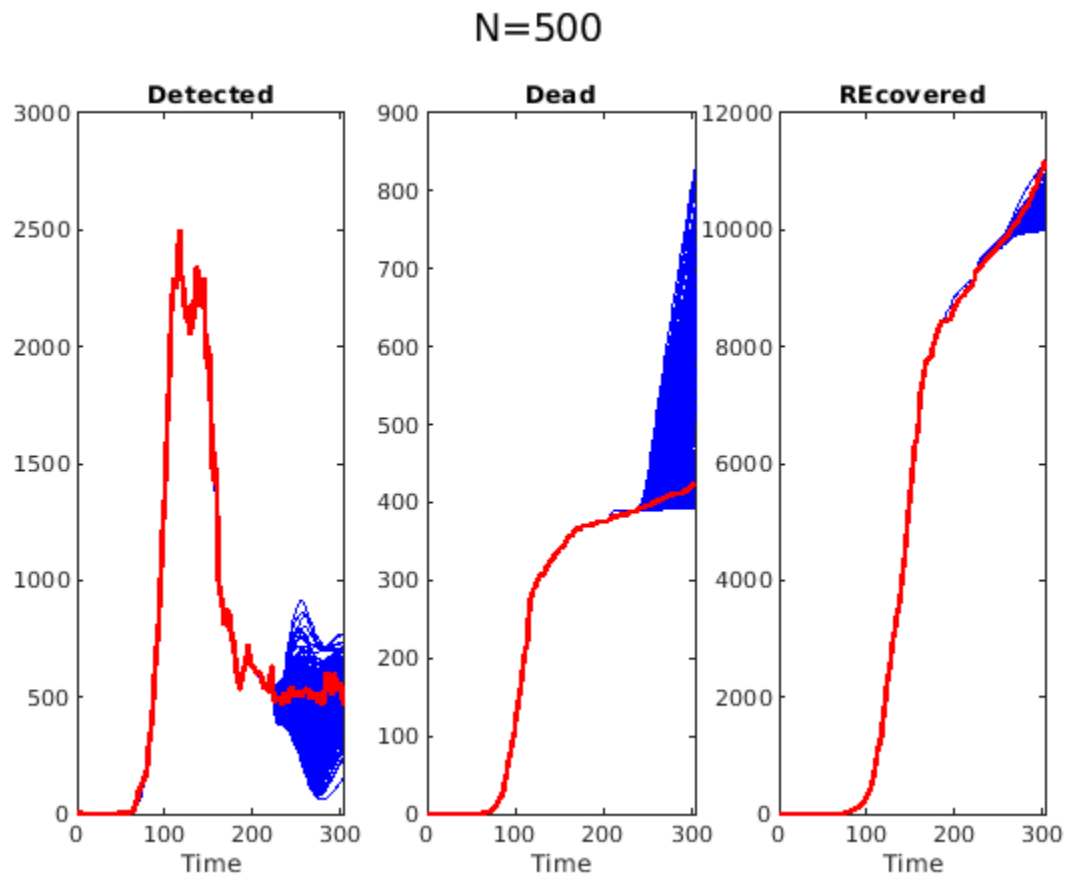
Chapter 7. Extension number7

7.1. Basic information

The extension to be validated consists of the time series from the data304 to the 338. The status of the validation is: COMPLETED.
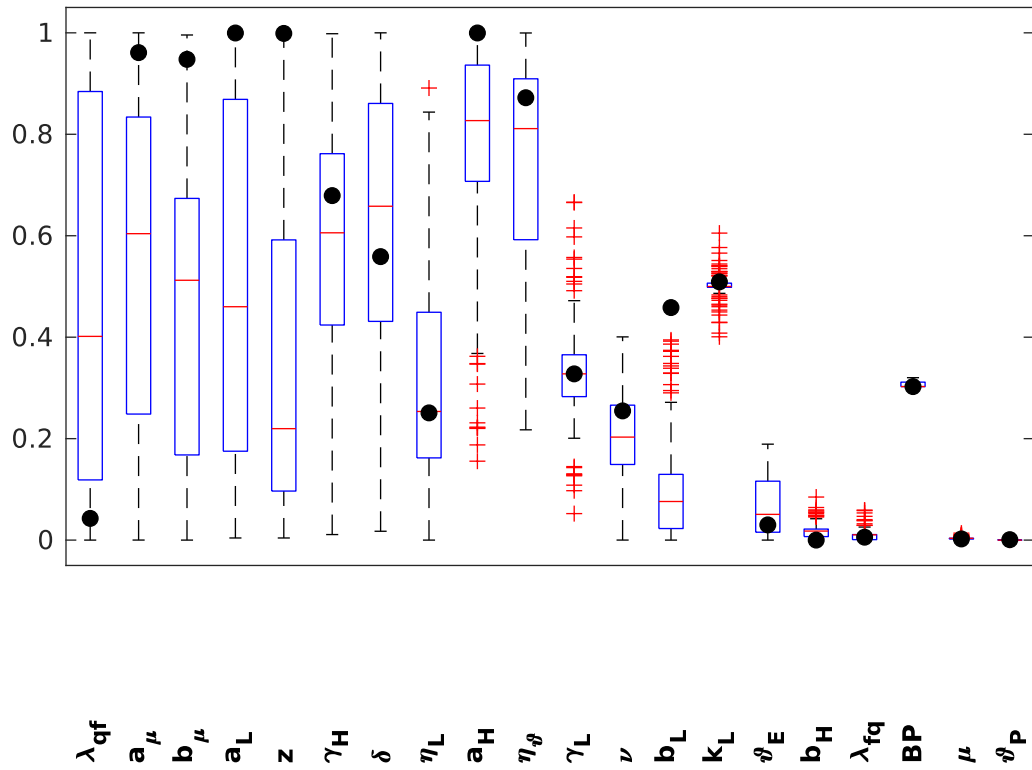
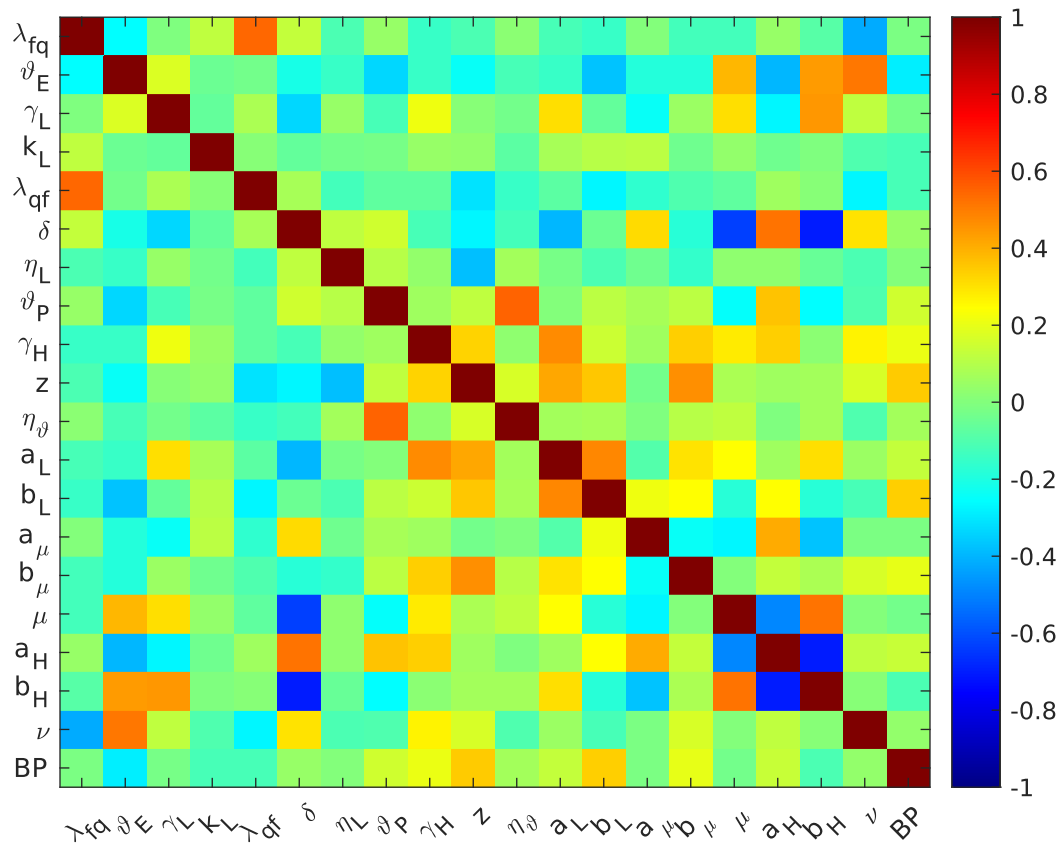The number of estimations needed to perform the validation was1000.

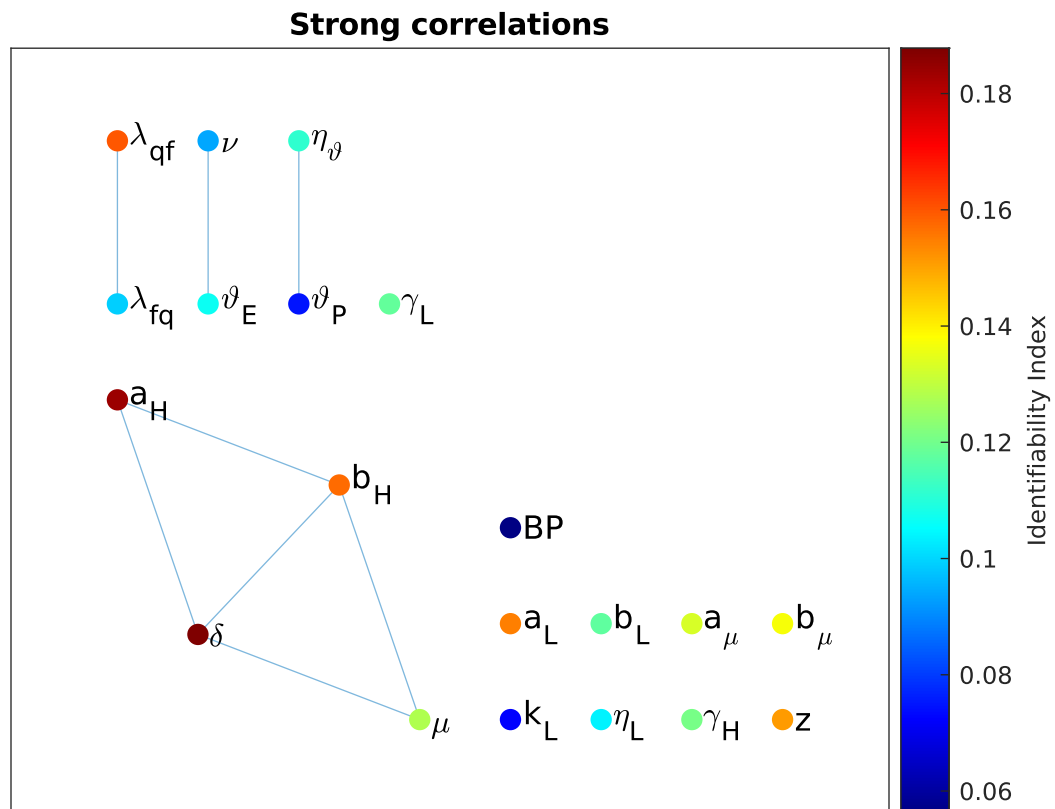## 7.2. Estimated parameters with their intervals

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
\lambda_{fq}	'0.182'	'0.2465'	'0.1708'	'0.2161'	'0.0764'
\vartheta_E	'0.8152'	'0.8896'	'0.2461'	'0.8881'	'0.1058'
\gamma_L	'0.5464'	'0.9708'	'0.5521'	'0.7231'	'0.0715'
k_L	'1.9972'	'10'	'5.5'	'5.4986'	'0.0392'
\lambda_{qf}	'0.7279'	'0.9891'	'0.6832'	'0.8385'	'0.0679'
\delta	'0'	'0.0172'	'0.0921'	'0.0096'	'0.0911'
\eta_L	'0.5802'	'1'	'0.5859'	'0.998'	'0.0772'
\vartheta_P	'0'	'0'	'0.0118'	'0'	'0.0717'
\gamma_H	'0.2266'	'1'	'0.519'	'0.2576'	'0.1194'
z	'23.0478'	'30'	'14.3491'	'29.9582'	'0.0793'
\eta_\vartheta	'0.3369'	'0.9309'	'0.768'	'0.9246'	'0.0768'
a_L	'1.1847'	'1.8928'	'2.2207'	'1.8596'	'0.0942'
b_L	'3.0436'	'4.6052'	'3.3114'	'3.6121'	'0.0937'
a_\mu	'1'	'14.3'	'8.7137'	'12.0113'	'0.0917'
b_\mu	'1.2394'	'12.97'	'7.714'	'3.1104'	'0.0999'
\mu	'0'	'0.0024'	'0.0124'	'0.0011'	'0.0595'
a_H	'2.0912'	'11.0236'	'3.9866'	'3.1092'	'0.1093'
b_H	'1'	'4.3487'	'1.9164'	'1.0201'	'0.0993'
\nu	'426.0071'	'500'	'232.5352'	'499.3449'	'0.0931'
BP	'282.8637'	'297.541'	'303.5'	'296.5'	'0.0602'

7.3. Identifiability analisys

Strong correlations

7.4. Uncertainty analisys

N=500
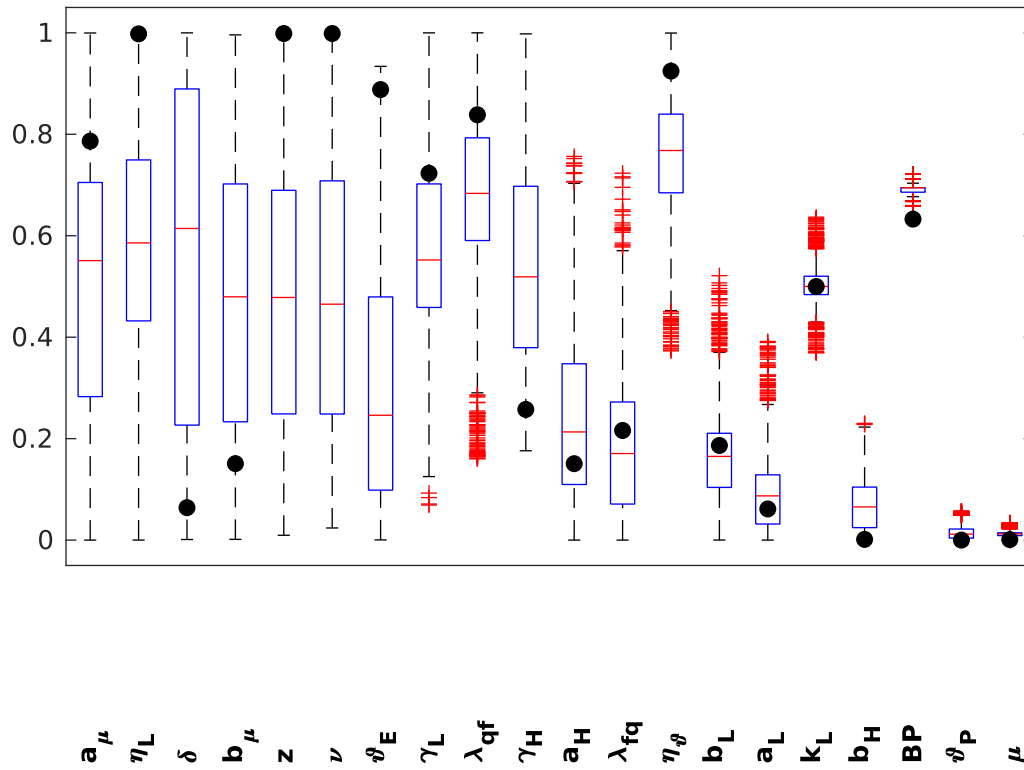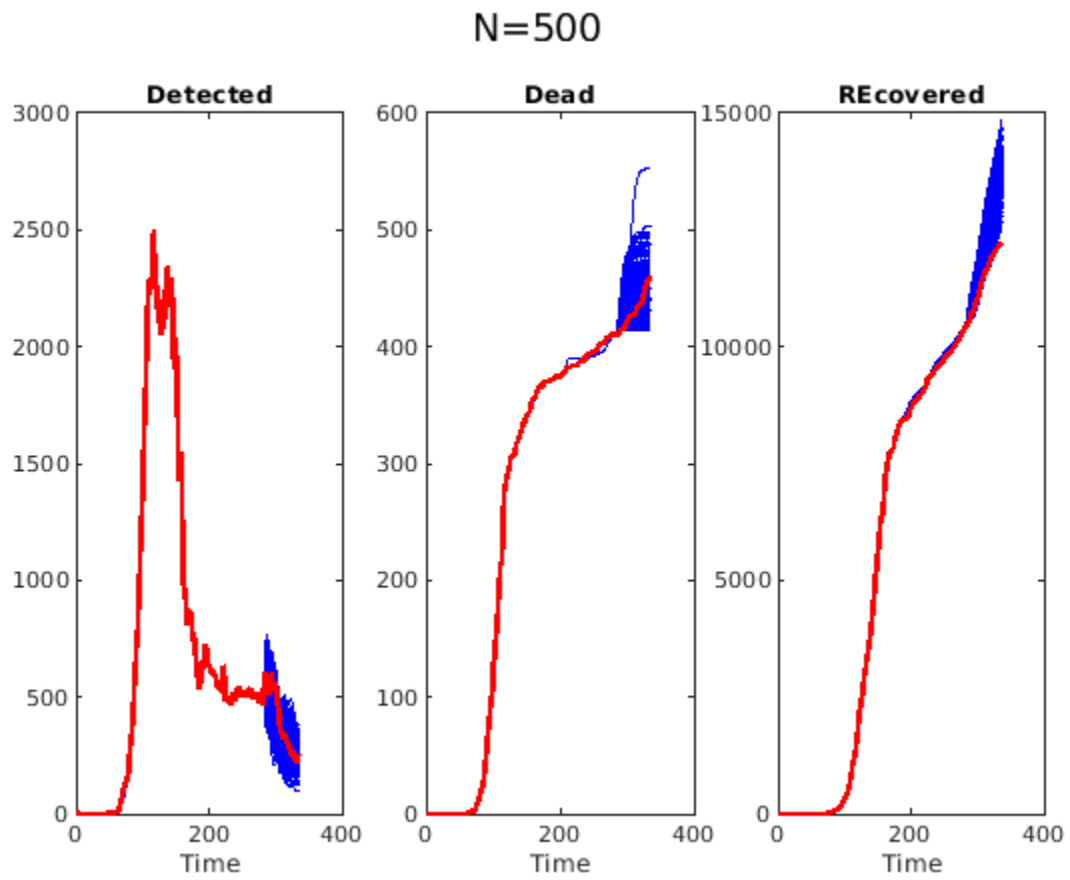
Chapter 8. Extension number8

8.1. Basic information

The extension to be validated consists of the time series from the data338 to the 370. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.
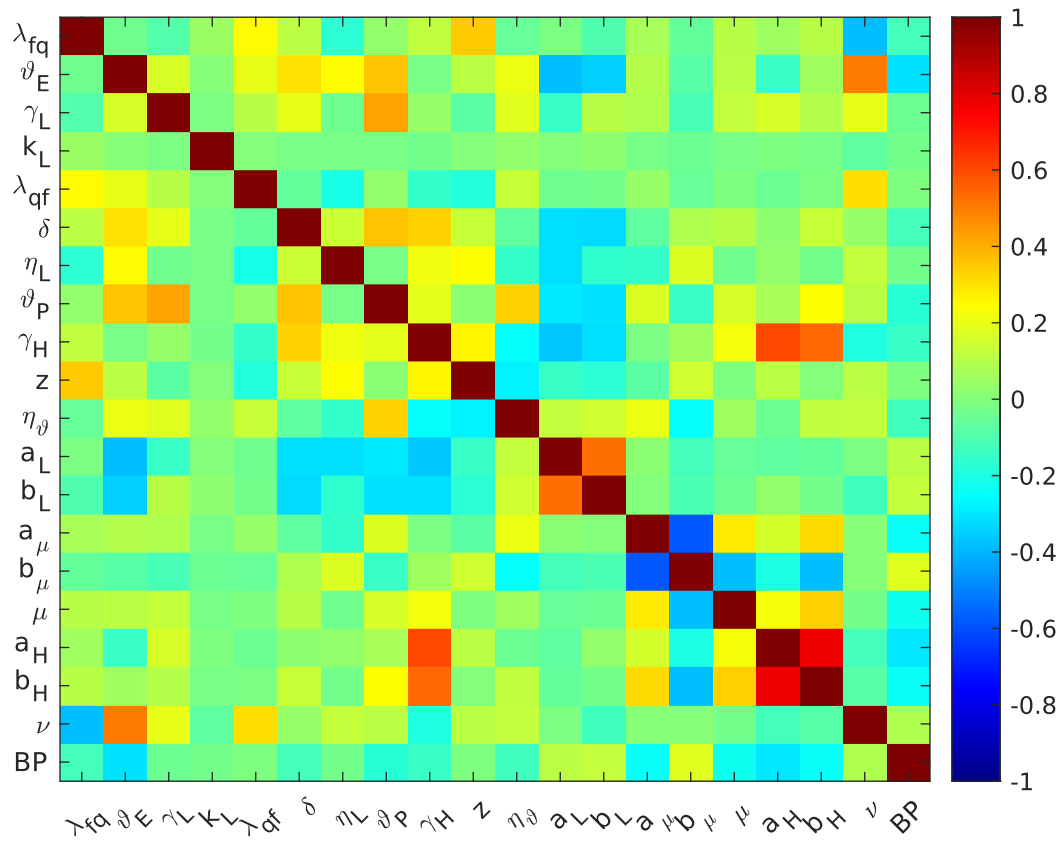
8.2. Estimated parameters with their intervals

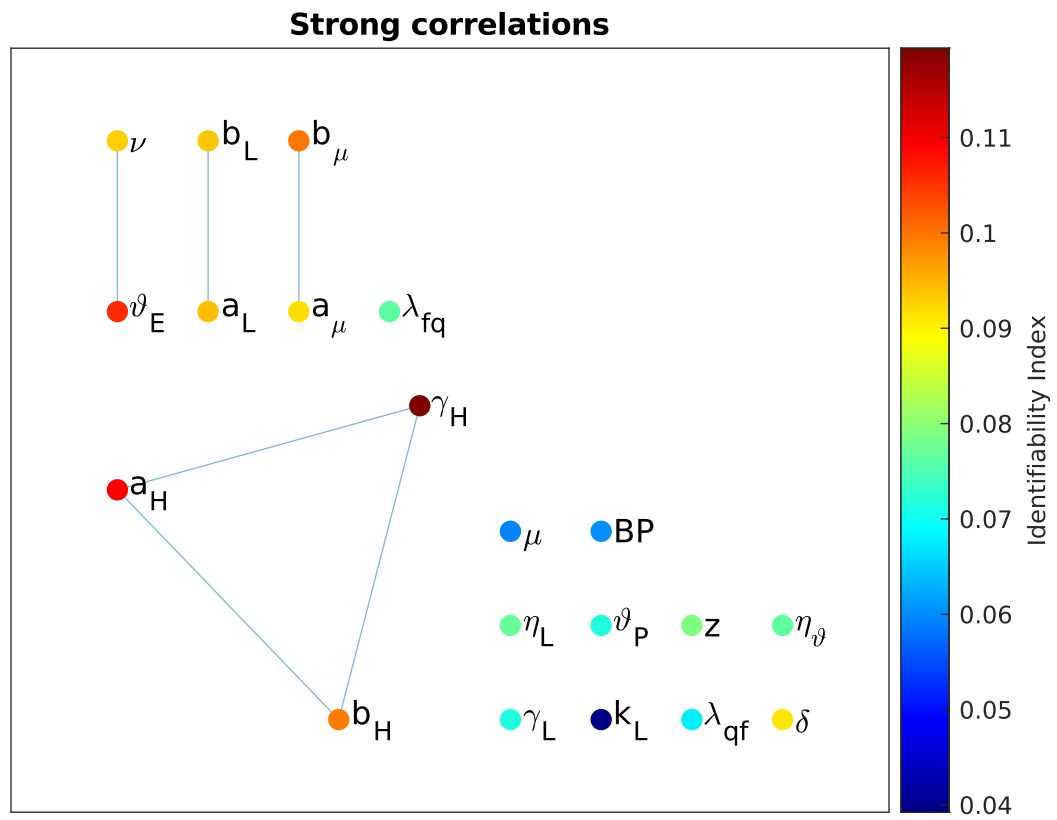It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

	Rango		Nominal	Mejor	Index
λ_{fq}	'0.0337'	'0.0726'	'0.0531'	'0.2683'	'0.0909'
ϑ_E	'0.3269'	'0.3732'	'0.35'	'0.0026'	'0.1664'
γ_L	'0.1538'	'0.1765'	'0.1652'	'0.9707'	'0.0779'
k_L	'5.3788'	'5.6241'	'5.5014'	'8.3585'	'0.0447'
λ_{qf}	'0.5013'	'0.5515'	'0.5264'	'0.0907'	'0.0809'
δ	'0.0562'	'0.0633'	'0.0598'	'0.0161'	'0.1039'
η_L	'0.5667'	'0.6075'	'0.5871'	'0.8405'	'0.0712'
ϑ_P	'0'	'0.0217'	'0.0036'	'0.0151'	'0.0975'
γ_H	'0.3496'	'0.401'	'0.3753'	'0.7578'	'0.1434'
z	'6.1922'	'7.4684'	'6.8303'	'22.3946'	'0.0881'
η_ϑ	'0.7303'	'0.7677'	'0.749'	'0.7412'	'0.066'
a_L	'3.4628'	'3.9689'	'3.7158'	'14.5679'	'0.1154'
b_L	'9.6088'	'10.3952'	'10.002'	'13.9904'	'0.0907'
a_μ	'2.5862'	'3.1278'	'2.857'	'2.849'	'0.1359'
b_μ	'7.4193'	'7.9926'	'7.7059'	'2.5134'	'0.0865'
μ	'0.6959'	'0.7522'	'0.7241'	'0.9025'	'0.1387'
a_H	'9.086'	'9.5739'	'9.3299'	'9.4657'	'0.0703'
b_H	'6.028'	'6.4989'	'6.2634'	'2.0689'	'0.0618'
ν	'234.4736'	'257.2237'	'245.8486'	'11.3569'	'0.0683'
BP	'331.6219'	'333.3768'	'332.4993'	'330.3434'	'0.155'

8.3. Identifiability analisys

Strong correlations

8.4. Uncertainty analisys

N=500
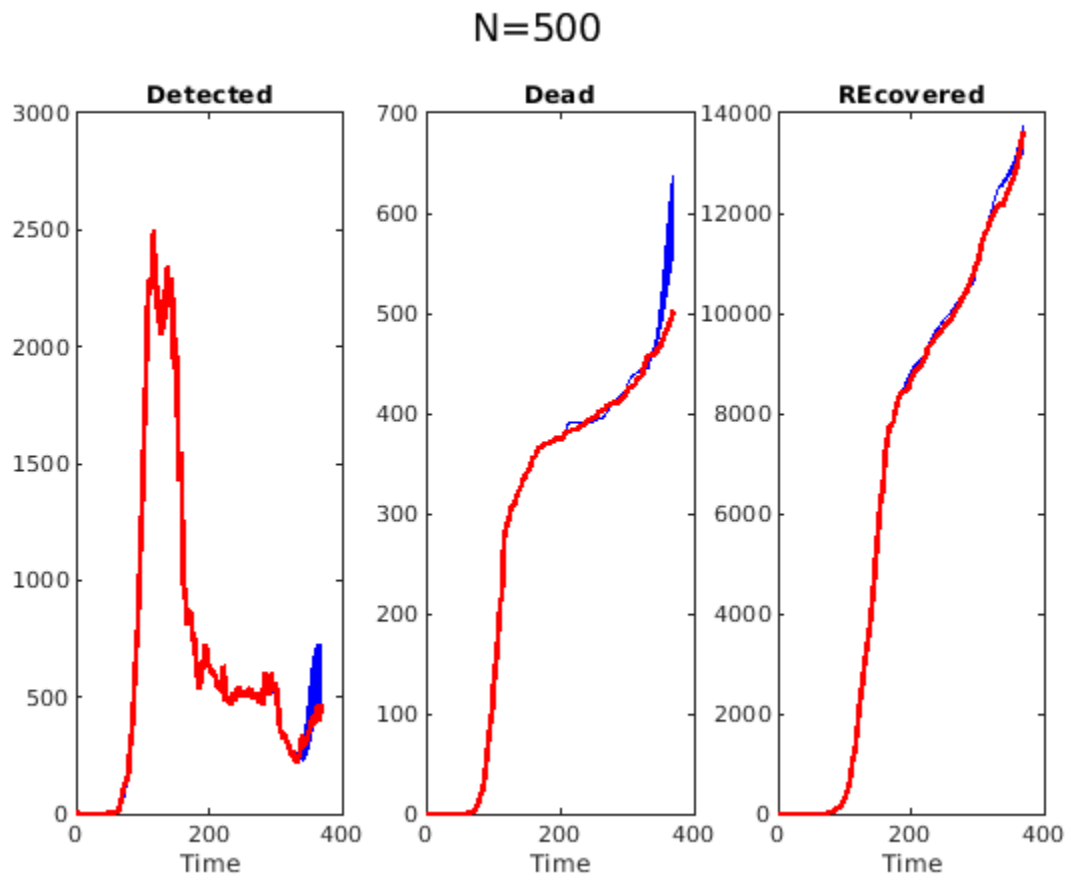
Chapter 9. Extension number9

9.1. Basic information

The extension to be validated consists of the time series from the data370 to the 391. The status of the validation is: COMPLETED.
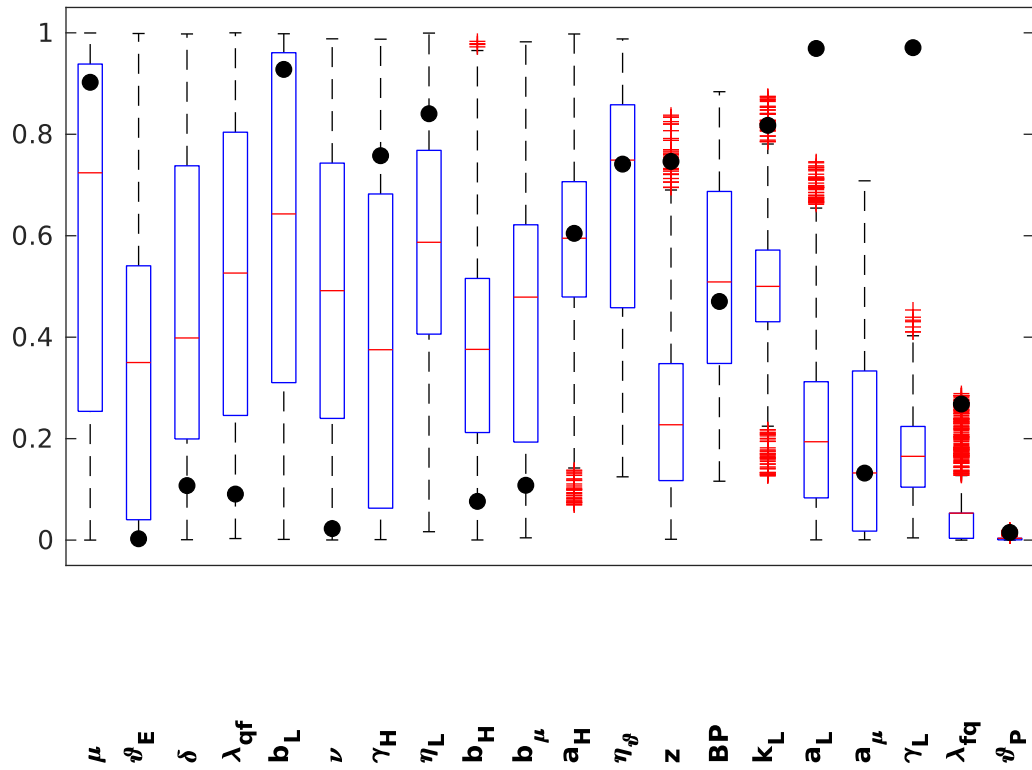
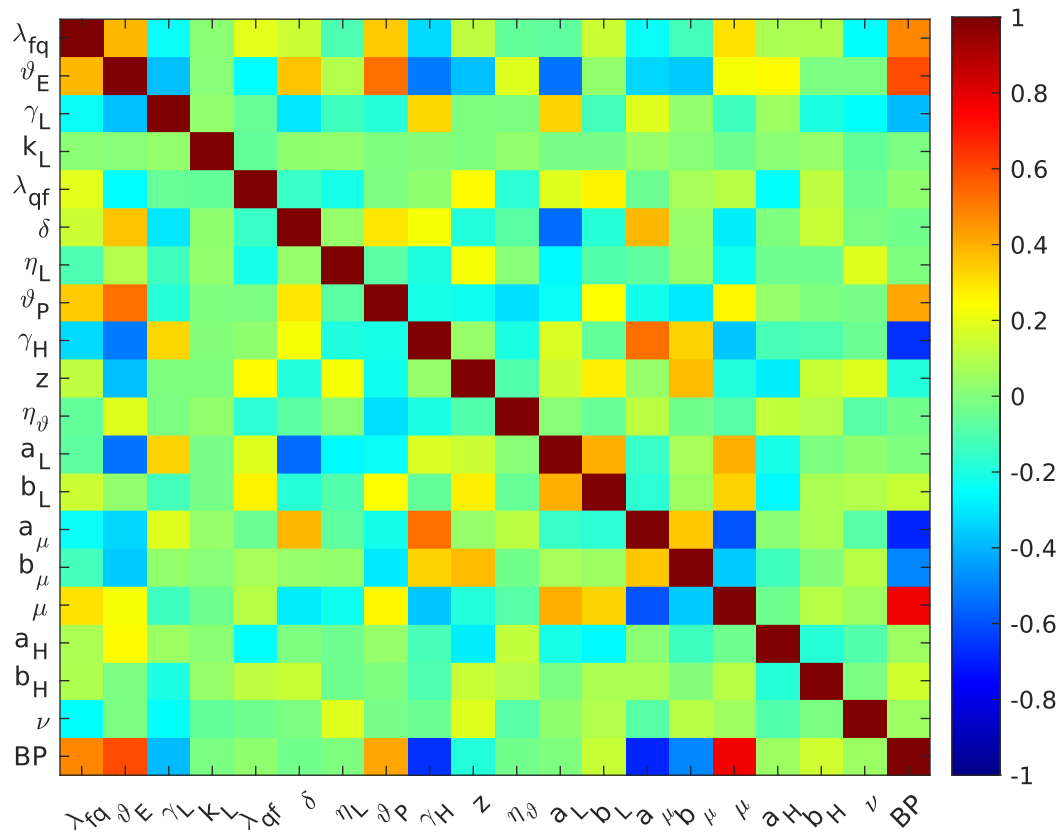The number of estimations needed to perform the validation was1000.
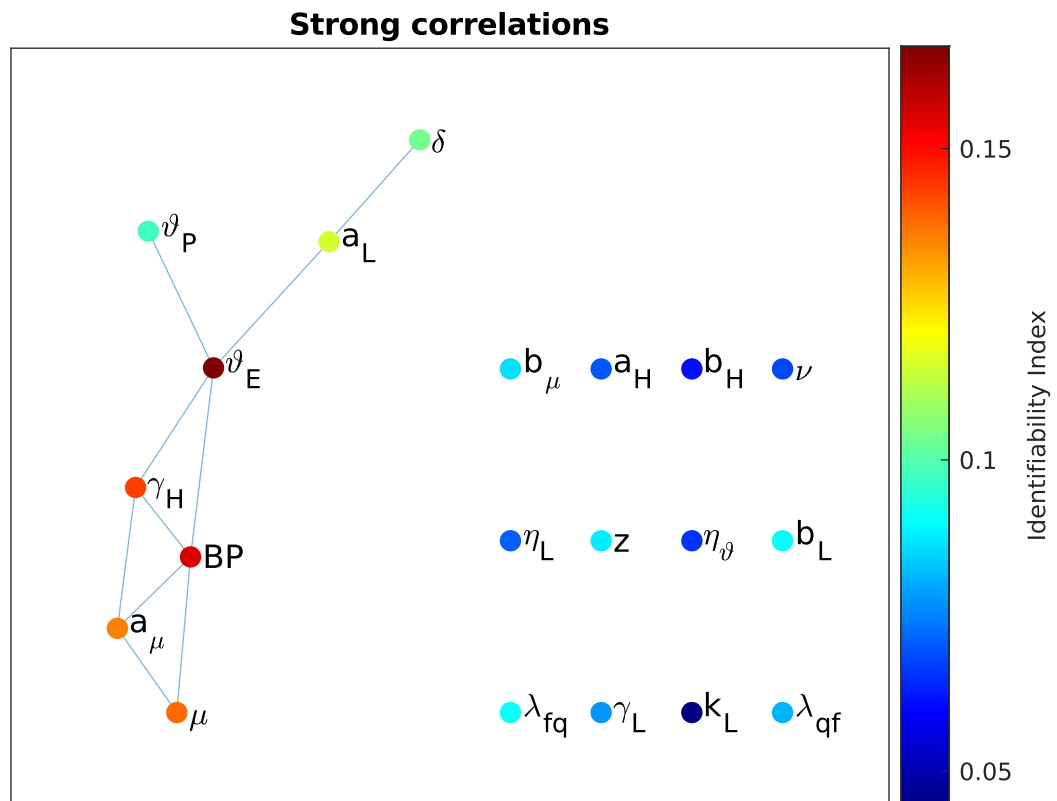
9.2. Estimated parameters with their intervals

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.0358'	'0.0759'	'0.0559'	'0.8459'	'0.1139'
\vartheta_E	'0.1408'	'0.1827'	'0.1617'	'0.0008'	'0.0824'
\gamma_L	'0.5226'	'0.5614'	'0.542'	'0.4792'	'0.1173'
k_L	'5.3839'	'5.6083'	'5.4961'	'5.3849'	'0.0442'
\lambda_{qf}	'0.3622'	'0.398'	'0.3801'	'0.9999'	'0.1007'
\delta	'0.0482'	'0.0549'	'0.0515'	'0.0219'	'0.0828'
\eta_L	'0.4994'	'0.5423'	'0.5208'	'0.0675'	'0.0784'
\vartheta_P	'0.0118'	'0.02'	'0.0159'	'0.0008'	'0.0694'
\gamma_H	'0.4915'	'0.5209'	'0.5062'	'0.4653'	'0.0803'
z	'21.5527'	'22.6952'	'22.1239'	'29.9328'	'0.1056'
\eta_\vartheta	'0.68'	'0.7145'	'0.6973'	'0.198'	'0.1016'
a_L	'5.3352'	'5.8122'	'5.5737'	'3.4605'	'0.0968'
b_L	'9.2617'	'9.7886'	'9.5251'	'4.4671'	'0.0678'
a_\mu	'5.4269'	'5.8844'	'5.6557'	'1.4998'	'0.1034'
b_\mu	'8.6068'	'8.966'	'8.7864'	'3.9489'	'0.0592'
\mu	'0.5678'	'0.5969'	'0.5824'	'0.3861'	'0.066'
a_H	'8.2301'	'8.669'	'8.4495'	'11.6099'	'0.0703'
b_H	'7.4301'	'7.7885'	'7.6093'	'10.4674'	'0.056'
\nu	'227.9157'	'249.4575'	'238.6866'	'103.8167'	'0.0681'
BP	'360.1138'	'361.4526'	'360.7832'	'370.5'	'0.1132'

9.3. Identifiability analisys

Strong correlations

9.4. Uncertainty analisys

N=500
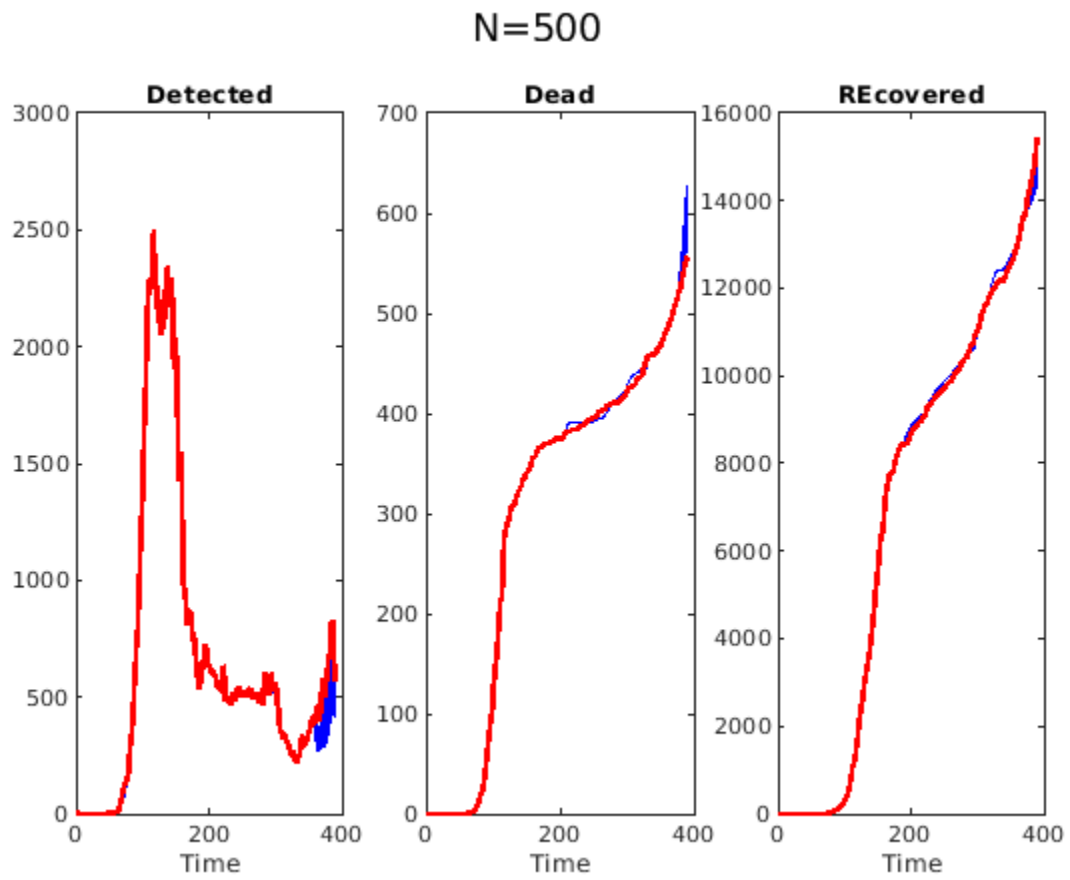
Chapter 10. Extension number10

10.1. Basic information

The extension to be validated consists of the time series from the data391 to the 421. The status of the validation is: COMPLETED.
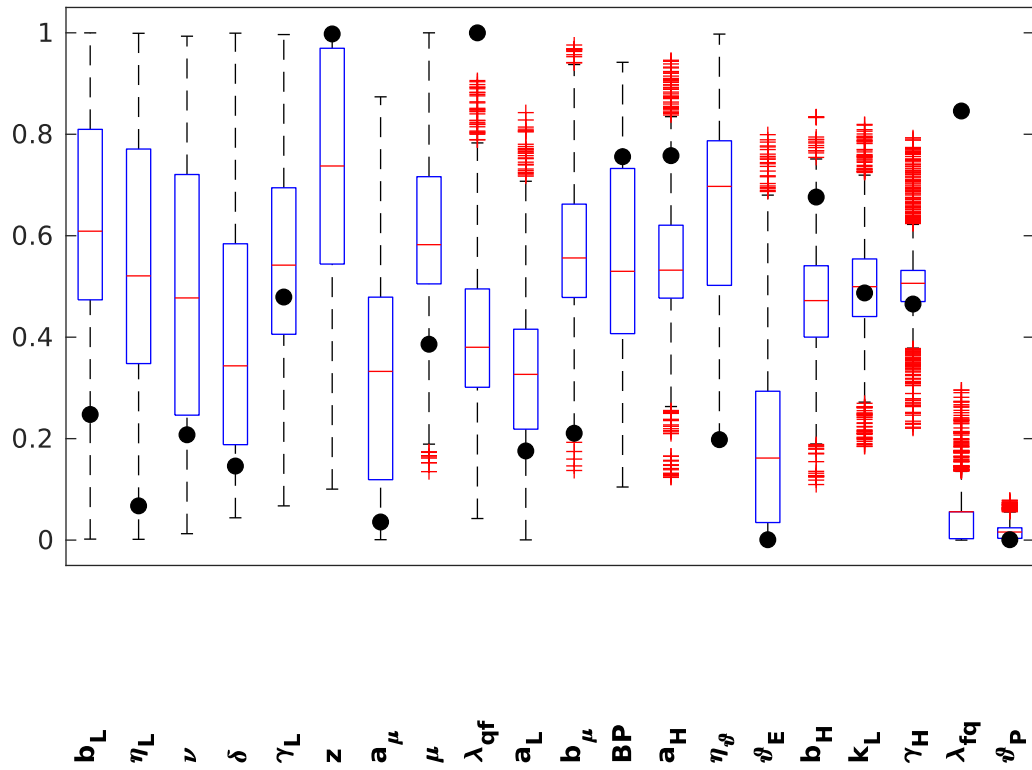
The number of estimations needed to perform the validation was1000.
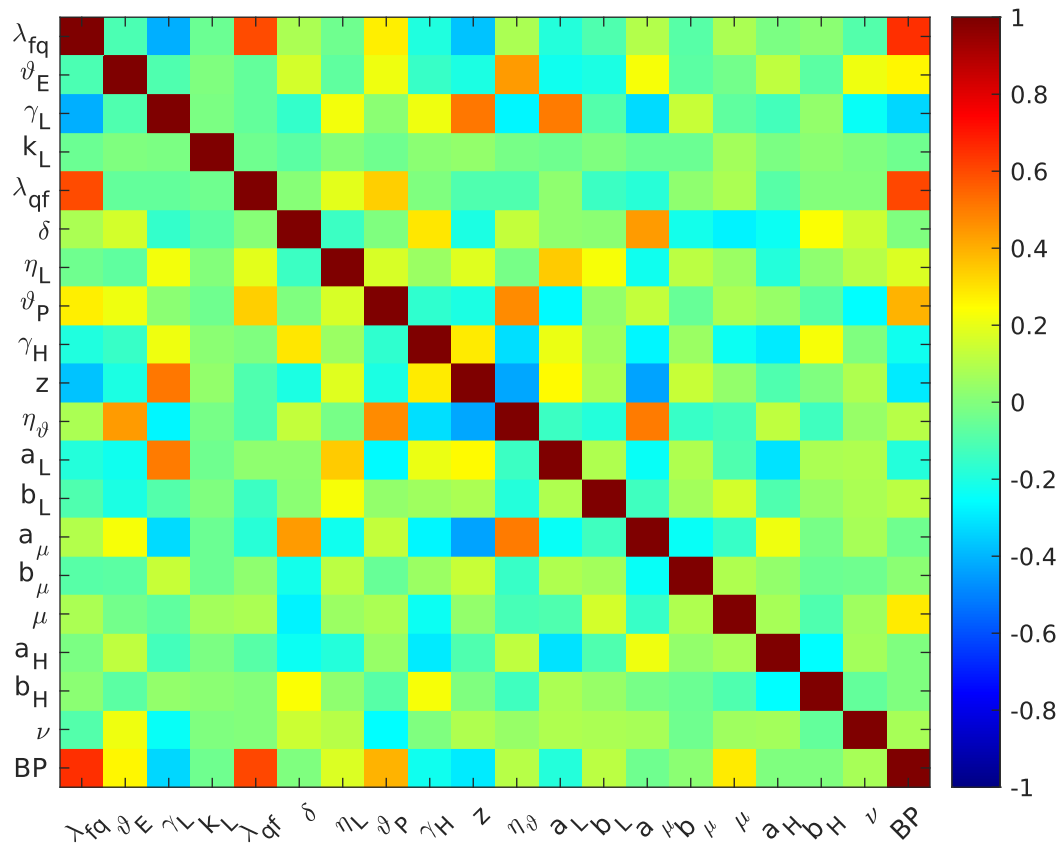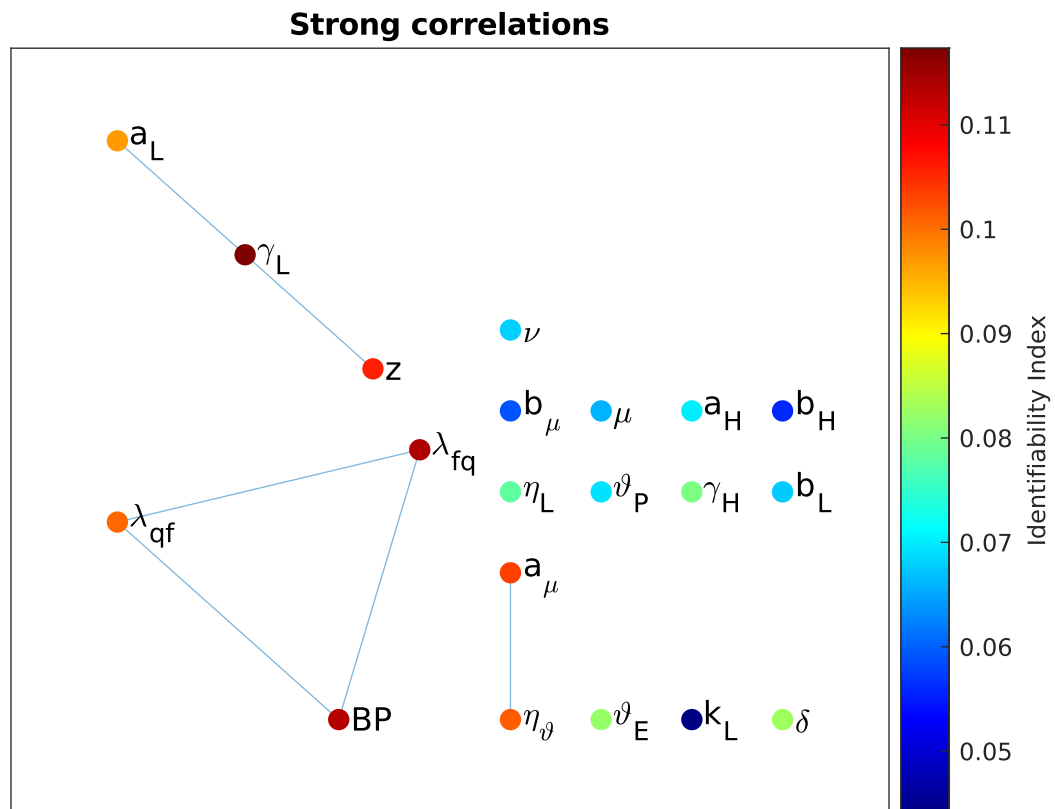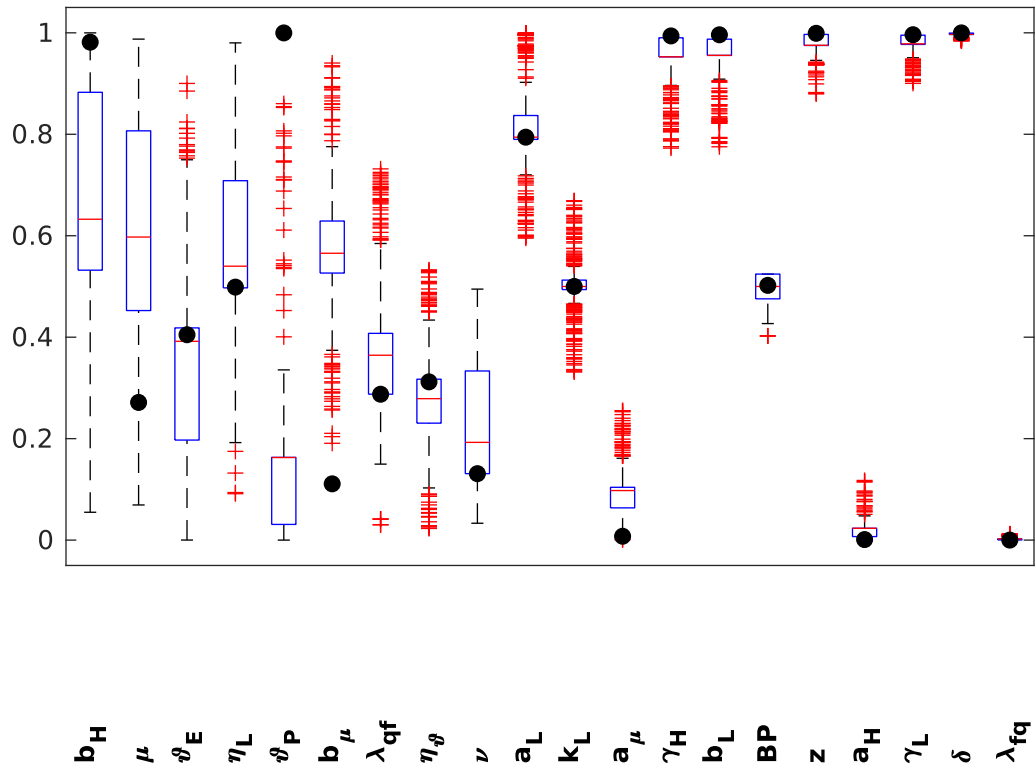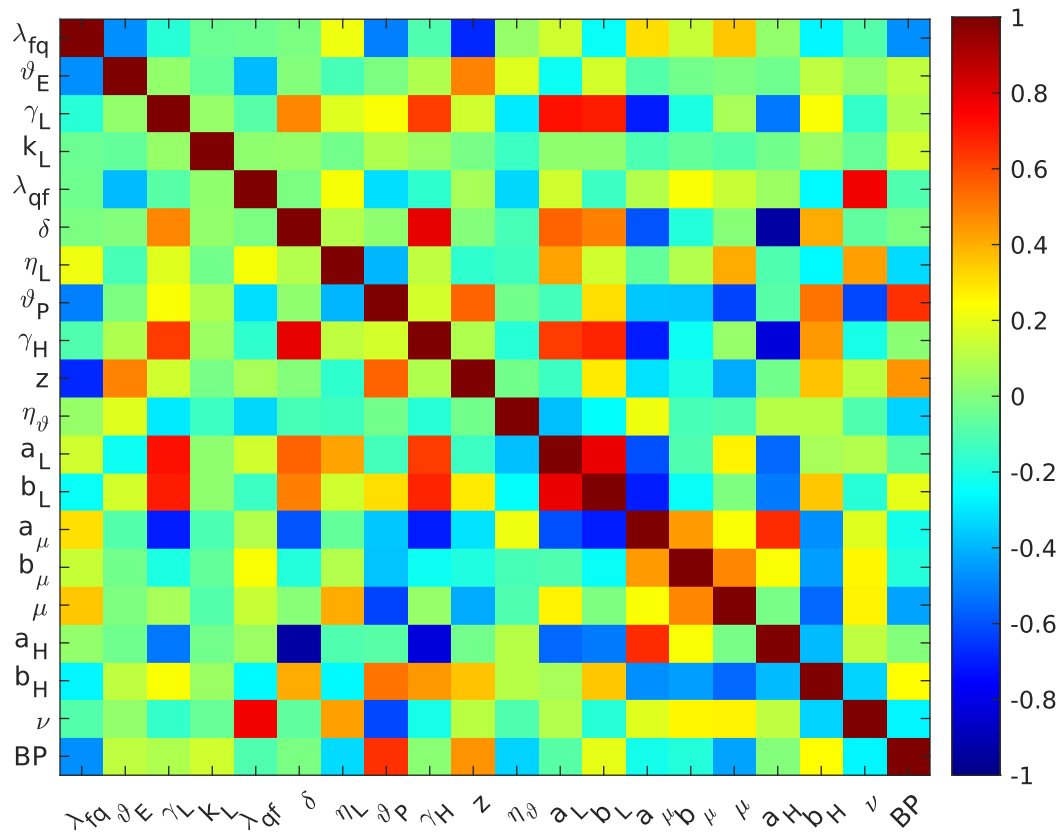
10.2. Estimated parameters with their intervals

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
\lambda_{fq}	'0'	'0'	'0.0024'	'0'	'0.1078'
\vartheta_E	'0.2644'	'0.4397'	'0.3919'	'0.4048'	'0.0844'
\gamma_L	'0.3319'	'1'	'0.9782'	'0.9962'	'0.1771'
k_L	'1'	'10'	'5.4997'	'5.5001'	'0.0586'
\lambda_{qf}	'0.1575'	'0.5897'	'0.3647'	'0.2876'	'0.1098'
\delta	'0'	'0.15'	'0.1495'	'0.15'	'0.1502'
\eta_L	'0'	'1'	'0.54'	'0.4987'	'0.097'
\vartheta_P	'0.8823'	'1'	'0.1631'	'0.9998'	'0.2311'
\gamma_H	'0'	'1'	'0.9526'	'0.9939'	'0.2016'
z	'23.0727'	'30'	'29.2508'	'29.9704'	'0.134'
\eta_\vartheta	'0'	'0.7019'	'0.2788'	'0.3119'	'0.085'
a_L	'9.2335'	'12.4465'	'12.12'	'12.1197'	'0.1964'
b_L	'10.536'	'15'	'14.3772'	'14.9455'	'0.1907'
a_\mu	'1'	'14.44'	'2.3674'	'1.1067'	'0.2006'
b_\mu	'1'	'15'	'8.9165'	'2.5529'	'0.1056'
\mu	'0'	'0.6106'	'0.5974'	'0.2714'	'0.1356'
a_H	'1'	'15'	'1.326'	'1.0146'	'0.1905'
b_H	'1'	'15'	'9.8554'	'14.7419'	'0.1527'
\nu	'65.2954'	'85.1153'	'96.6133'	'65.479'	'0.1236'
BP	'385.9013'	'391.5'	'390.5'	'390.5896'	'0.0953'

10.3. Identifiability analisys
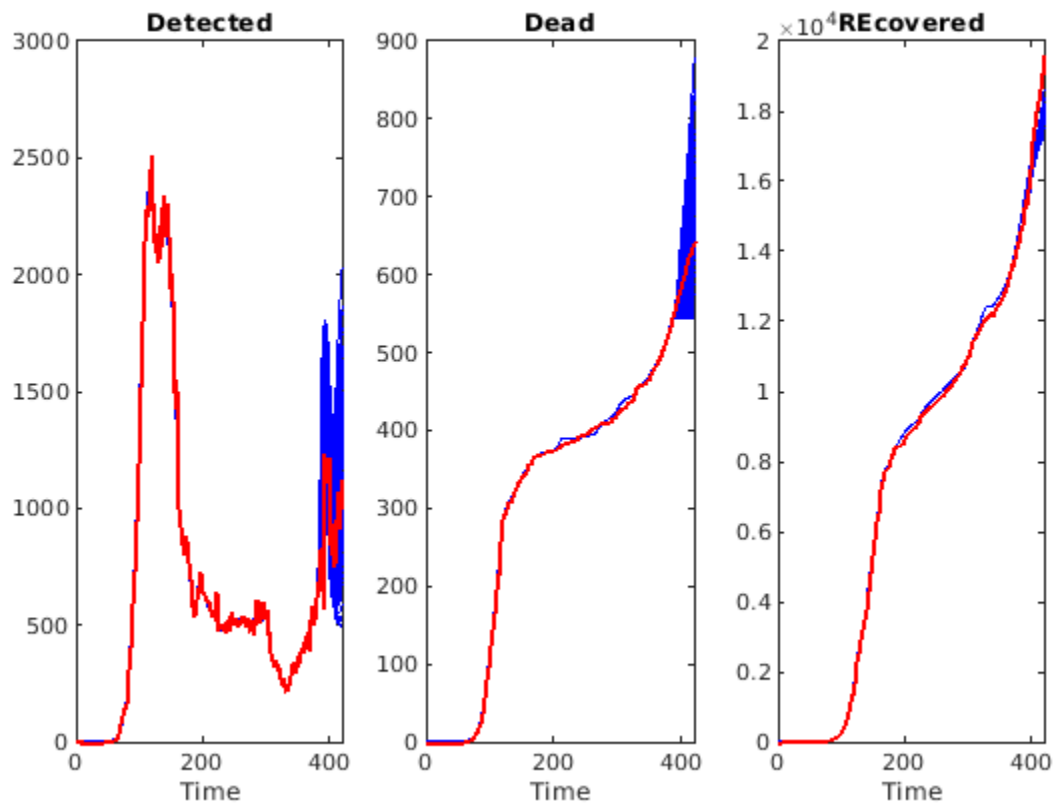
Strong correlations
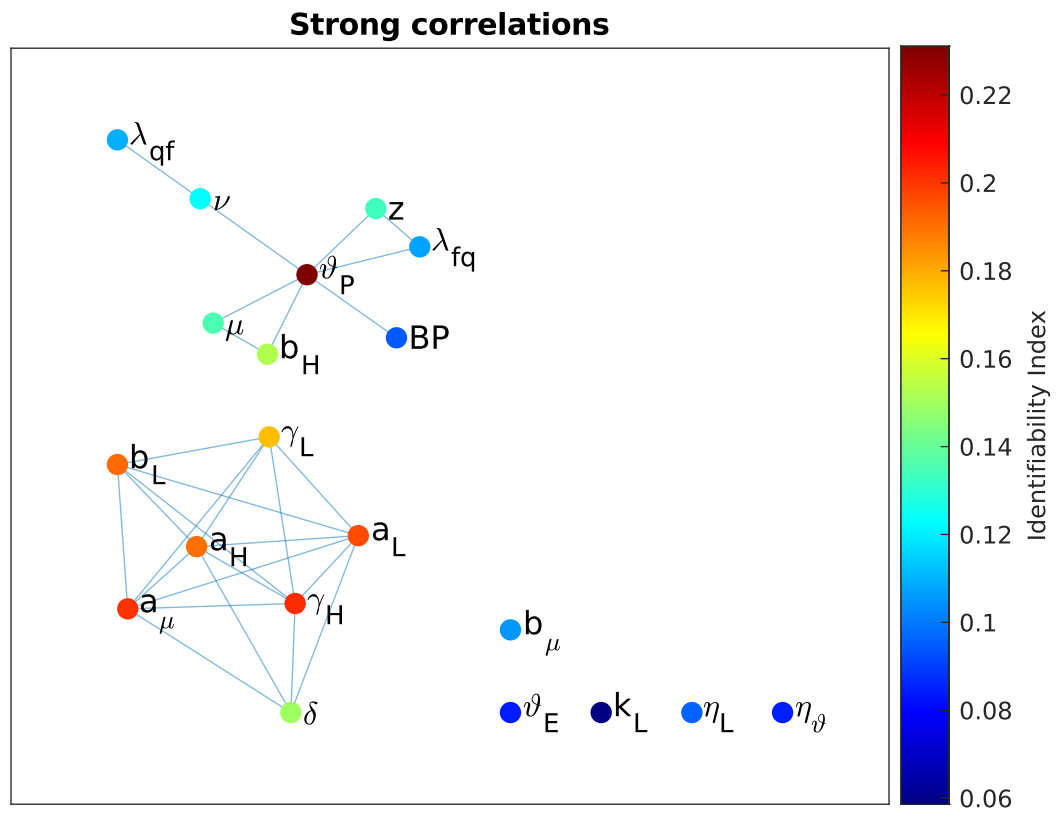
10.4. Uncertainty analisys

N=500

Chapter 11. Extension number11

11.1. Basic information

The extension to be validated consists of the time series from the data421 to the 442. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was3000.

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'	'0.0934'	'0'	'0.0203'	'0.1267'
\vartheta_E	'0.1876'	'0.287'	'0.2373'	'0.0001'	'0.3295'
\gamma_L	'0.7422'	'0.9242'	'0.8332'	'0.9855'	'0.3319'
k_L	'5.2193'	'5.9102'	'5.5647'	'5.2357'	'0.0862'
\lambda_{qf}	'0.206'	'0.4041'	'0.3051'	'0.0011'	'0.1775'
\delta	'0'	'0.0248'	'0.0098'	'0.1498'	'0.3604'
\eta_L	'0.5547'	'0.6828'	'0.6188'	'0.5841'	'0.1129'
\vartheta_P	'0.0078'	'0.02'	'0.0139'	'0.0001'	'0.2164'
\gamma_H	'0.3605'	'0.5519'	'0.4562'	'0.8443'	'0.3986'
z	'12.2761'	'16.7488'	'14.5125'	'29.9342'	'0.1995'
\eta_\vartheta	'0.7217'	'0.8647'	'0.7932'	'0.6143'	'0.2154'
a_L	'1'	'2.625'	'1.005'	'14.9318'	'0.3578'
b_L	'13.8966'	'15'	'14.9765'	'5.0981'	'0.228'
a_\mu	'7.1896'	'9.0488'	'8.1192'	'1.1928'	'0.3995'
b_\mu	'11.5209'	'13.0883'	'12.3046'	'12.1174'	'0.2922'
\mu	'0.6905'	'0.8756'	'0.783'	'0.0096'	'0.3871'
a_H	'9.1645'	'11.9504'	'10.5575'	'1.5809'	'0.4105'
b_H	'4.9985'	'7.1569'	'6.0777'	'2.5779'	'0.3187'
\nu	'28.6801'	'40.5083'	'34.5942'	'5.3462'	'0.2618'
BP	'401.5174'	'403.4826'	'402.5'	'410.5'	'0.1019'

11.3. Identifiability analisys

Strong correlations

11.4. Uncertainty analisys

N=500

Chapter 12. Extension number12

12.1. Basic information

The extension to be validated consists of the time series from the data442 to the 454. The status of the validation is: COMPLETED.
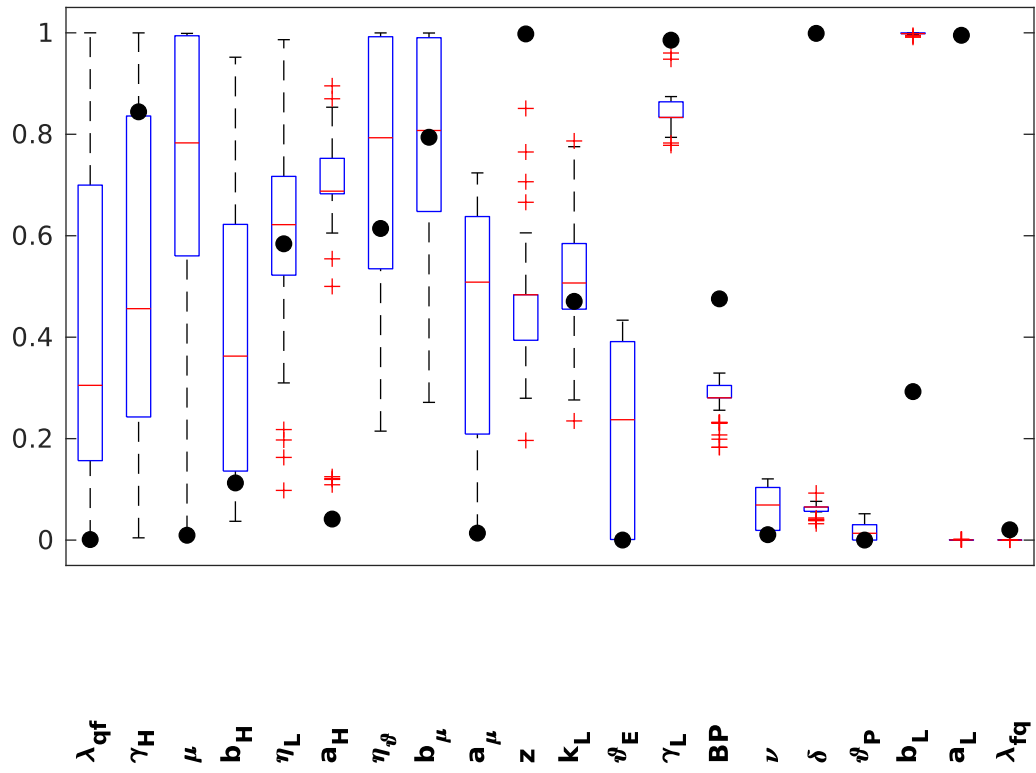
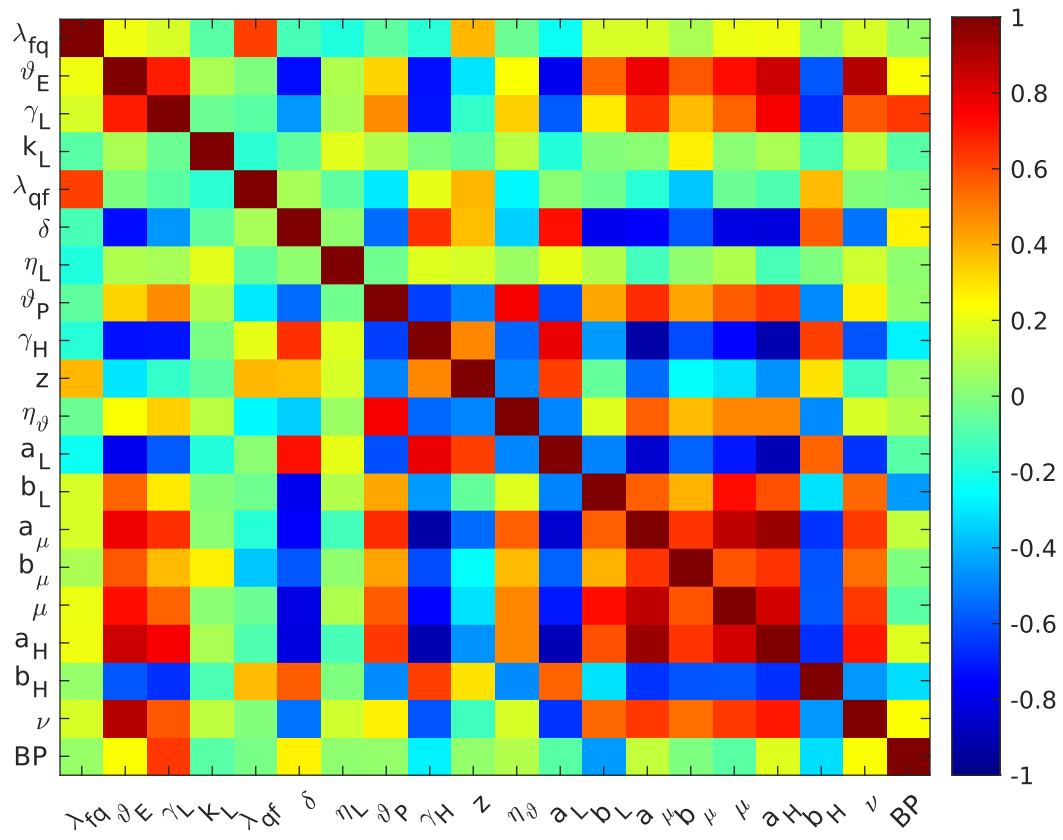The number of estimations needed to perform the validation was1000.

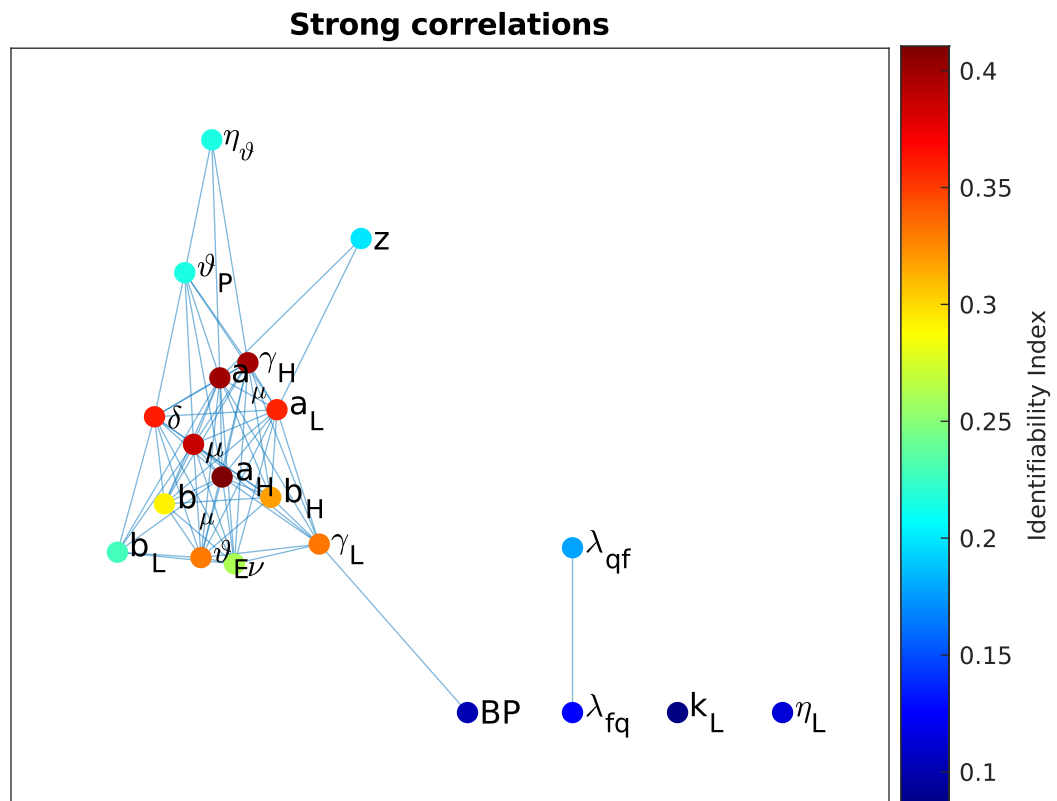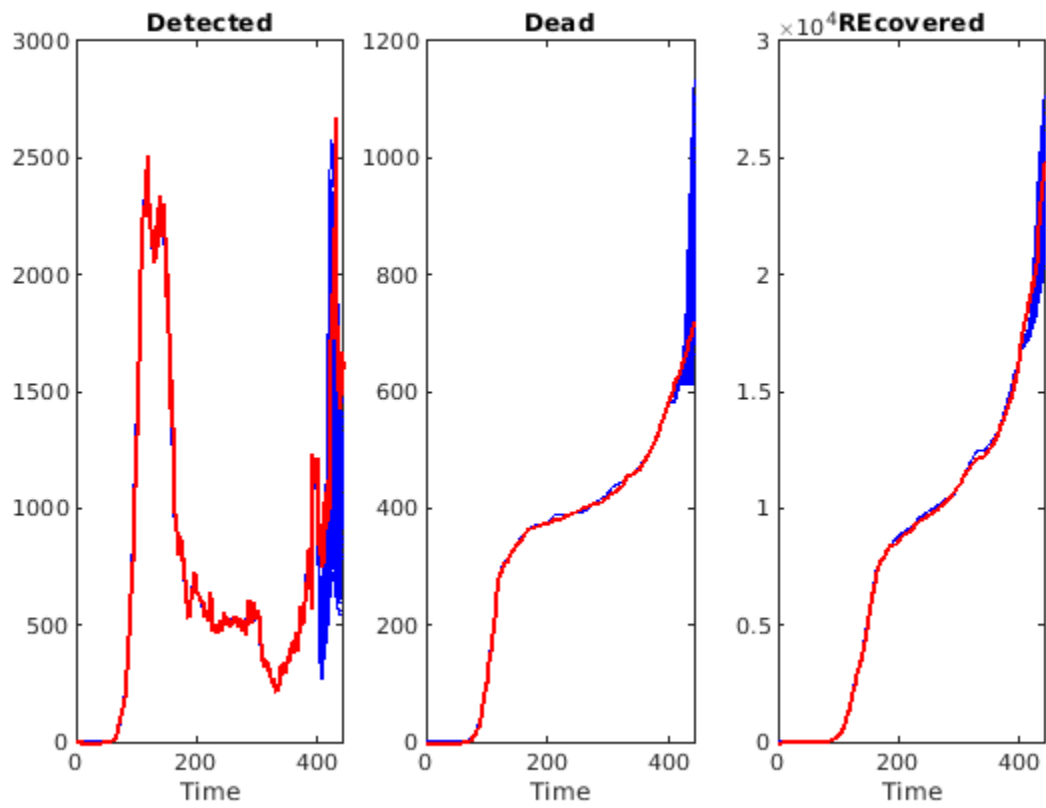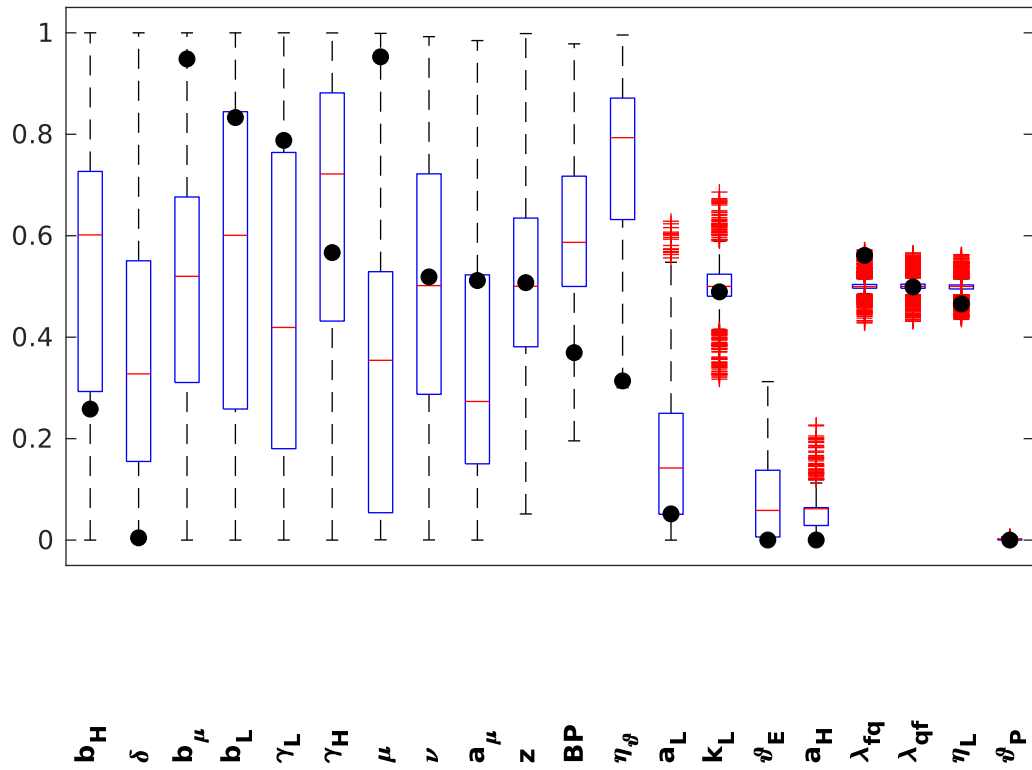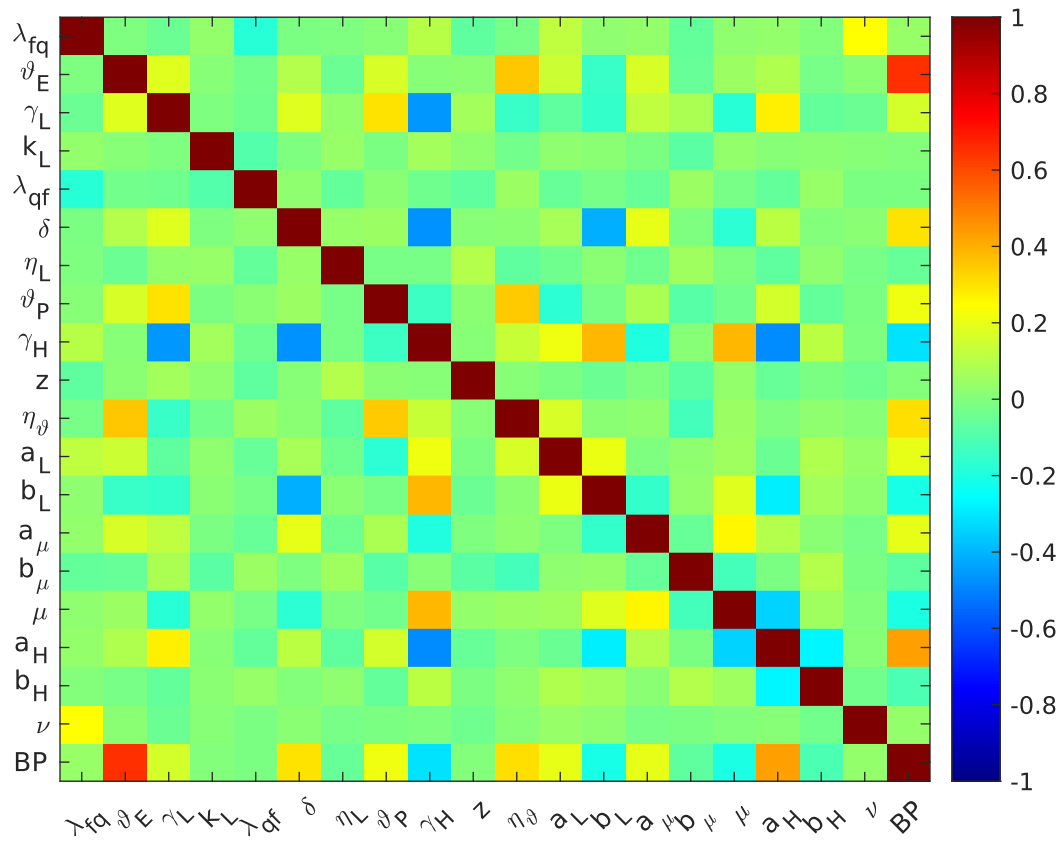## 12.2. Estimated parameters with their intervals

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

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'1'	'0.4997'	'0.5612'	'0.0517'
\vartheta_E	'0'	'0.0003'	'0.0586'	'0.0002'	'0.0755'
\gamma_L	'0.7128'	'1'	'0.4192'	'0.7879'	'0.0865'
k_L	'1'	'10'	'5.5008'	'5.4042'	'0.0437'
\lambda_{qf}	'0'	'1'	'0.5001'	'0.499'	'0.0465'
\delta	'0.0001'	'0.0015'	'0.0492'	'0.0007'	'0.079'
\eta_L	'0'	'1'	'0.5'	'0.4656'	'0.0447'
\vartheta_P	'0.0001'	'0.0008'	'0.0013'	'0.0001'	'0.0493'
\gamma_H	'0.3149'	'1'	'0.7217'	'0.5668'	'0.0983'
z	'0'	'30'	'15.0119'	'15.2256'	'0.0514'
\eta_\vartheta	'0.2518'	'0.3863'	'0.7932'	'0.3139'	'0.0687'
a_L	'1.6879'	'2.0107'	'2.9909'	'1.7233'	'0.0685'
b_L	'11.9464'	'13.6014'	'9.4108'	'12.6611'	'0.0856'
a_\mu	'5.163'	'15'	'4.8276'	'8.1634'	'0.0707'
b_\mu	'1'	'15'	'8.28'	'14.2789'	'0.0627'
\mu	'0'	'1'	'0.3544'	'0.9527'	'0.0777'
a_H	'1'	'2.7312'	'1.8658'	'1.003'	'0.0837'
b_H	'2.4005'	'13.6822'	'9.4228'	'4.616'	'0.0647'
\nu	'0'	'500'	'250.8324'	'259.4114'	'0.0584'
BP	'428.7165'	'429.5029'	'434.5'	'429.4997'	'0.0959'

12.3. Identifiability analisys
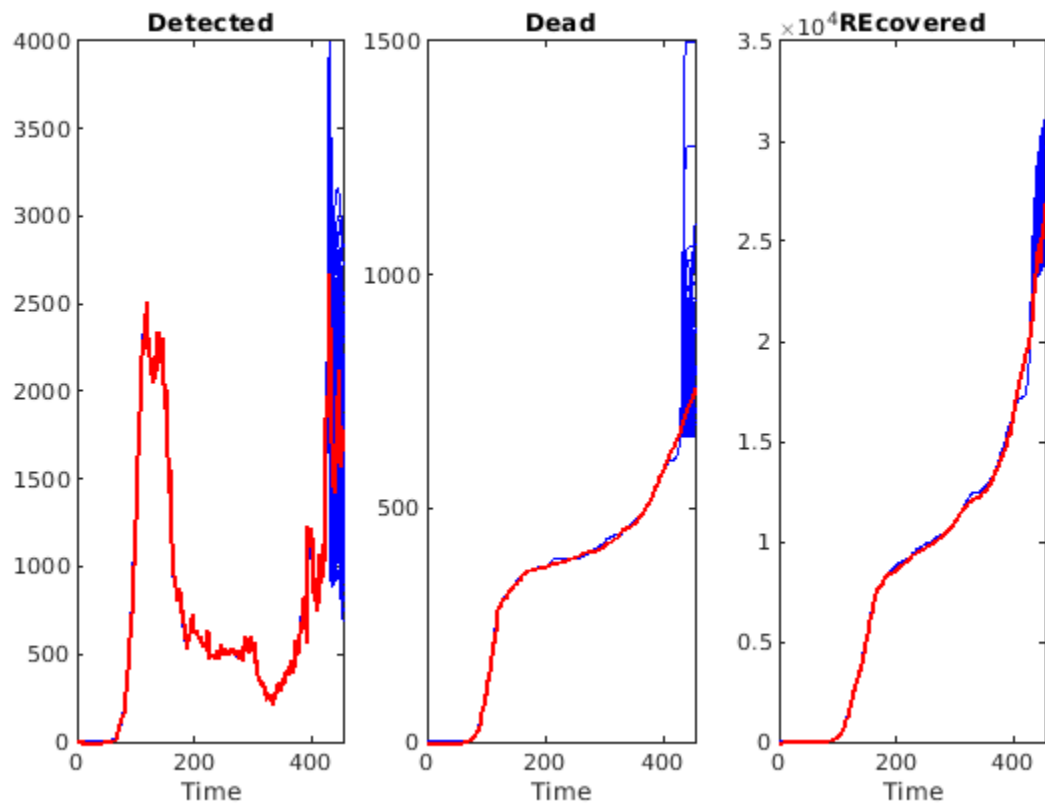
Strong correlations
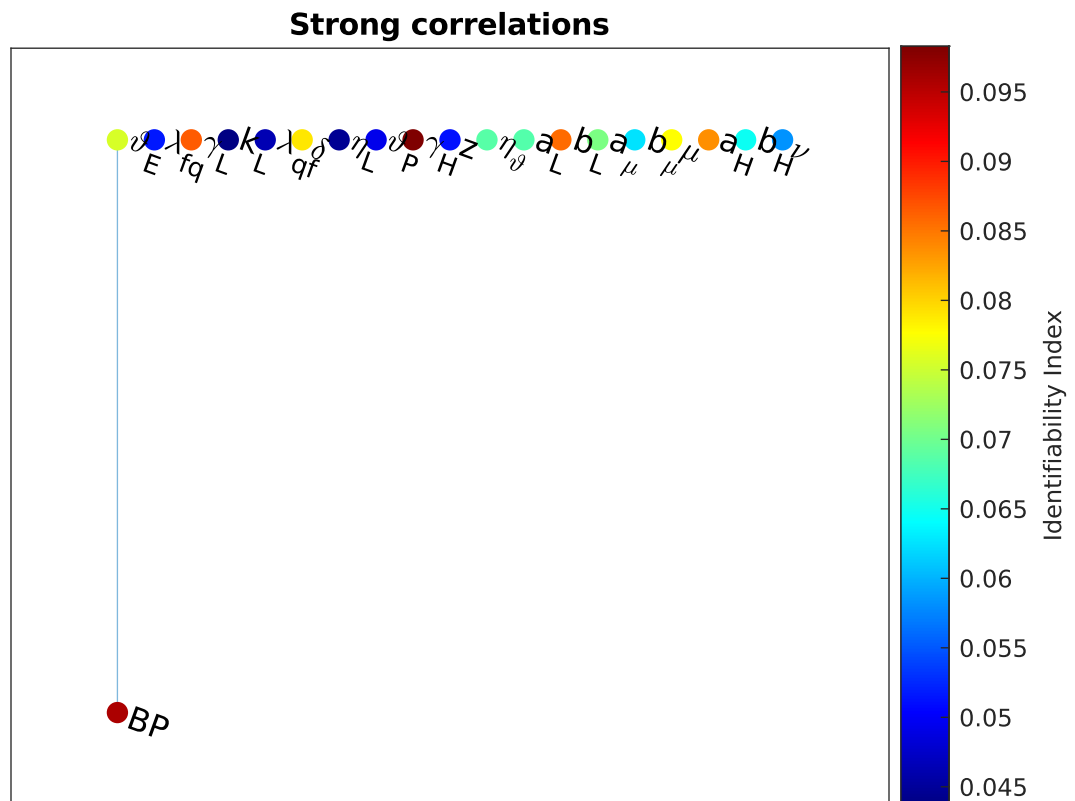
12.4. Uncertainty analisys

N=500

Chapter 13. Extension number13

13.1. Basic information

The extension to be validated consists of the time series from the data454 to the 463. The status of the validation is: COMPLETED.
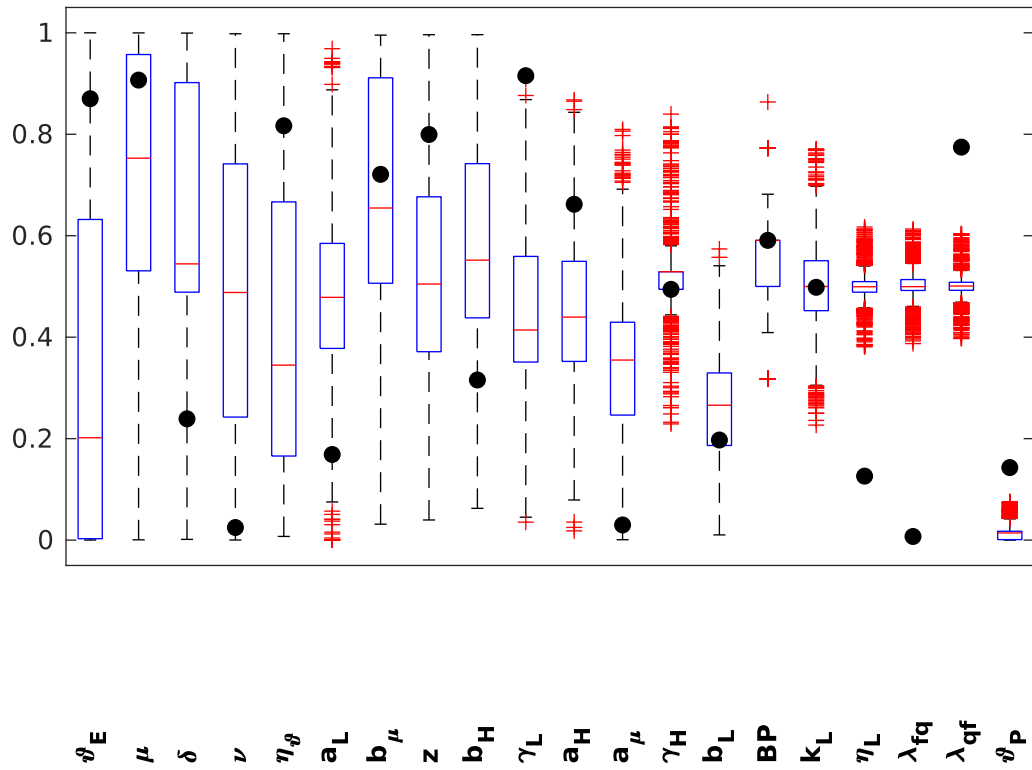
The number of estimations needed to perform the validation was1000.

13.2. Estimated parameters with their intervals

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4867'	'0.5125'	'0.4996'	'0.0071'	'0.0734'
\vartheta_E	'0.1717'	'0.2319'	'0.2018'	'0.87'	'0.1204'
\gamma_L	'0.3995'	'0.4288'	'0.4142'	'0.9155'	'0.0653'
k_L	'5.3916'	'5.6076'	'5.4996'	'5.485'	'0.047'
\lambda_{qf}	'0.4892'	'0.5125'	'0.5009'	'0.7746'	'0.0652'
\delta	'0.0785'	'0.0849'	'0.0817'	'0.0359'	'0.129'
\eta_L	'0.489'	'0.5099'	'0.4994'	'0.1261'	'0.0556'
\vartheta_P	'0.0079'	'0.0204'	'0.0141'	'0.143'	'0.0947'
\gamma_H	'0.5096'	'0.5485'	'0.5291'	'0.4943'	'0.1668'
z	'14.6025'	'15.6826'	'15.1426'	'23.9866'	'0.0593'
\eta_\vartheta	'0.3217'	'0.3681'	'0.3449'	'0.8167'	'0.1657'
a_L	'7.4525'	'7.9459'	'7.6992'	'3.3631'	'0.1261'
b_L	'4.5634'	'4.8804'	'4.7219'	'3.7621'	'0.0987'
a_\mu	'5.7532'	'6.185'	'5.9691'	'1.4185'	'0.0926'
b_\mu	'9.887'	'10.4432'	'10.1651'	'11.0943'	'0.1438'
\mu	'0.734'	'0.7717'	'0.7529'	'0.9068'	'0.1454'
a_H	'6.966'	'7.3426'	'7.1543'	'10.2681'	'0.0711'
b_H	'8.4475'	'9.0035'	'8.7255'	'5.4184'	'0.1228'
\nu	'231.5427'	'256.5521'	'244.0474'	'12.3852'	'0.0795'
BP	'448.4062'	'448.5938'	'448.5'	'448.5'	'0.0634'

13.3. Identifiability analisys

Strong correlations

13.4. Uncertainty analisys

Chapter 14. Extension number14

14.1. Basic information

The extension to be validated consists of the time series from the data463 to the 478. The status of the validation is: COMPLETED.

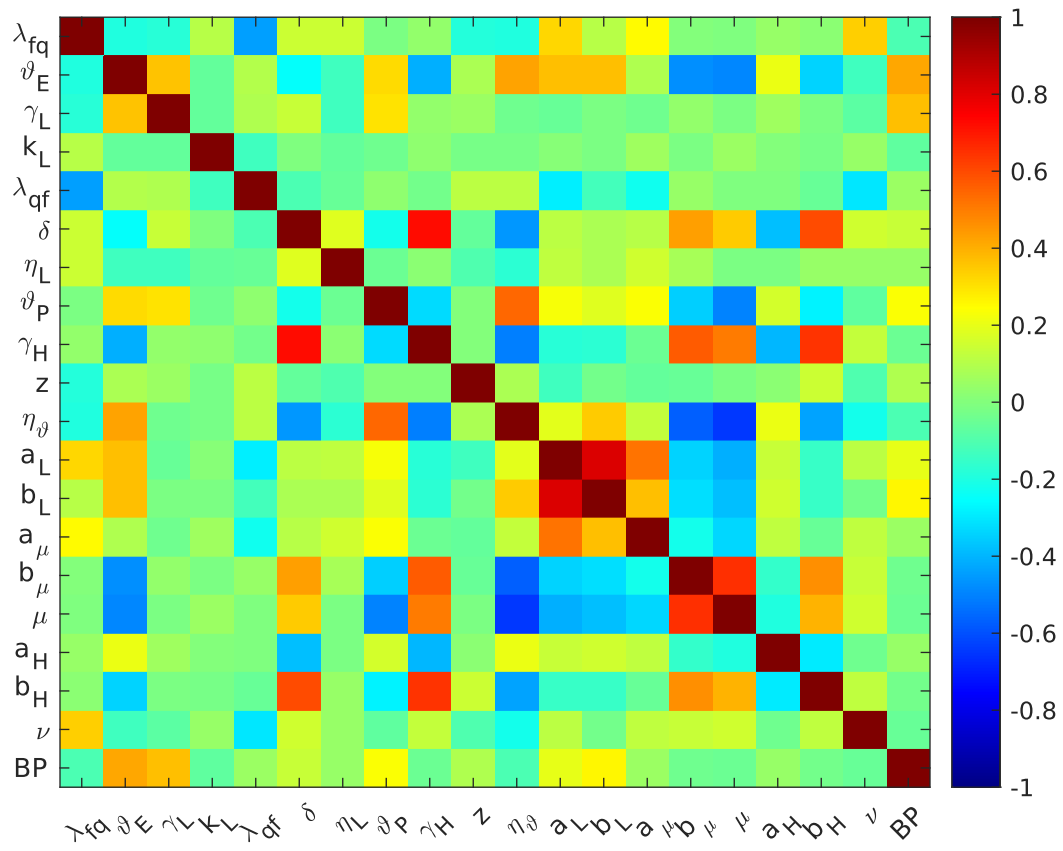The number of estimations needed to perform the validation was1000.
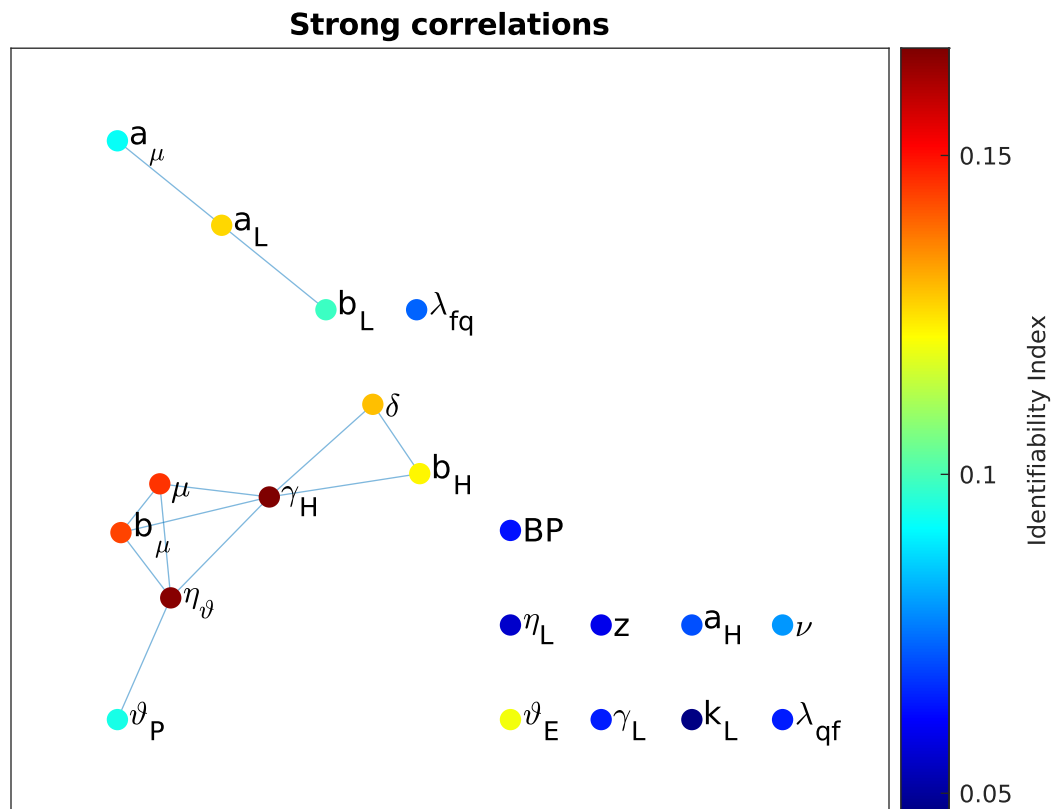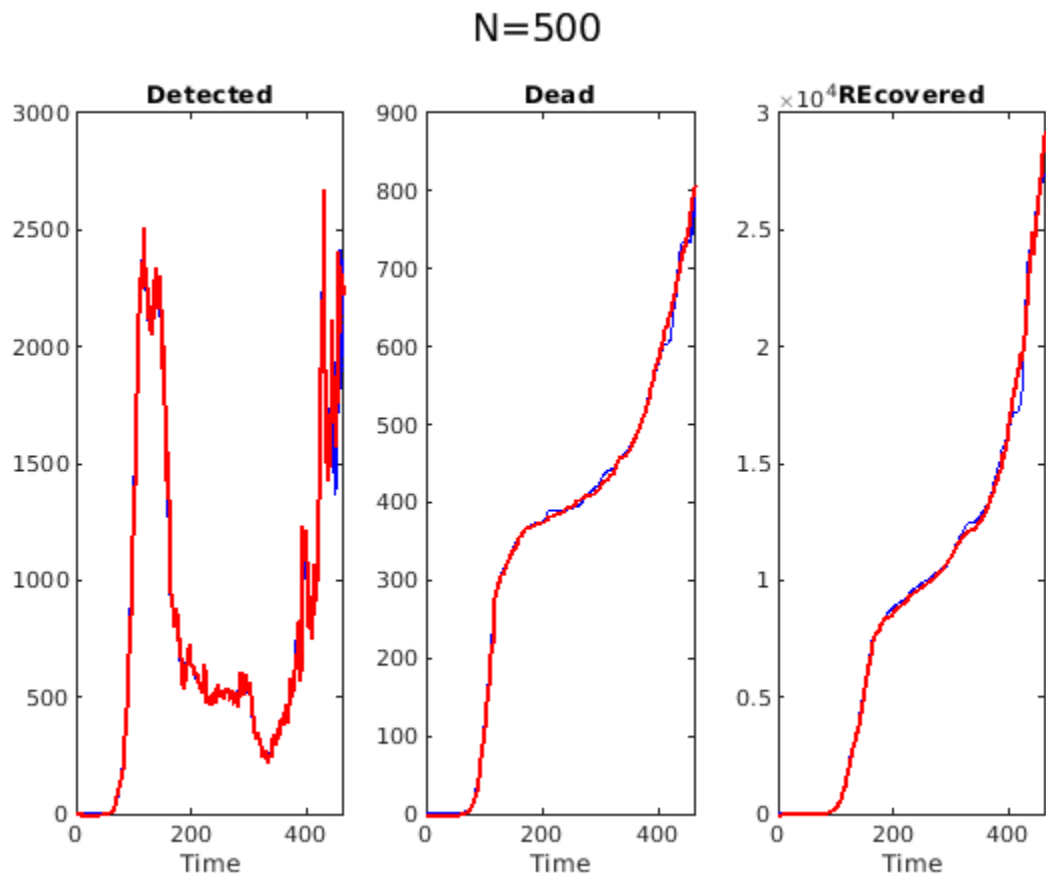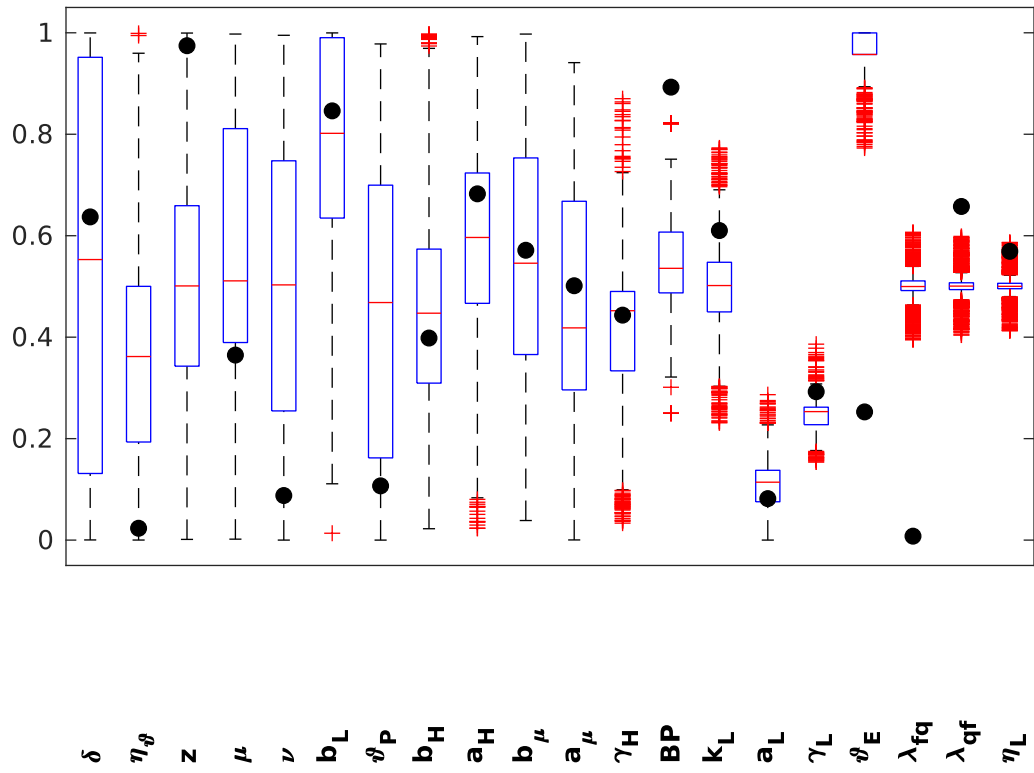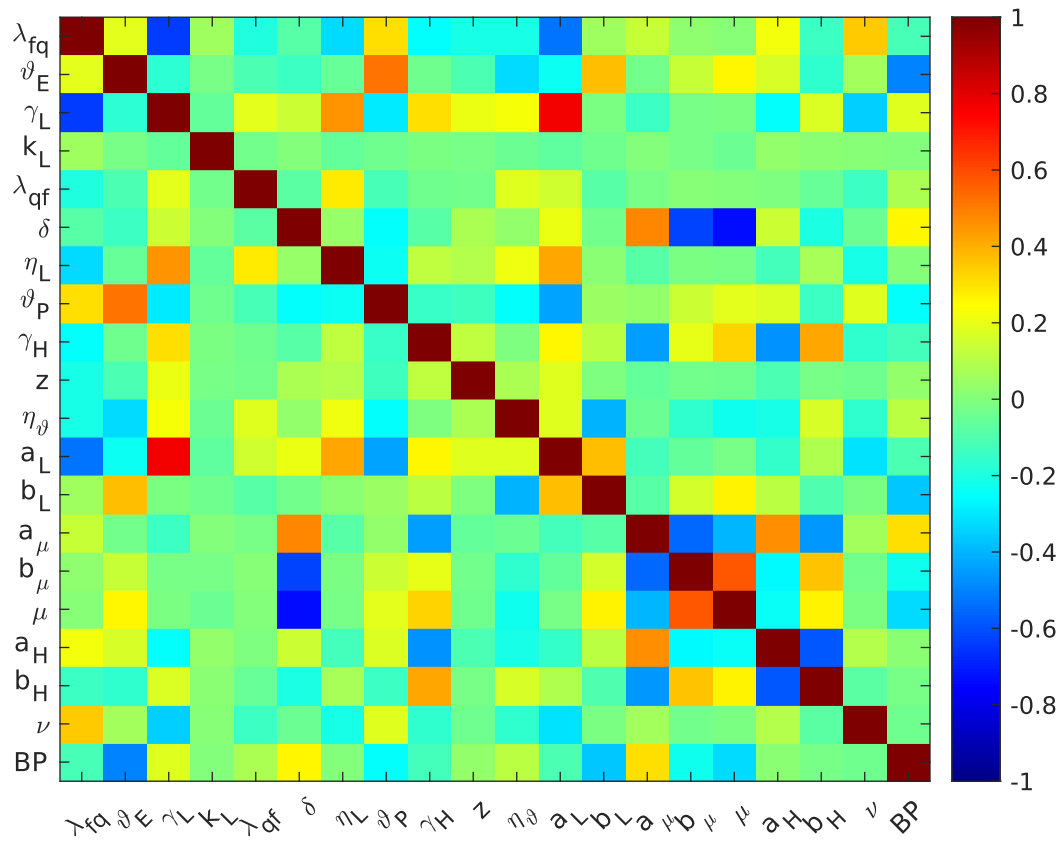
14.2. Estimated parameters with their intervals

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4896'	'0.5101'	'0.4998'	'0.0078'	'0.1103'
\vartheta_E	'0.9346'	'0.9799'	'0.9572'	'0.2527'	'0.1049'
\gamma_L	'0.2398'	'0.2667'	'0.2533'	'0.2925'	'0.1211'
k_L	'5.419'	'5.6128'	'5.5159'	'6.4916'	'0.0429'
\lambda_{qf}	'0.4918'	'0.5095'	'0.5007'	'0.6576'	'0.0559'
\delta	'0.0784'	'0.0875'	'0.083'	'0.0956'	'0.1257'
\eta_L	'0.4921'	'0.5084'	'0.5002'	'0.5692'	'0.0689'
\vartheta_P	'0.4457'	'0.4908'	'0.4683'	'0.1069'	'0.1085'
\gamma_H	'0.4354'	'0.4689'	'0.4522'	'0.4435'	'0.0871'
z	'14.5425'	'15.5189'	'15.0307'	'29.2361'	'0.0609'
\eta_\vartheta	'0.3442'	'0.3795'	'0.3618'	'0.0233'	'0.083'
a_L	'2.502'	'2.6939'	'2.5979'	'2.1446'	'0.115'
b_L	'11.9948'	'12.4561'	'12.2254'	'12.8454'	'0.0744'
a_\mu	'6.6082'	'7.1047'	'6.8564'	'8.0195'	'0.1041'
b_\mu	'8.3366'	'8.9456'	'8.6411'	'8.9986'	'0.1293'
\mu	'0.4886'	'0.5334'	'0.511'	'0.3647'	'0.1221'
a_H	'9.1202'	'9.5831'	'9.3516'	'10.5558'	'0.102'
b_H	'7.0142'	'7.5091'	'7.2617'	'6.5763'	'0.0989'
\nu	'240.4582'	'262.5998'	'251.529'	'43.9309'	'0.0762'
BP	'461.3481'	'461.6519'	'461.5'	'466.5'	'0.0741'

14.3. Identifiability analisys

Strong correlations

14.4. Uncertainty analisys

Chapter 15. Extension number15

15.1. Basic information

The extension to be validated consists of the time series from the data478 to the 485. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.
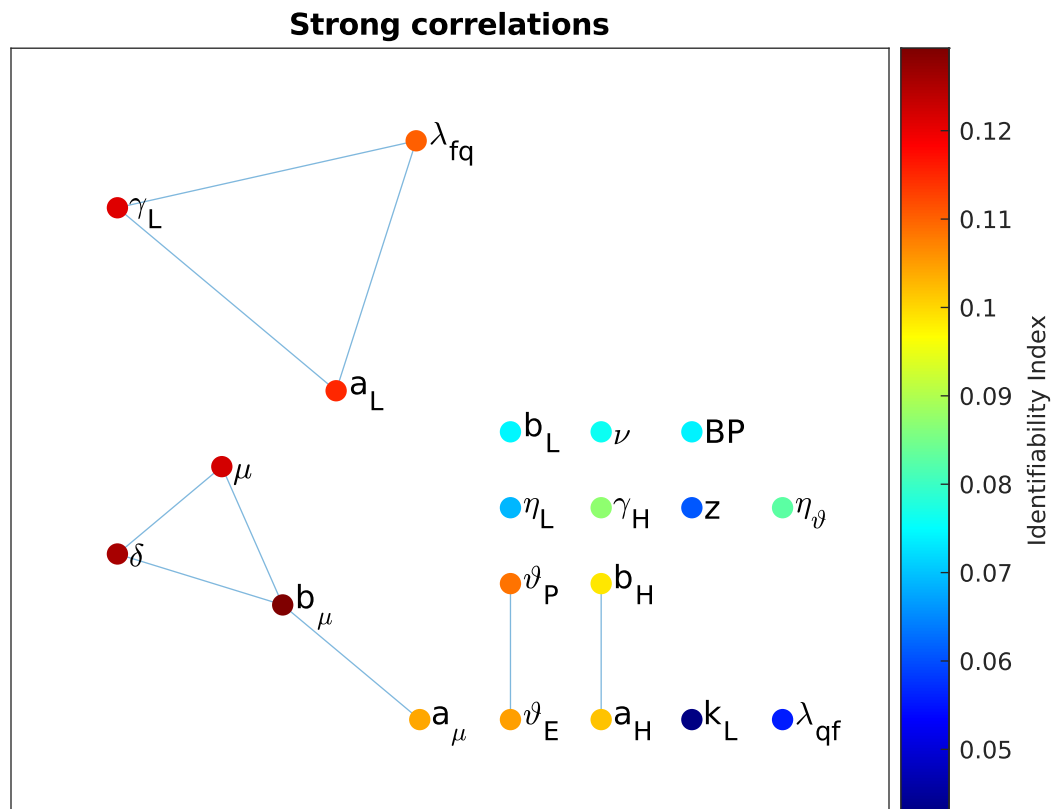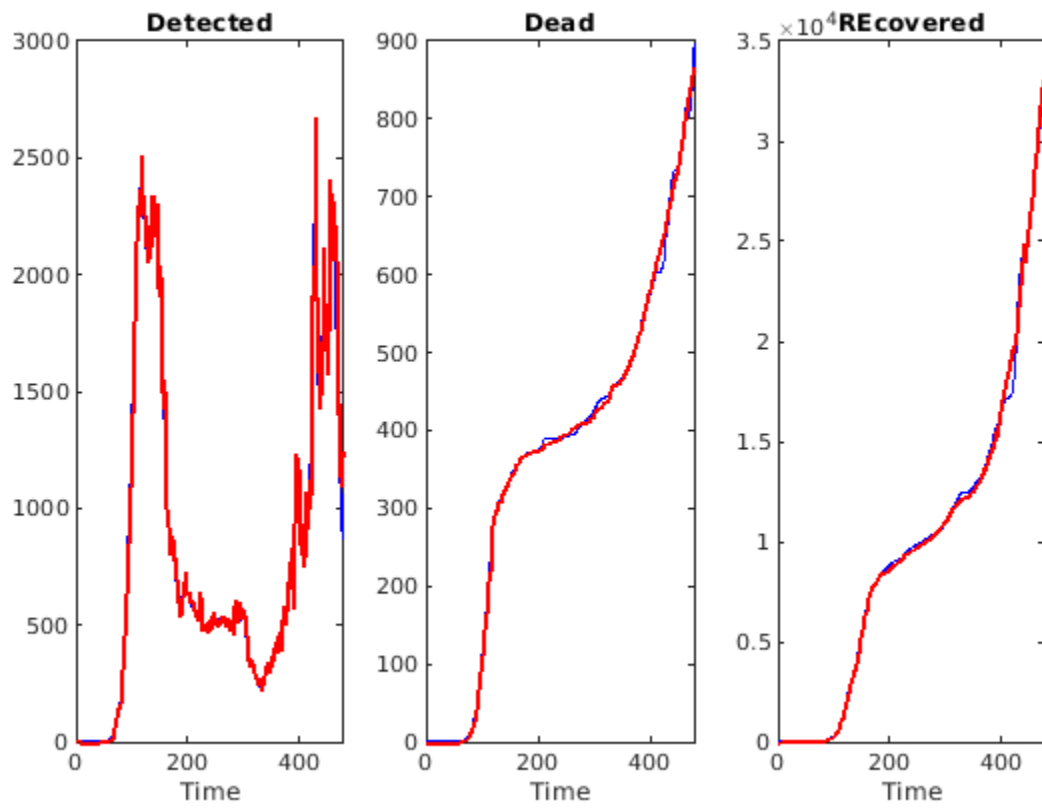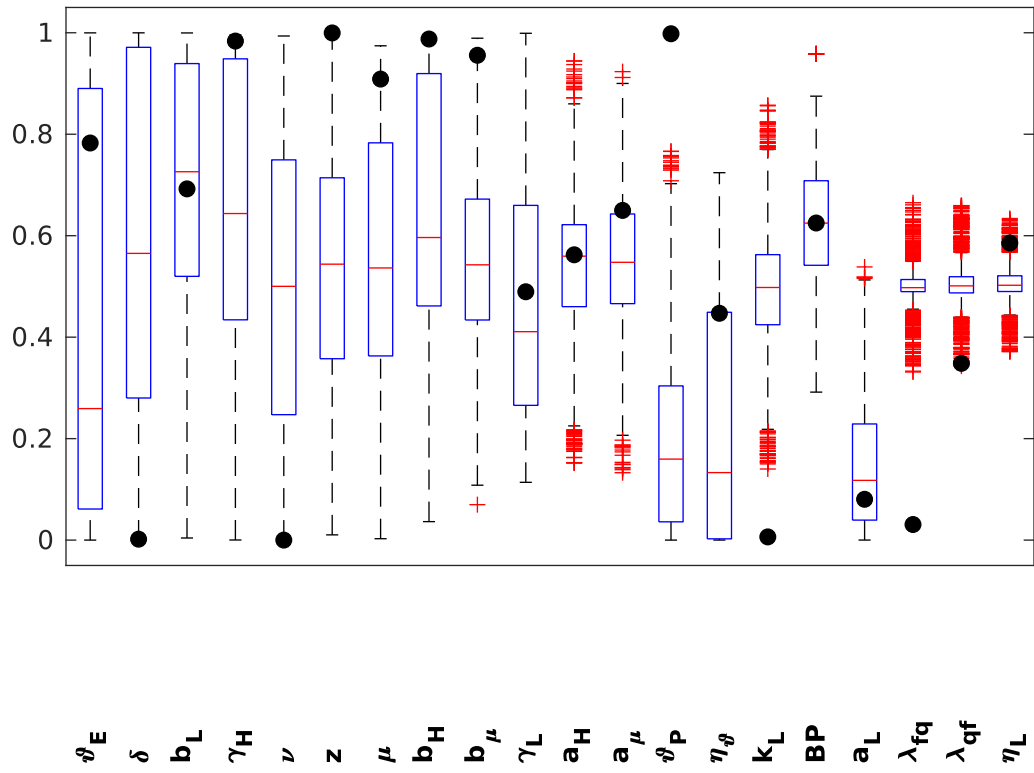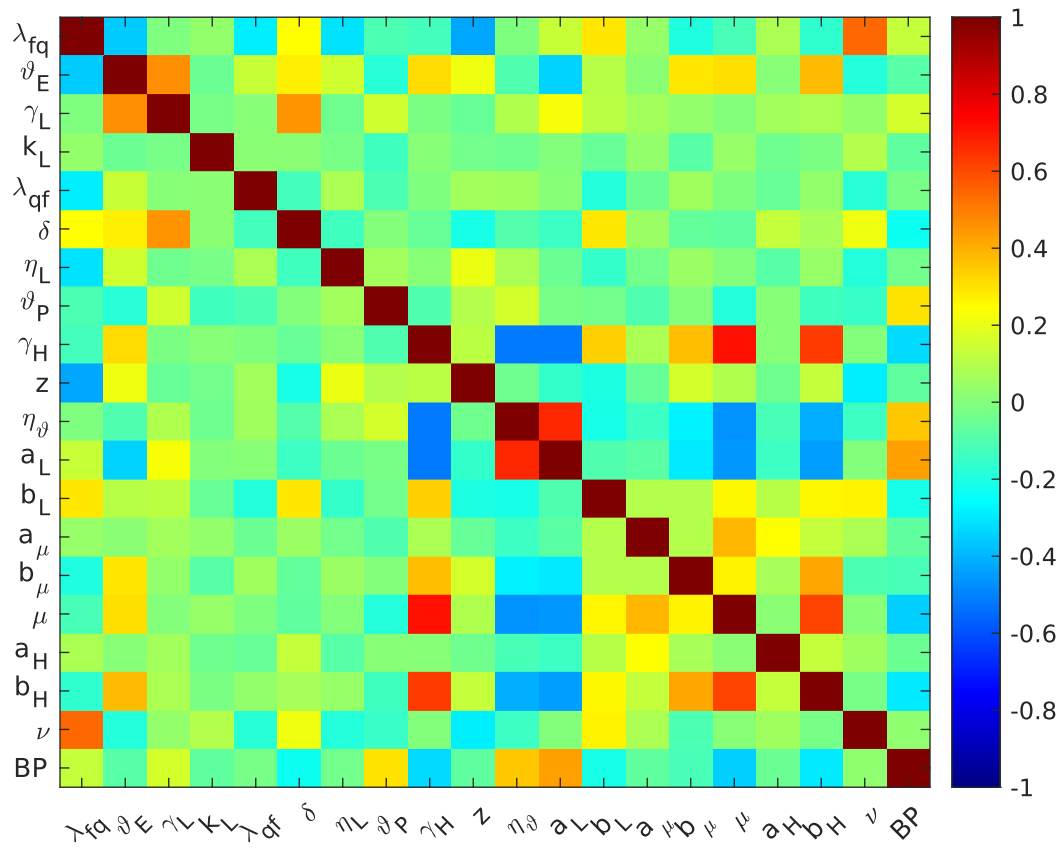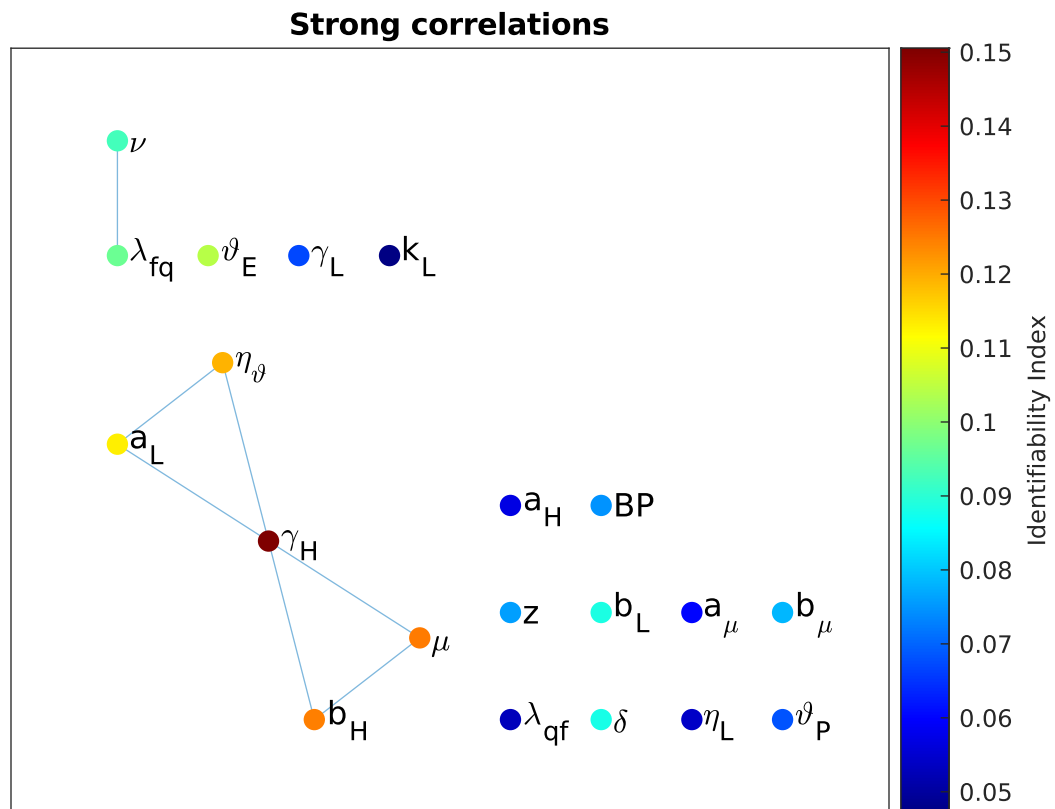
15.2. Estimated parameters with their intervals

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0.4832'	'0.5119'	'0.4976'	'0.0307'	'0.0965'
\vartheta_E	'0.2291'	'0.2893'	'0.2592'	'0.7827'	'0.1045'
\gamma_L	'0.3951'	'0.4266'	'0.4108'	'0.4895'	'0.067'
k_L	'5.3691'	'5.5933'	'5.4812'	'1.0567'	'0.0472'
\lambda_{qf}	'0.4915'	'0.5107'	'0.5011'	'0.3484'	'0.0529'
\delta	'0.0806'	'0.0889'	'0.0848'	'0.0003'	'0.0883'
\eta_L	'0.4941'	'0.5105'	'0.5023'	'0.5856'	'0.0544'
\vartheta_P	'0.1415'	'0.178'	'0.1597'	'0.9981'	'0.0682'
\gamma_H	'0.6209'	'0.6664'	'0.6437'	'0.9836'	'0.1505'
z	'15.7694'	'16.8644'	'16.3169'	'29.9895'	'0.0759'
\eta_\vartheta	'0.1132'	'0.1533'	'0.1332'	'0.4471'	'0.1192'
a_L	'2.4965'	'2.8017'	'2.6491'	'2.1259'	'0.113'
b_L	'10.8621'	'11.4676'	'11.1648'	'10.6919'	'0.0884'
a_\mu	'8.4875'	'8.8423'	'8.6649'	'10.0976'	'0.0605'
b_\mu	'8.3872'	'8.8058'	'8.5965'	'14.379'	'0.0785'
\mu	'0.5158'	'0.5571'	'0.5364'	'0.9087'	'0.1249'
a_H	'8.6391'	'9.0317'	'8.8354'	'8.8731'	'0.0569'
b_H	'9.0725'	'9.6263'	'9.3494'	'14.8274'	'0.1246'
\nu	'238.5176'	'261.6895'	'250.1036'	'0.0081'	'0.0928'
BP	'470.3935'	'470.6008'	'470.4972'	'470.5'	'0.0751'

15.3. Identifiability analisys
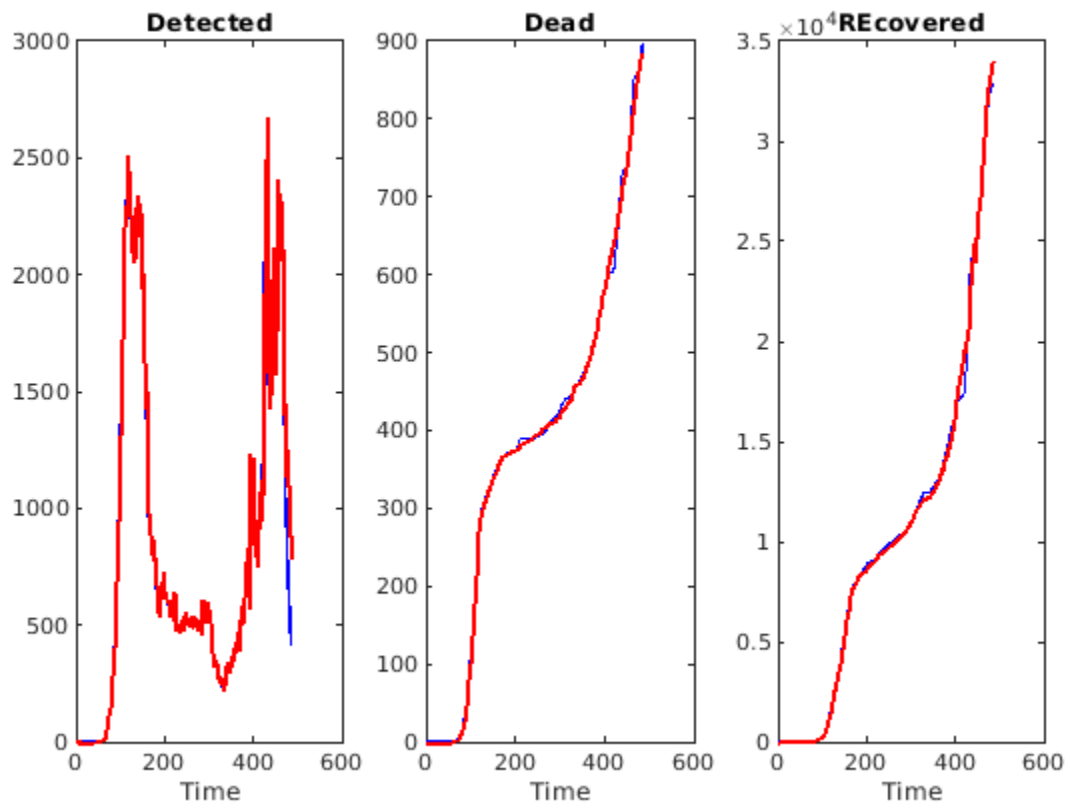
Strong correlations

15.4. Uncertainty analisys

N=500

Chapter 16. Extension number16

16.1. Basic information

The extension to be validated consists of the time series from the data485 to the 705. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was2000.
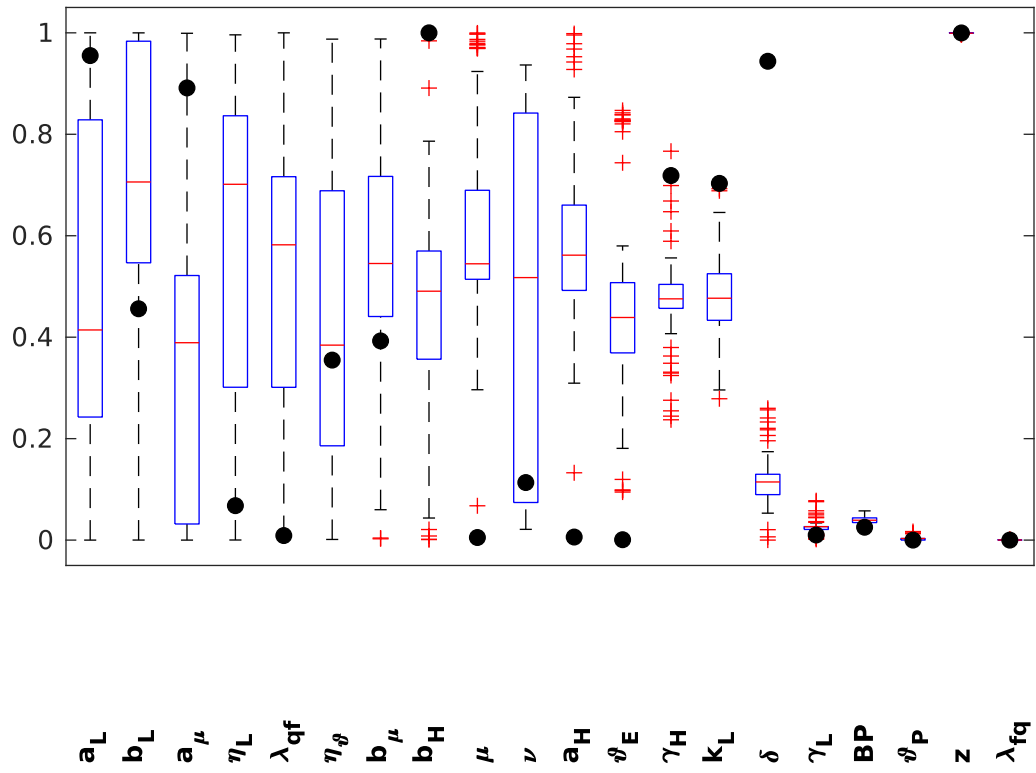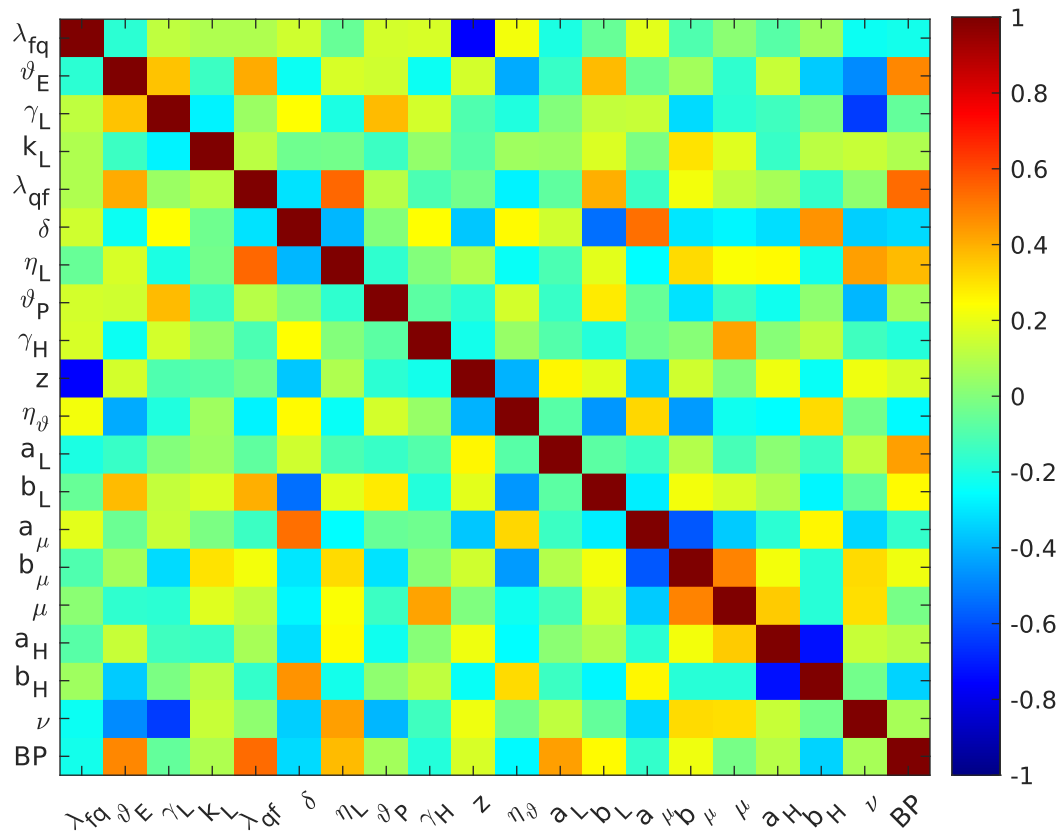
16.2. Estimated parameters with their intervals

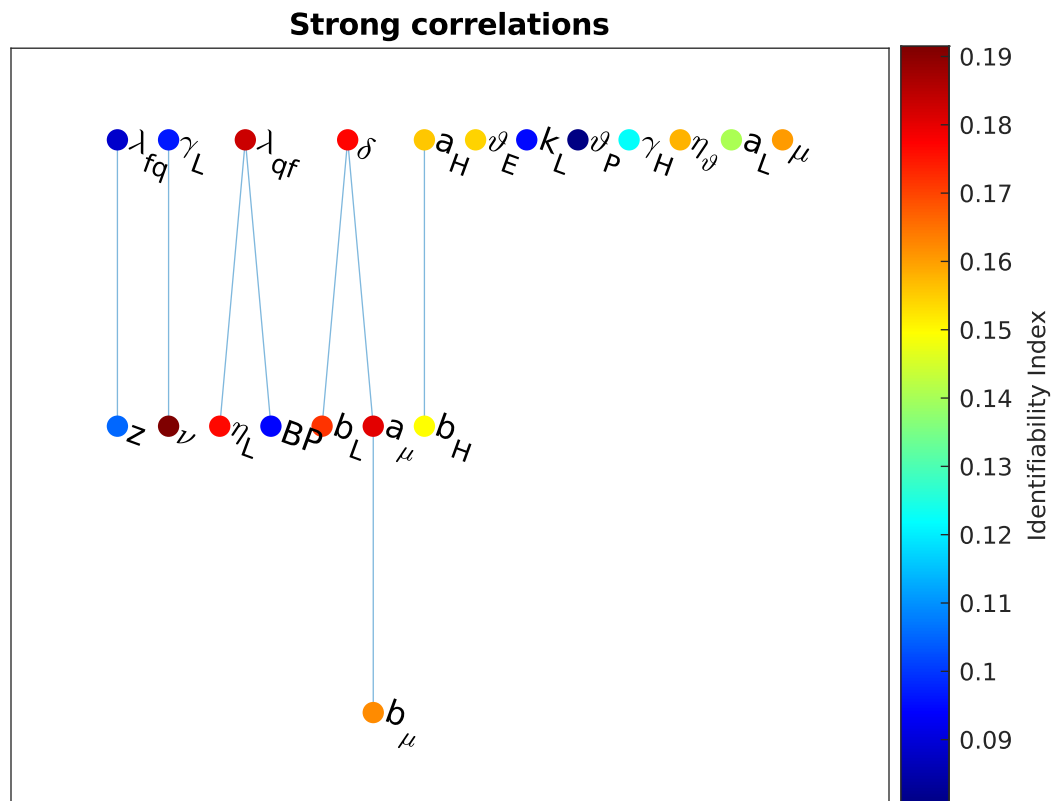It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0'	'0.0002'	'0'	'0.0884'
\vartheta_E	'0.0006'	'0.001'	'0.4388'	'0.0008'	'0.1546'
\gamma_L	'0.0086'	'0.0151'	'0.0266'	'0.0101'	'0.0966'
k_L	'4.0675'	'7.7193'	'5.2914'	'7.329'	'0.0952'
\lambda_{qf}	'0.0043'	'0.0095'	'0.5821'	'0.009'	'0.1829'
\delta	'0.0674'	'0.15'	'0.0172'	'0.1416'	'0.1768'
\eta_L	'0.0477'	'0.0703'	'0.7014'	'0.0679'	'0.1766'
\vartheta_P	'0'	'0'	'0.0032'	'0'	'0.0805'
\gamma_H	'0.4506'	'0.7486'	'0.4756'	'0.7187'	'0.1223'
z	'28.1069'	'30'	'29.9807'	'29.9936'	'0.1055'
\eta_\vartheta	'0.352'	'0.3799'	'0.3843'	'0.3548'	'0.1581'
a_L	'9.9412'	'14.6315'	'6.7996'	'14.3719'	'0.1405'
b_L	'5.0404'	'9.718'	'10.8837'	'7.3843'	'0.172'
a_\mu	'8.536'	'14.0665'	'6.4476'	'13.4794'	'0.1807'
b_\mu	'4.148'	'10.2516'	'8.6338'	'6.4973'	'0.1623'
\mu	'0.002'	'0.0053'	'0.5447'	'0.0051'	'0.1605'
a_H	'1'	'3.0584'	'8.8637'	'1.0843'	'0.1556'
b_H	'9.8998'	'15'	'7.8694'	'14.9999'	'0.1498'
\nu	'54.6905'	'80.2484'	'258.7466'	'56.7213'	'0.1915'
BP	'478'	'532.25'	'486.5'	'483.5'	'0.0944'

16.3. Identifiability analisys

Strong correlations
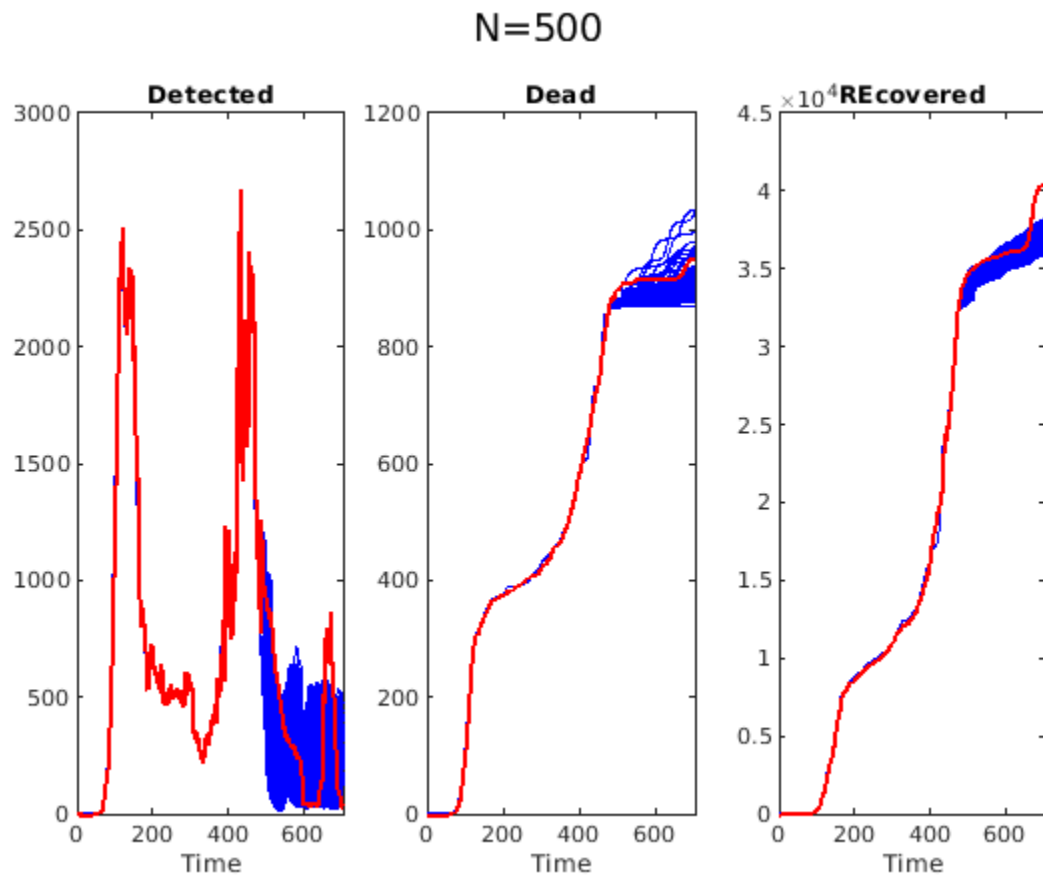
16.4. Uncertainty analisys

Chapter 17. Extension number17

17.1. Basic information

The extension to be validated consists of the time series from the data705 to the 721. The status of the validation is: COMPLETED.

The number of estimations needed to perform the validation was1000.
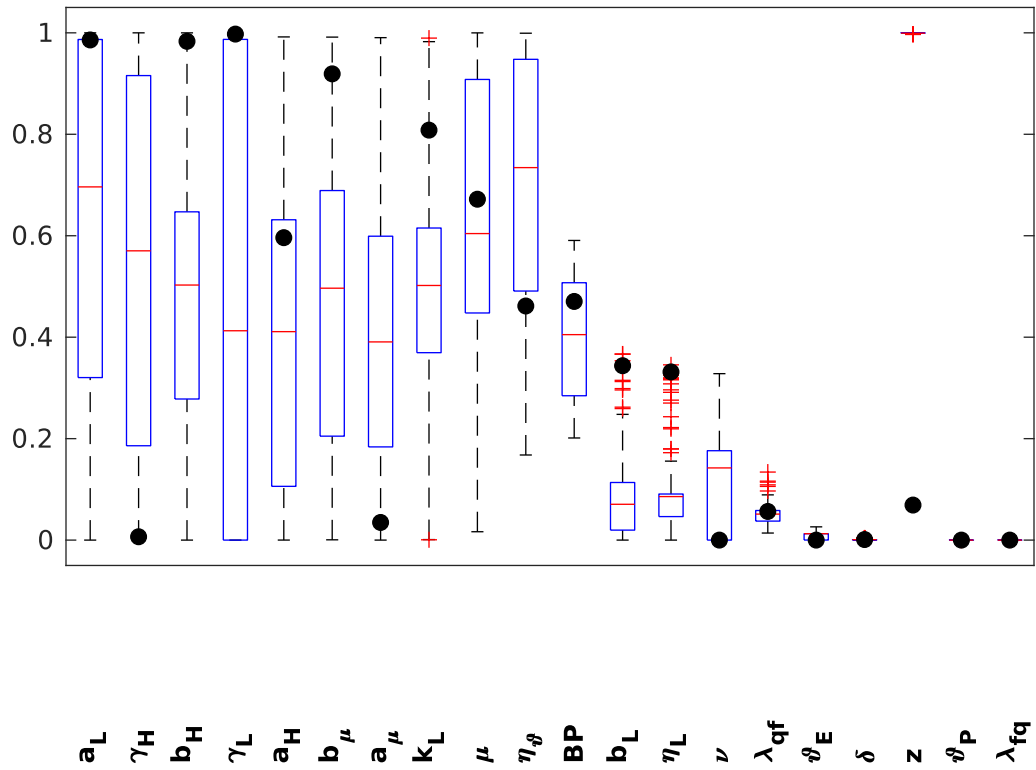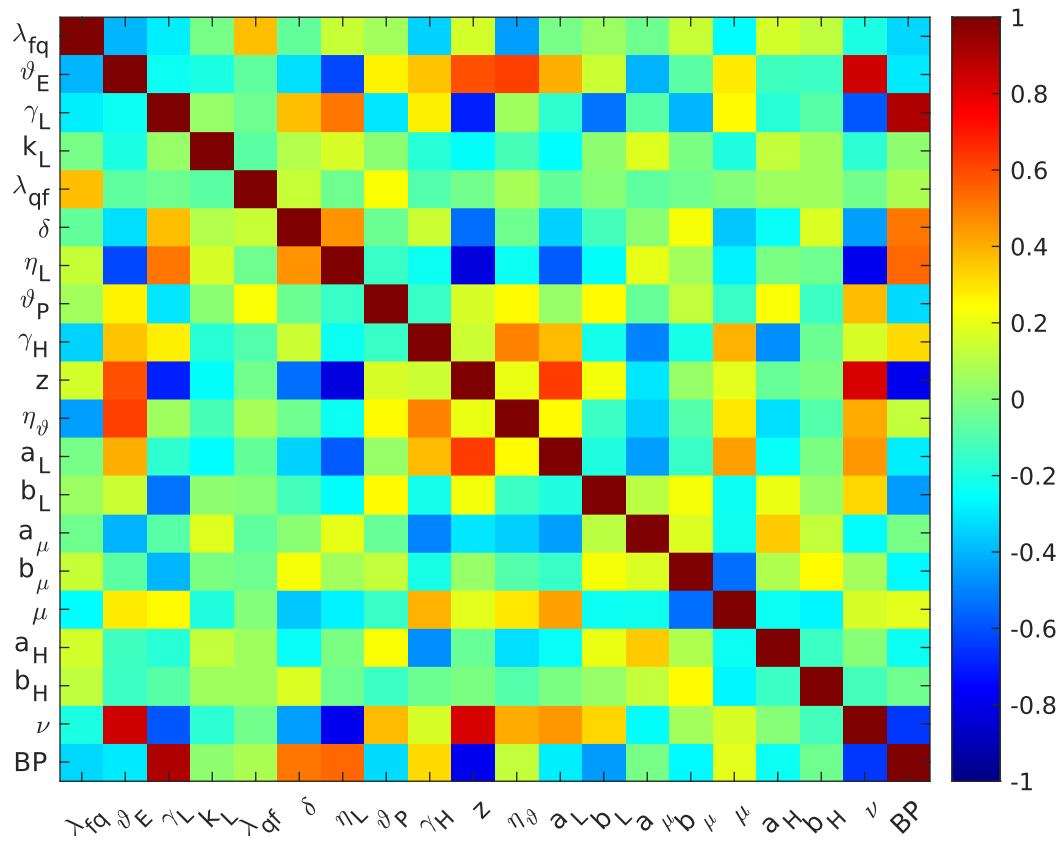
17.2. Estimated parameters with their intervals

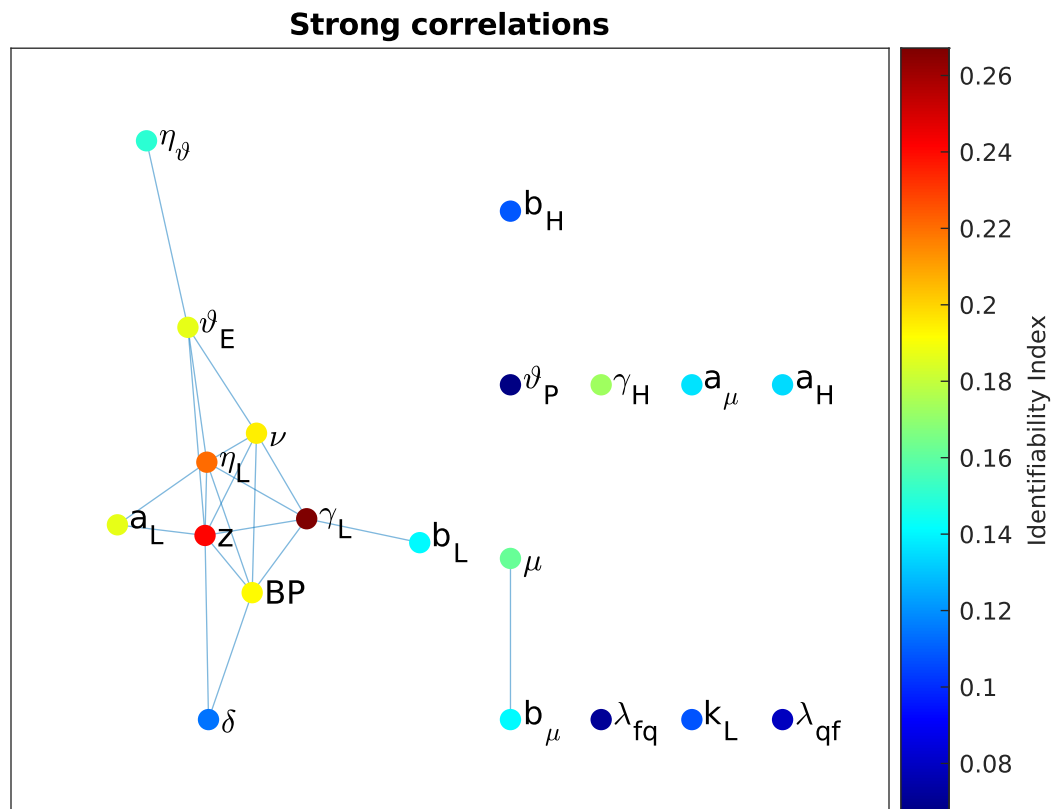It was necessary to fix 0 parameters of 10 that could be fixed to complete validation.

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

	Rango		Nominal	Mejor	Index
\lambda_{fq}	'0'	'0'	'0'	'0'	'0.0719'
\vartheta_E	'0'	'0'	'0.0126'	'0'	'0.187'
\gamma_L	'0.8873'	'1'	'0.4127'	'0.9975'	'0.2671'
k_L	'4.9784'	'8.6452'	'5.5176'	'8.2738'	'0.1084'
\lambda_{qf}	'0.0337'	'0.0875'	'0.0513'	'0.0565'	'0.0794'
\delta	'0'	'0.0017'	'0.0001'	'0.0002'	'0.1146'
\eta_L	'0.297'	'0.743'	'0.0858'	'0.3316'	'0.2205'
\vartheta_P	'0'	'0'	'0'	'0'	'0.0672'
\gamma_H	'0.0023'	'0.0086'	'0.5703'	'0.0066'	'0.1732'
z	'2.07'	'2.1619'	'29.9805'	'2.0722'	'0.2408'
\eta_\vartheta	'0.4612'	'0.4716'	'0.7343'	'0.4615'	'0.1508'
a_L	'14.1275'	'14.8958'	'10.748'	'14.8034'	'0.187'
b_L	'5.716'	'6.6839'	'1.9885'	'5.8128'	'0.1412'
a_\mu	'1.1907'	'7.5488'	'6.4698'	'1.487'	'0.1364'
b_\mu	'10.048'	'14.153'	'7.9522'	'13.8678'	'0.1414'
\mu	'0.3139'	'0.6964'	'0.6043'	'0.672'	'0.1618'
a_H	'4.2061'	'10.0028'	'6.7531'	'9.3467'	'0.1348'
b_H	'10.4899'	'15'	'8.0392'	'14.7659'	'0.1092'
\nu	'0'	'0.0001'	'71.1464'	'0.0001'	'0.1951'
BP	'588.5'	'698.75'	'576.5396'	'591.3279'	'0.1927'

17.3. Identifiability analisys

Strong correlations

17.4. Uncertainty analisys