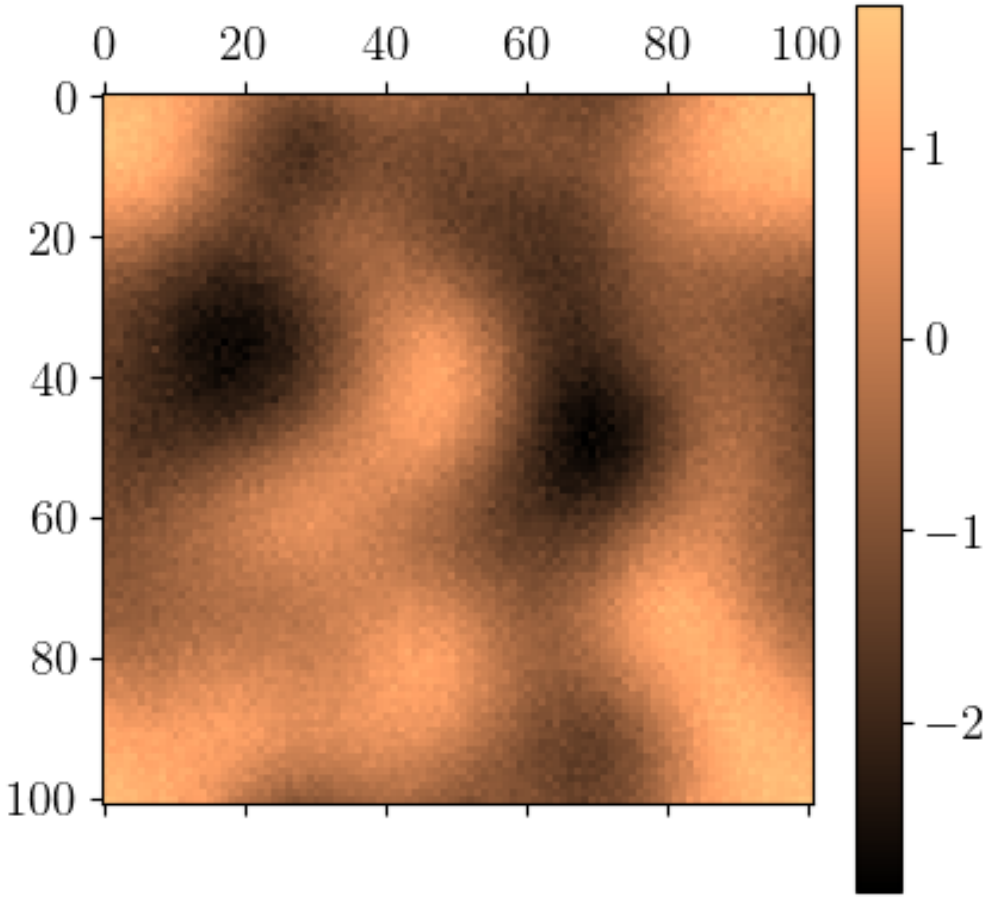
# Full resolution, no preconditionning : background state

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$



# Full resolution, no preconditionning : guess

With lanczos algorithm :

images/lxg11.png

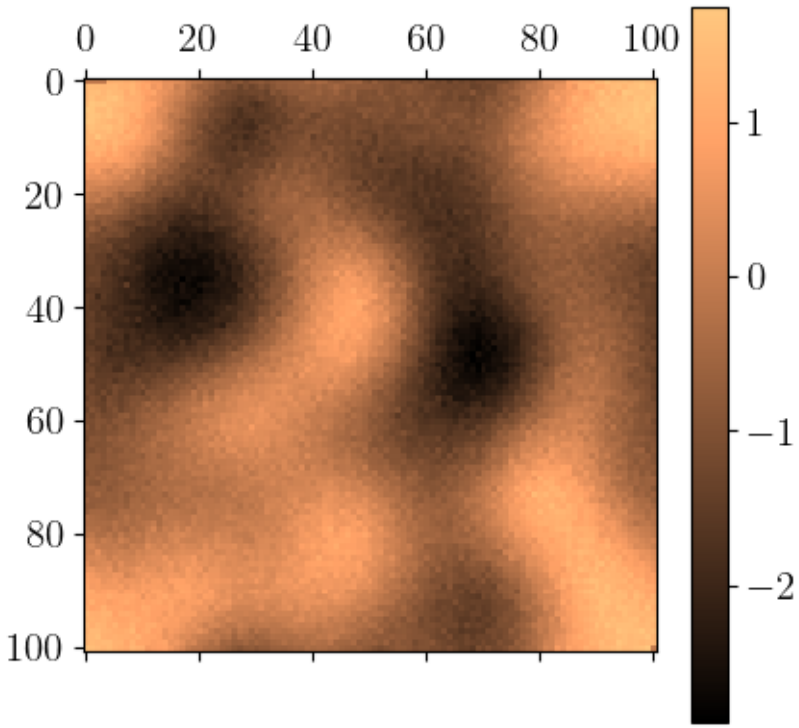



FIGURE – guess (outer iteration 1)

FIGURE – guess (outer iteration 2)

# Full resolution, no preconditionning : guess

With lanczos algorithm :

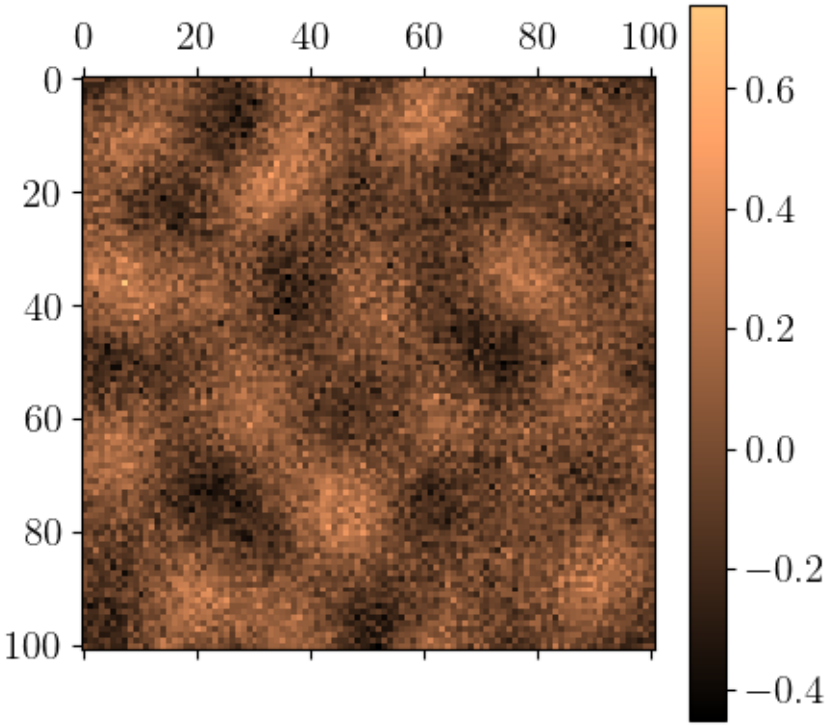



FIGURE – guess (outer iteration 3)

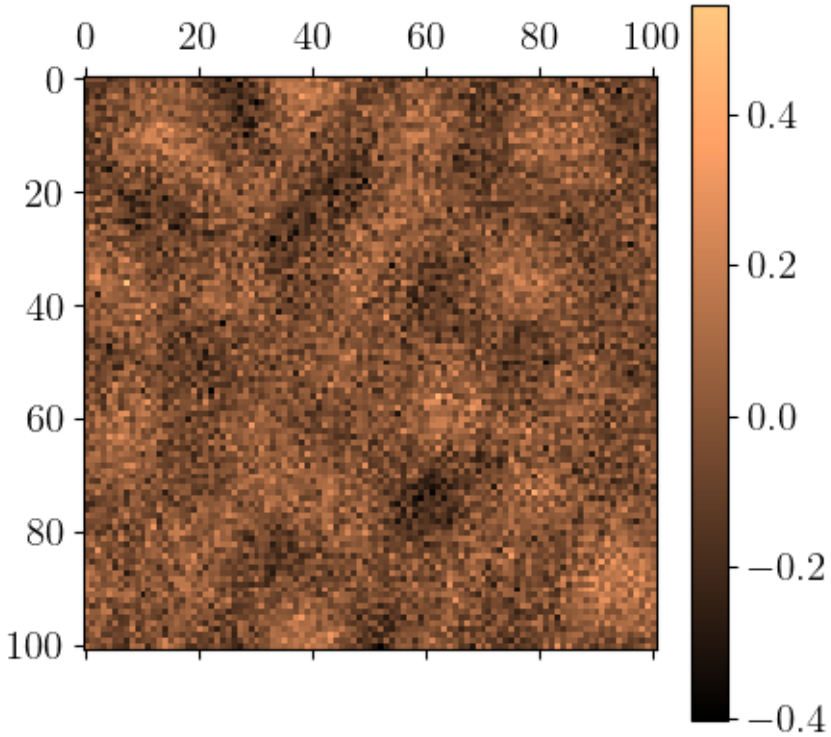



FIGURE – guess (outer iteration 4)

# Full resolution, no preconditionning : guess

With PlanczosIF algorithm :

images/pxg11.png

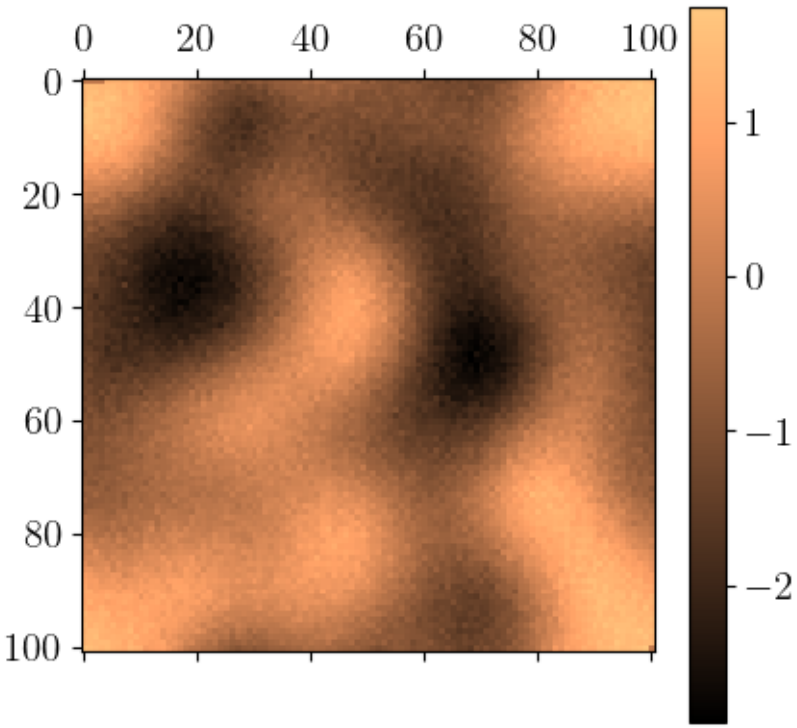



FIGURE – guess (outer iteration 1)

FIGURE – guess (outer iteration 2)

# Full resolution, no preconditionning : guess

With PlanczosIF algorithm :

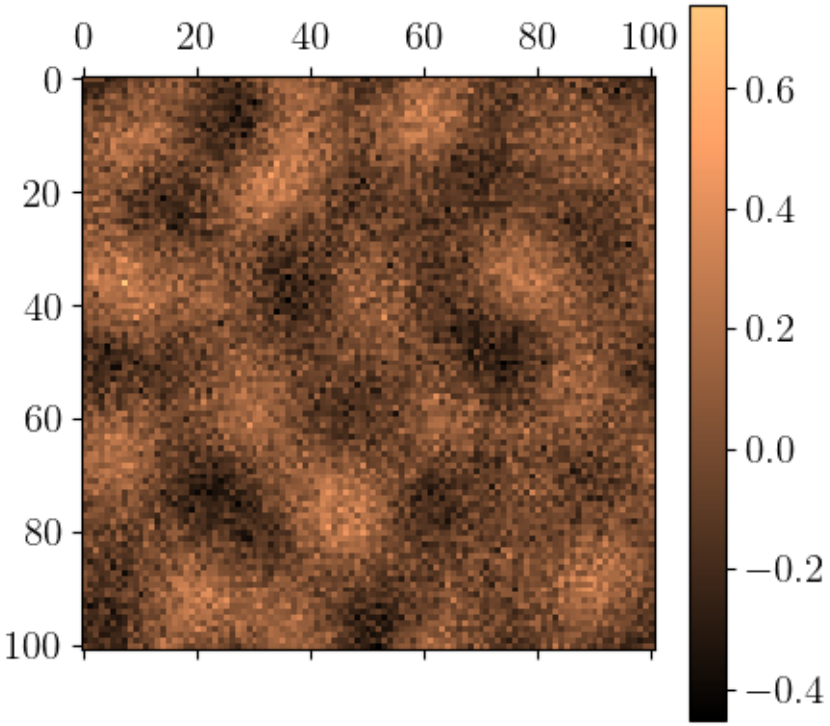



FIGURE – guess (outer iteration 3)

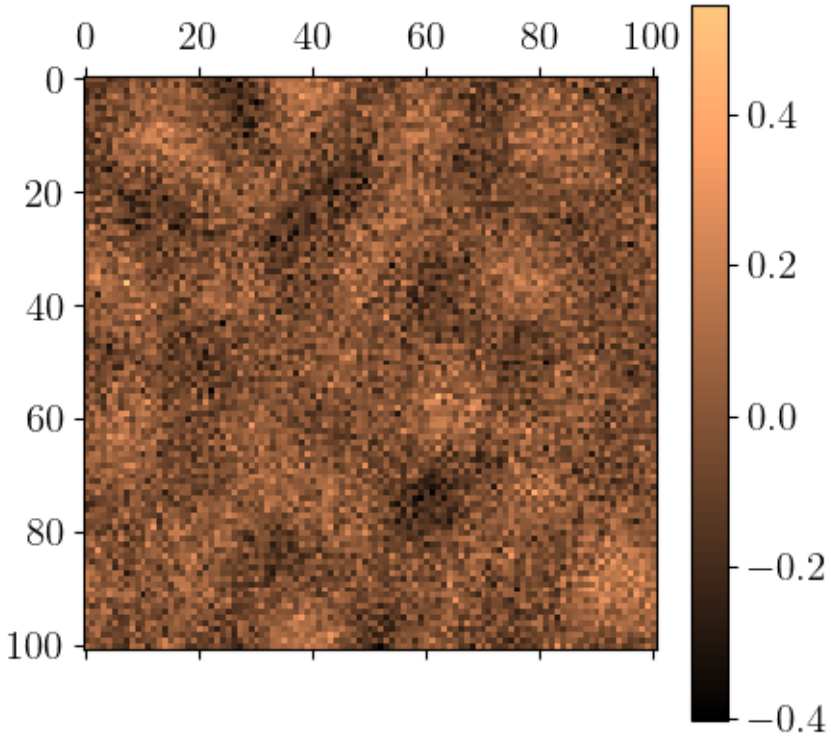



FIGURE – guess (outer iteration 4)

# Full resolution, no preconditionning : innovations

This example is obtained in model space but the results are “equal“ in control space :

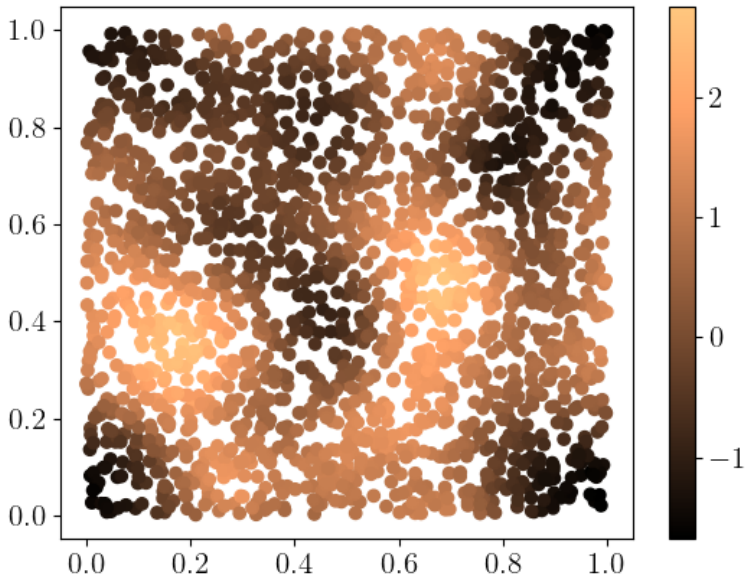



FIGURE – innovation (outer iteration 1)

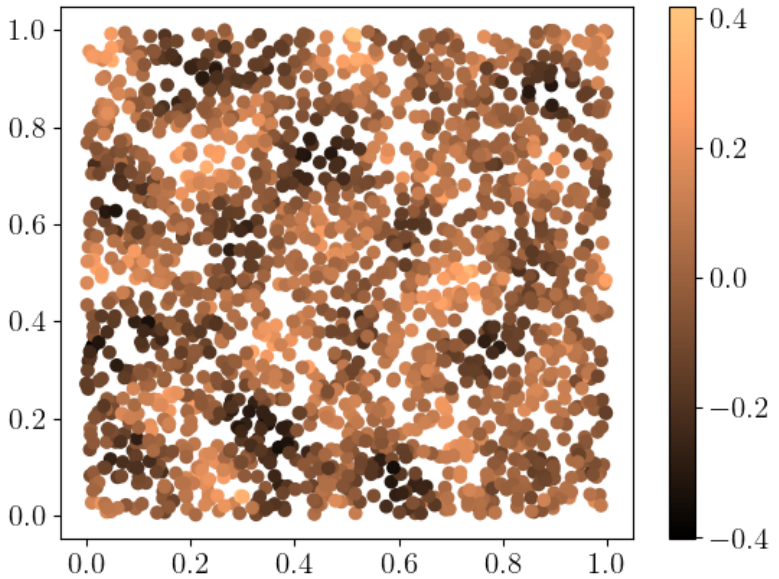



FIGURE – innovation (outer iteration 2)

# Full resolution, no preconditionning : innovations

This example is obtained in model space but the results are “equal“ in control space :

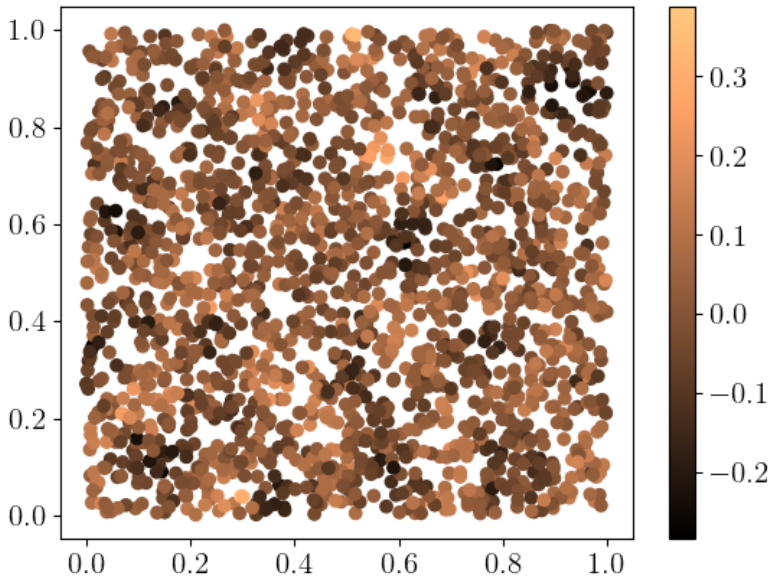



FIGURE – innovation (outer iteration 3)

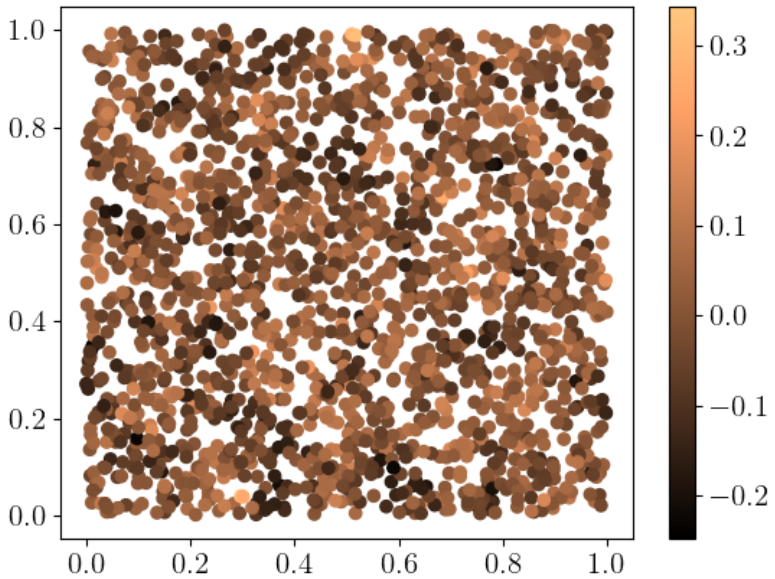
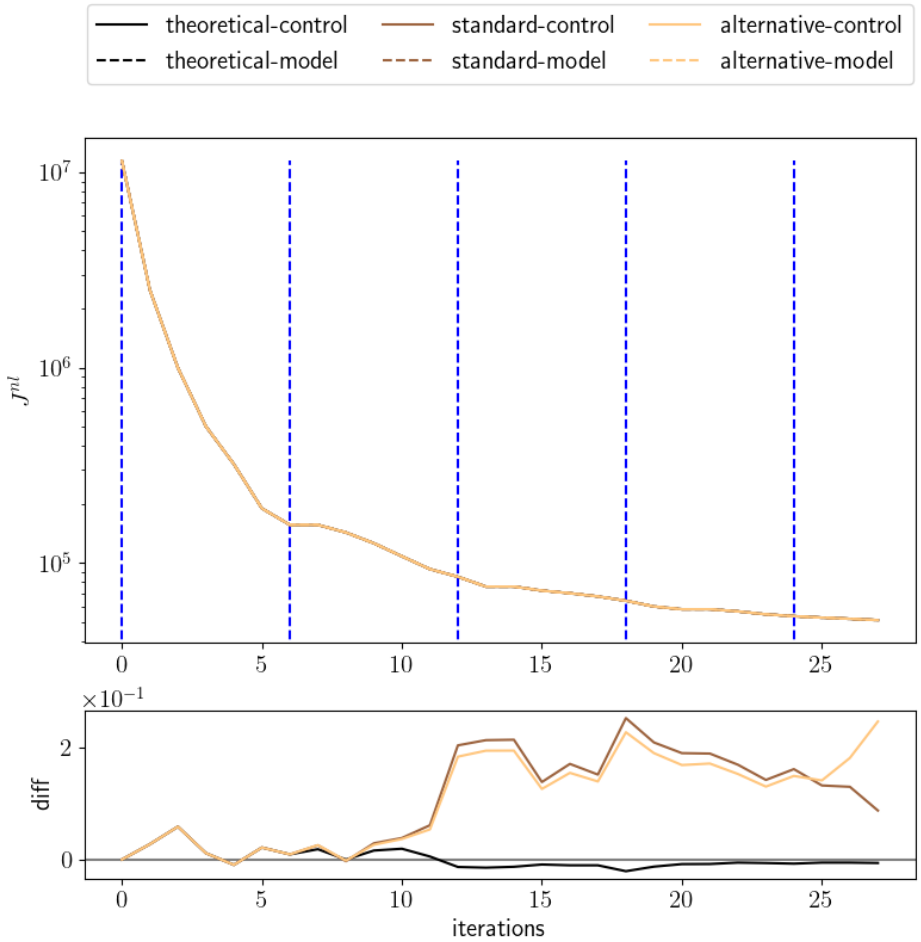



FIGURE – innovation (outer iteration 4)

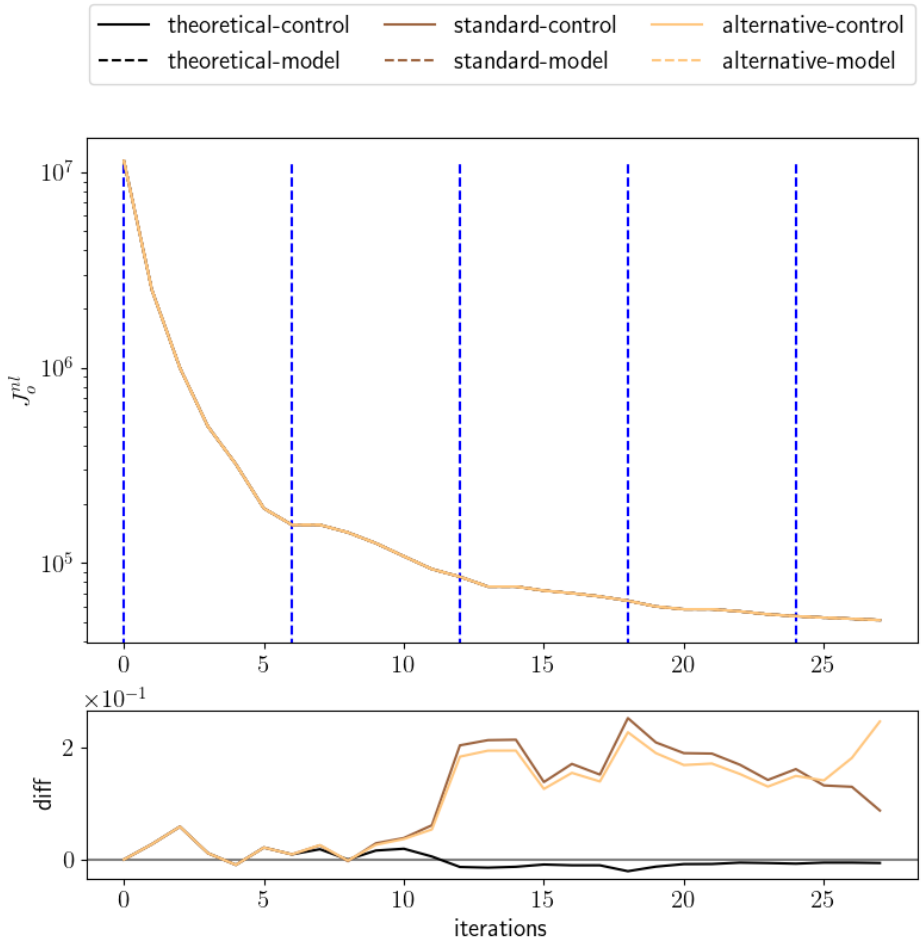
# Full resolution, no preconditionning :

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$



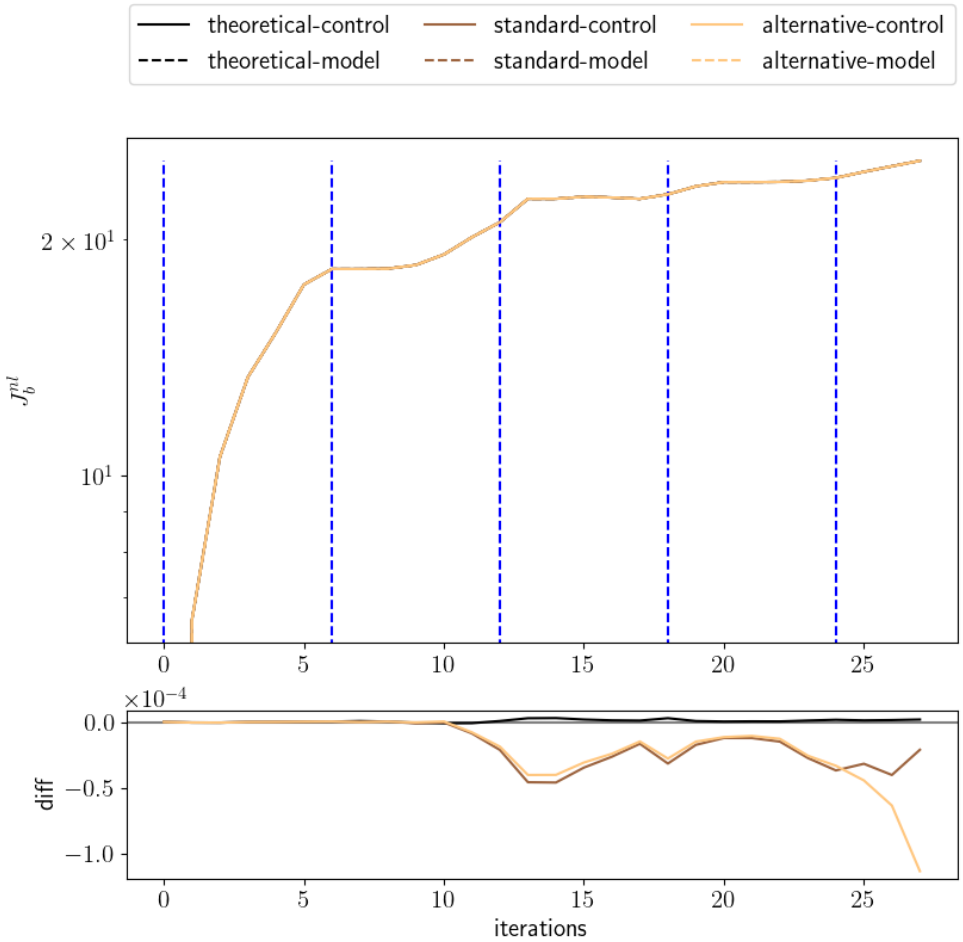
# Full resolution, no preconditionning :

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$



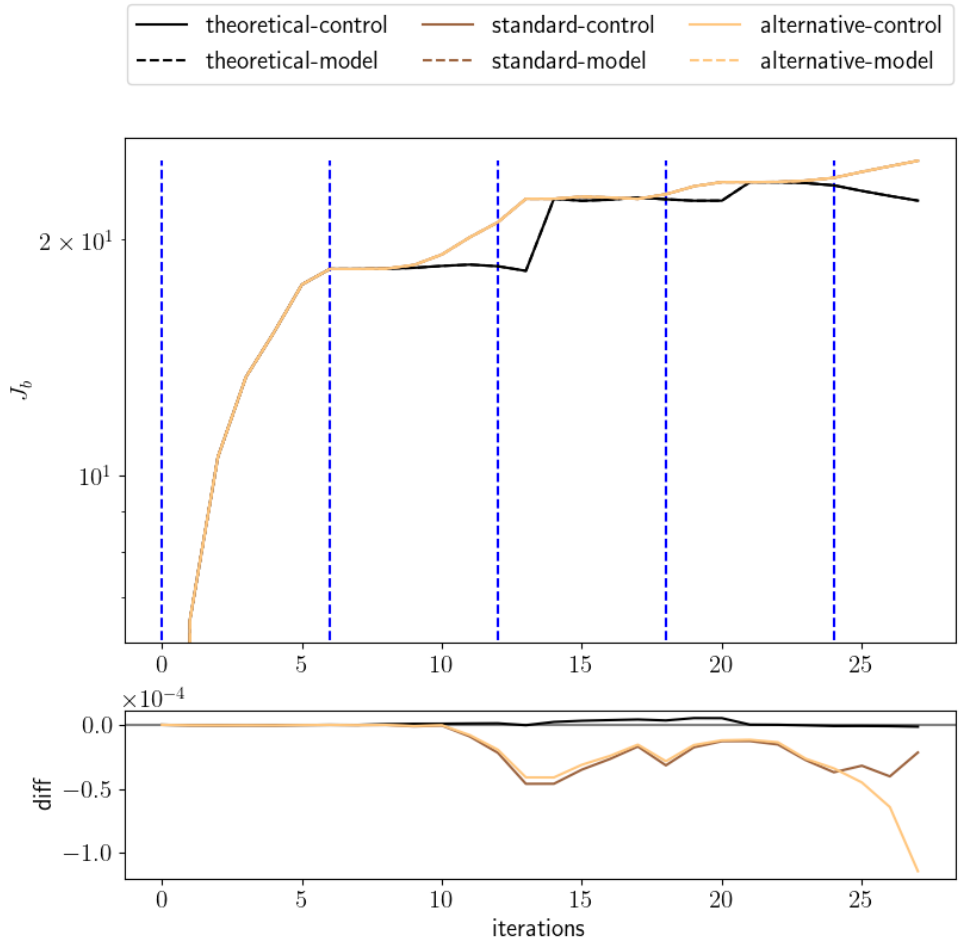
# Full resolution, no preconditionning :

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$



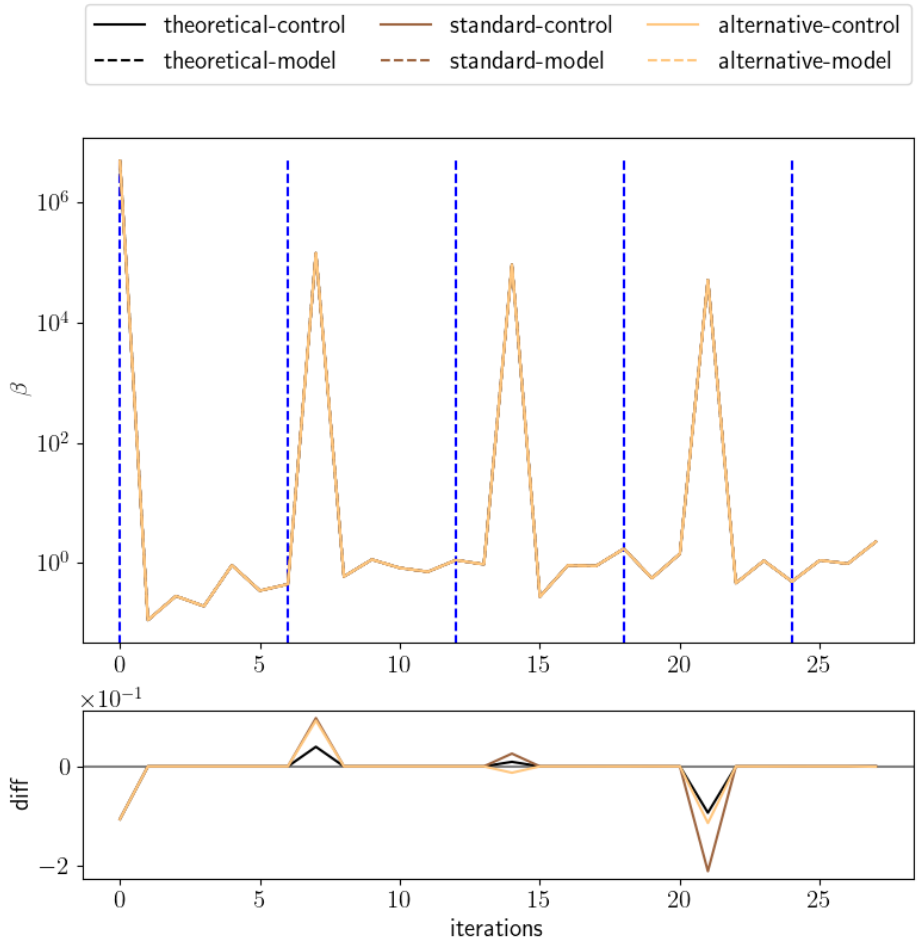
# Full resolution, no preconditionning :

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$



# Full resolution, no preconditionning :

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$



# Full resolution, no preconditionning :

$\sigma^o$ :0.01, $nx \times ny = 101 \times 101$, $sigmabvar = 0.1$, $n_{obs} = 2000$, $L_b = 0.1$