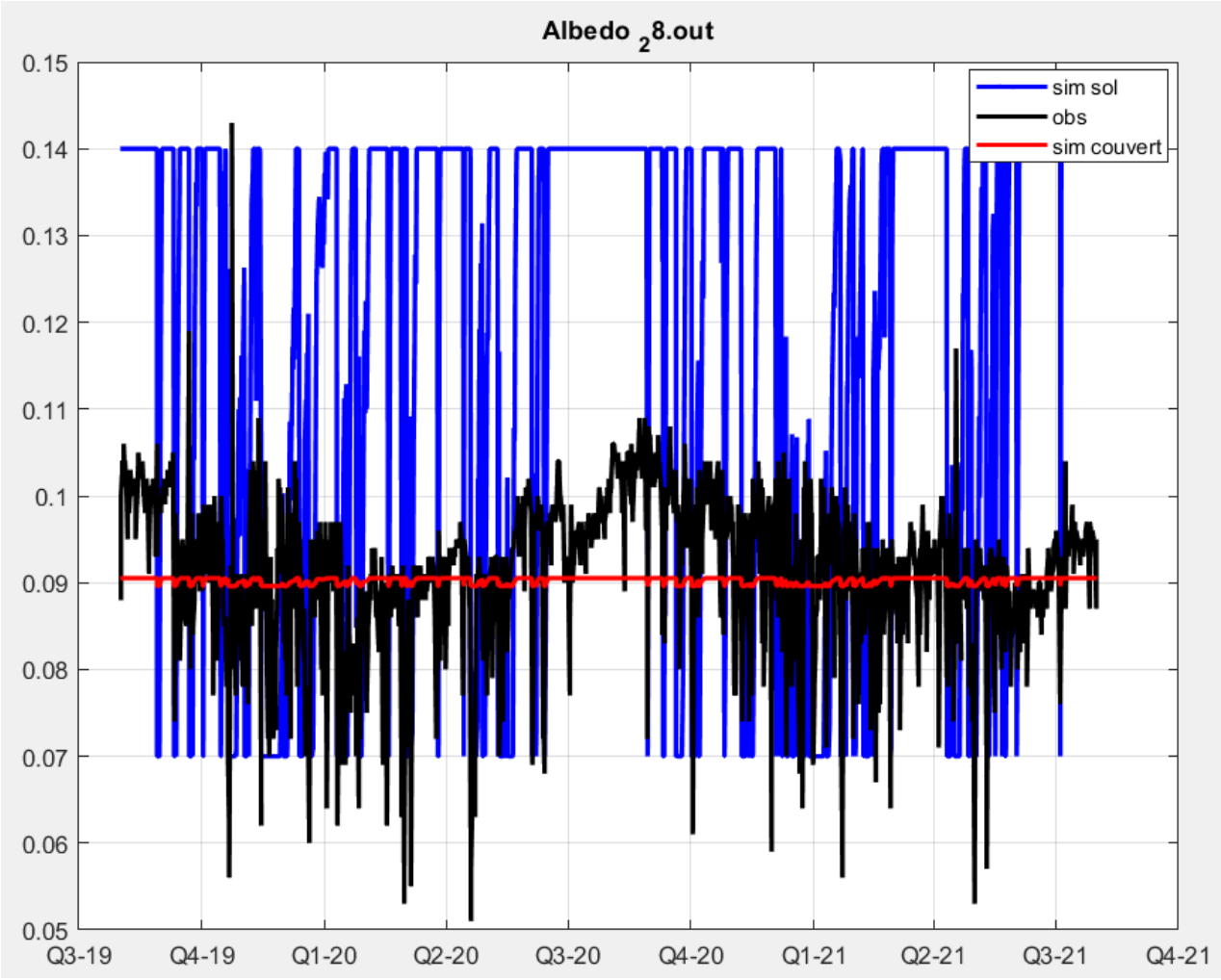
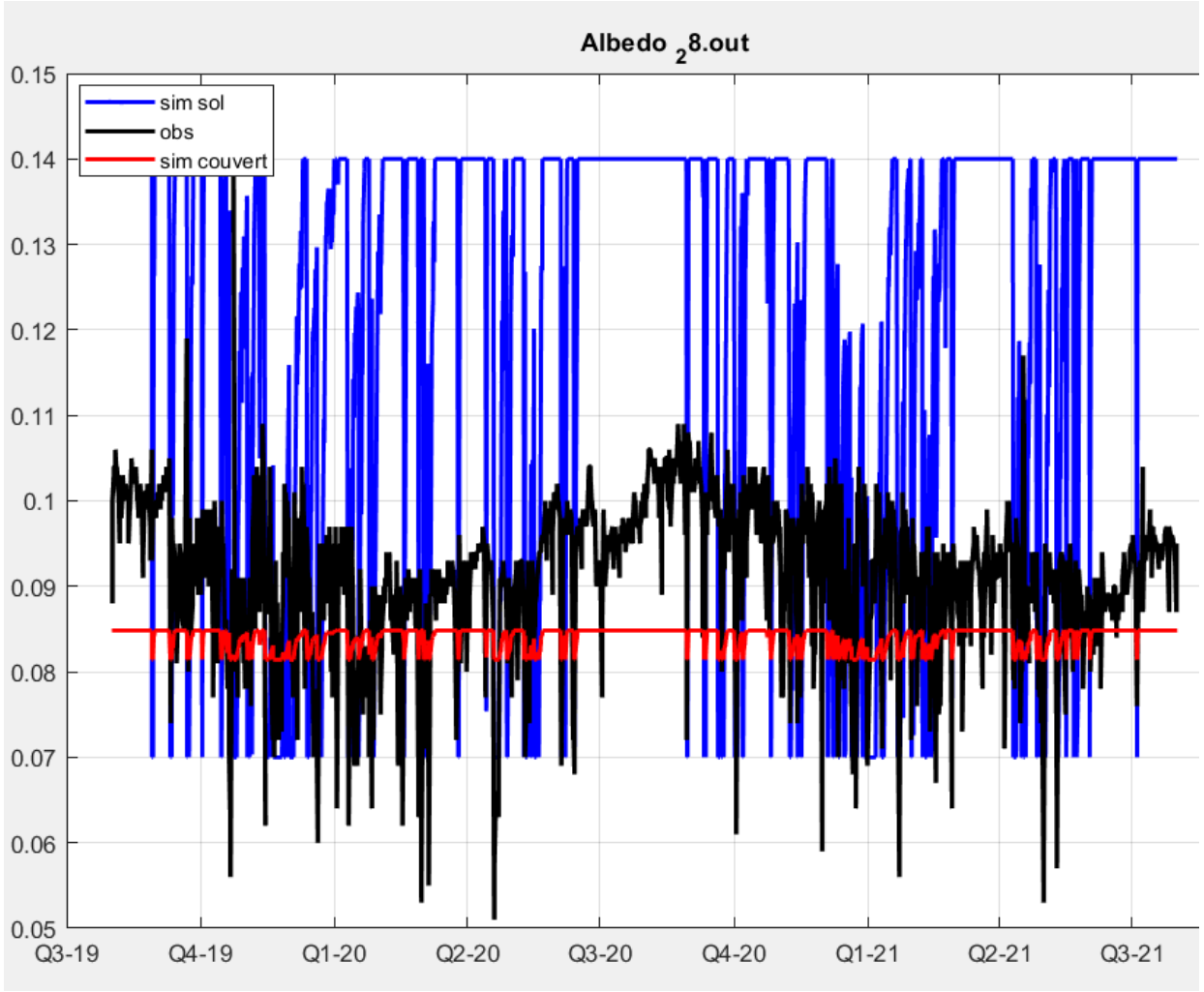
Albedo



- Coeff attenuation 0,72 (p3 ref)



- Coeff attenuation 0,5 (p4)
- Amplitudes plus grandes d'albedo simulé

P3 ref ksat 10-7

```
plcum=    1305.999999994402
evtcum=    966.51570310817817
etrcum=    503.97876702185556
evscum=    392.66341786580841
ruissurf=    296.7826154772802
percol=    281.31802573265298
variation de stock=    -249.7021989064
stock=    1282.8149510935323
interpcum=    69.873518220418276
bilanmas=    11.085854587792539
ijour=          731
t=    63158388.439413697
Calcul termine
```

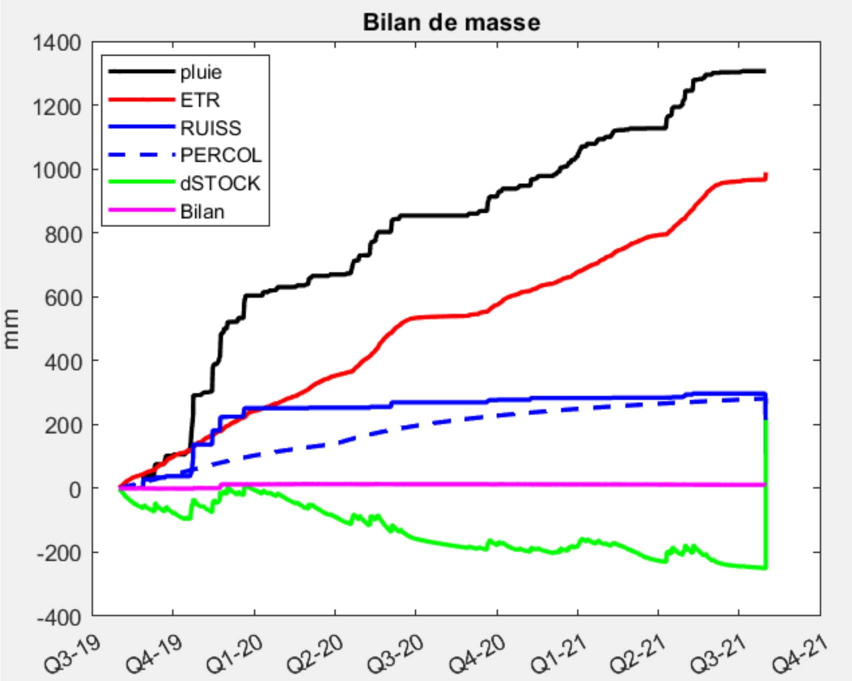
ETR vege
Evap sol

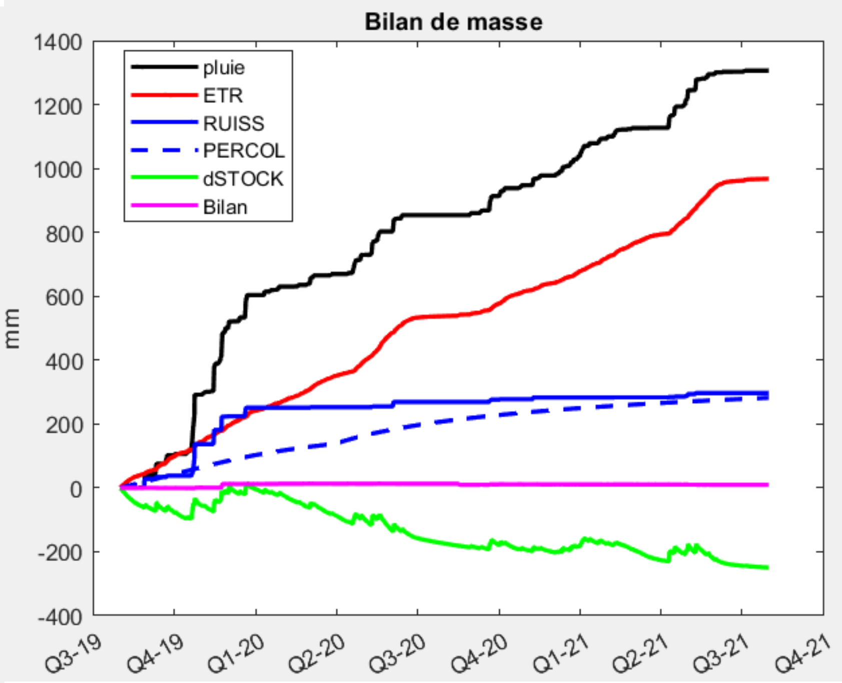
P4 change alb coeff

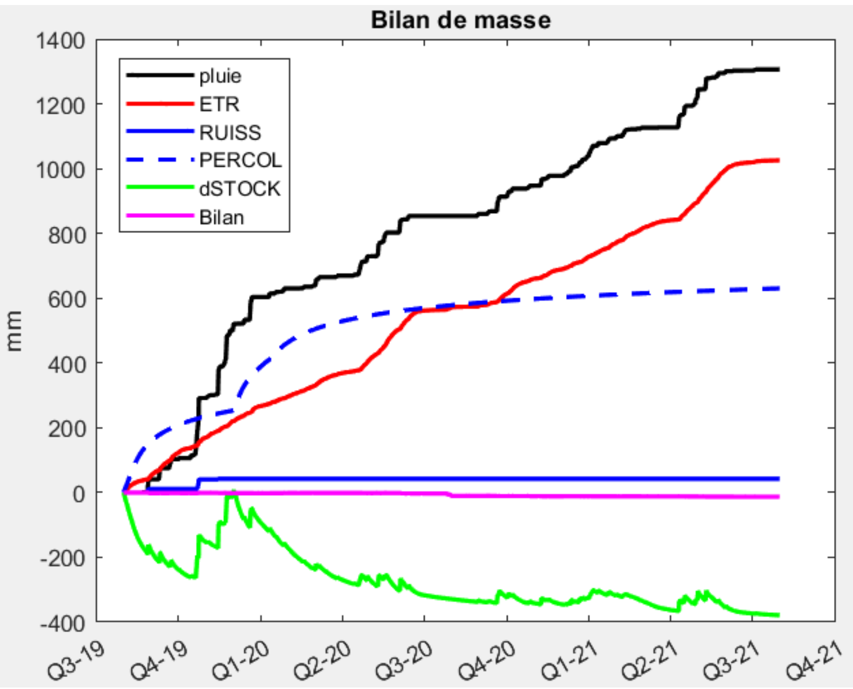
```
plcum=    1305.9999999980321
evtcum=    967.41043760919501
etrcum=    496.88237360020685
evscum=    407.62574888288611
ruissurf=    296.7511413192310
percol=    282.04684848305305
variation de stock=    -249.749310
stock=    1282.7678398767166
interpcum=    62.902315126038872
bilanmas=    9.5408827098324309
ijour=          732
t=    63158400.000000000
Calcul termine
```

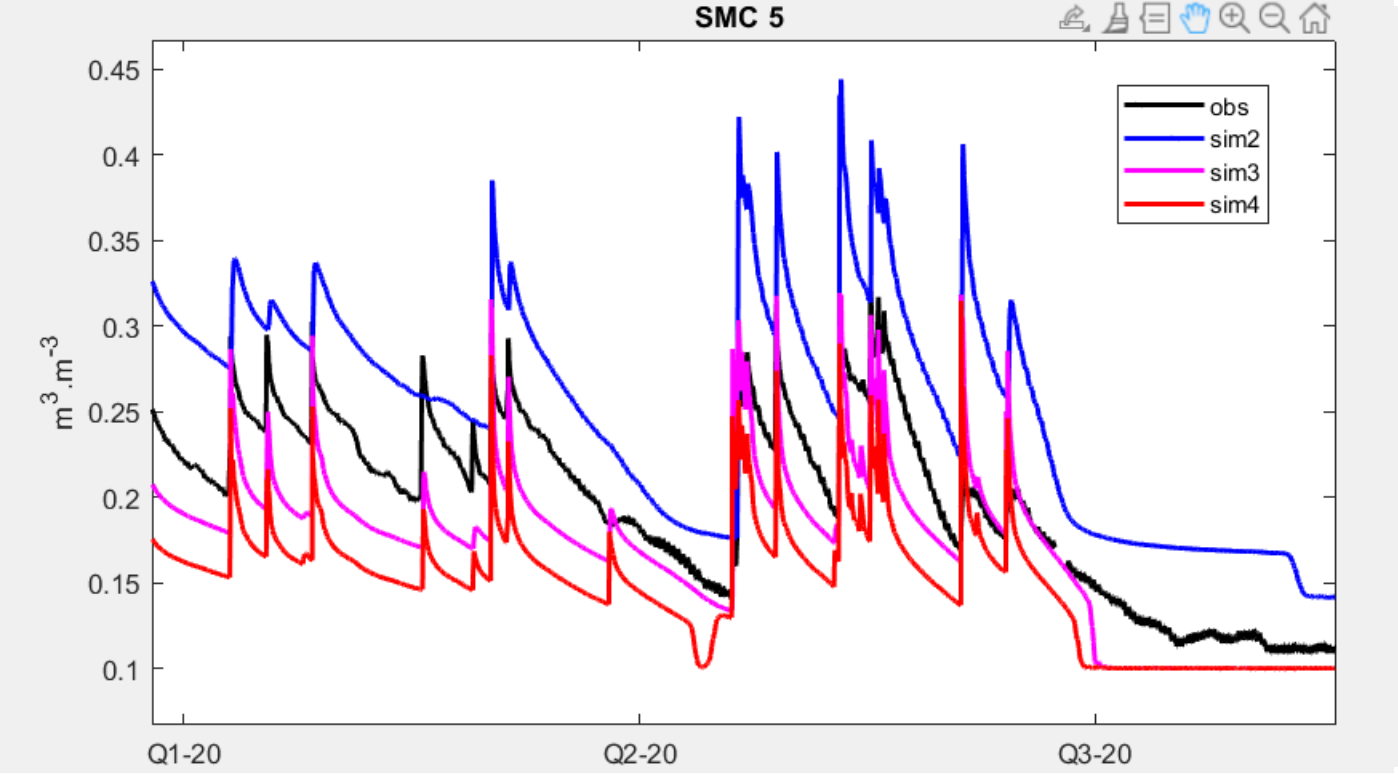
P5 ksat *10

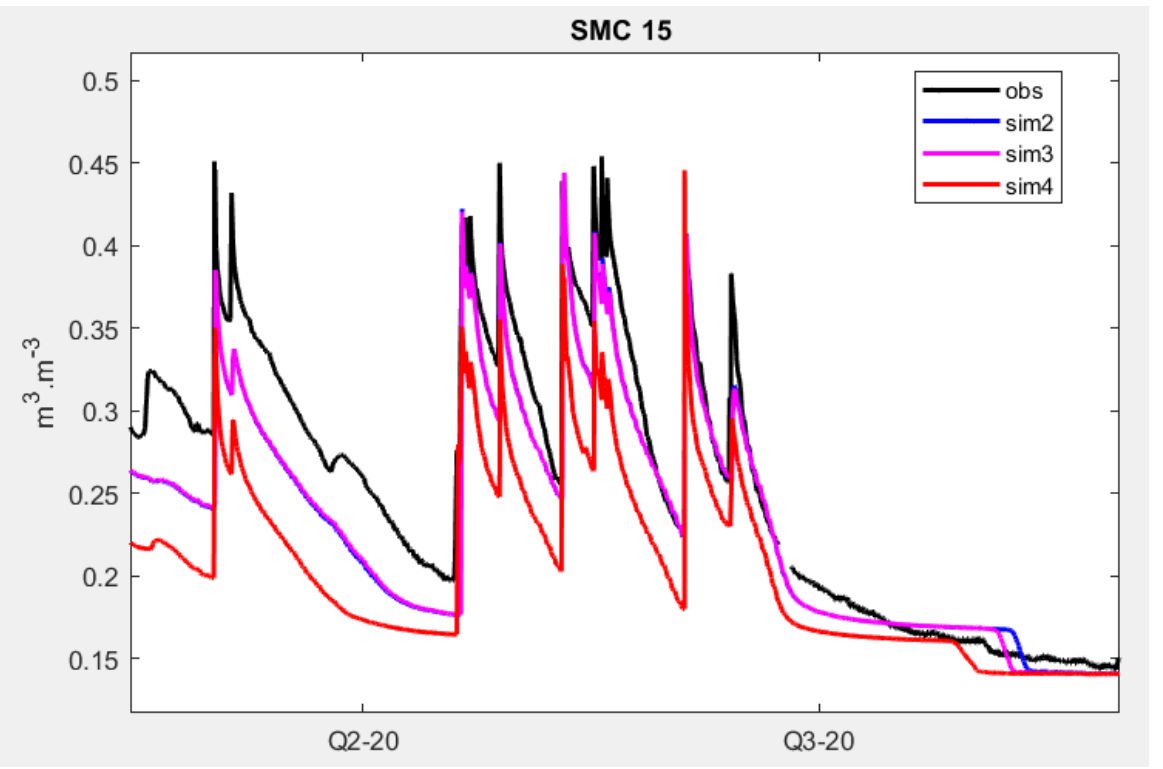
```
plcum=    1305.999999986524
evtcum=    1025.613460055942
etrcum=    564.81758620103767
evscum=    390.98162434123816
ruissurf=    42.27640328246982
percol=    630.1797466247292
variation de stock=    -379.078082
stock=    1153.439067183867
interpcum=    69.81424951369187
bilanmas=    -12.99152714836054
ijour=          732
t=    63158400.000000000
Calcul termine
```





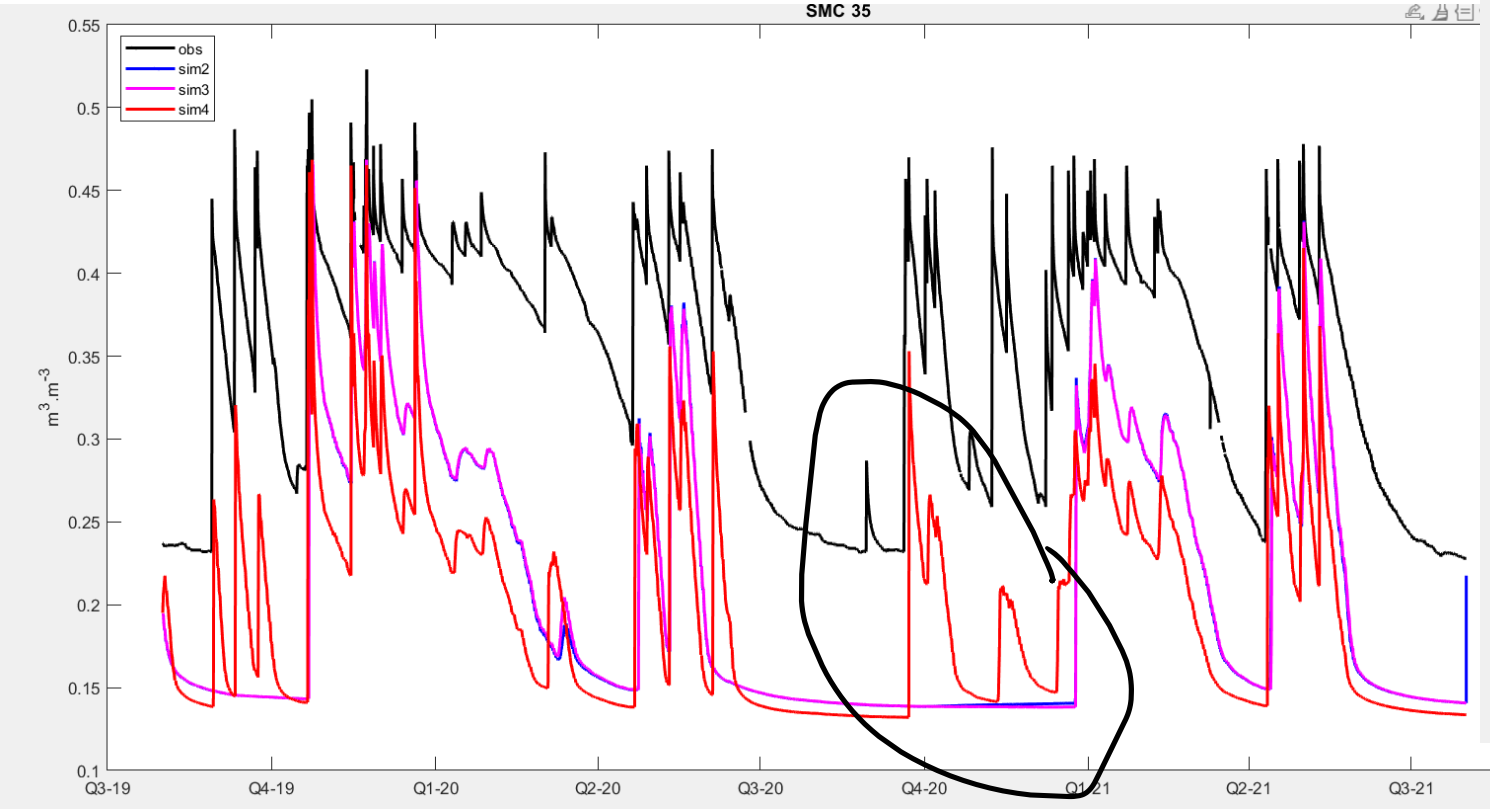


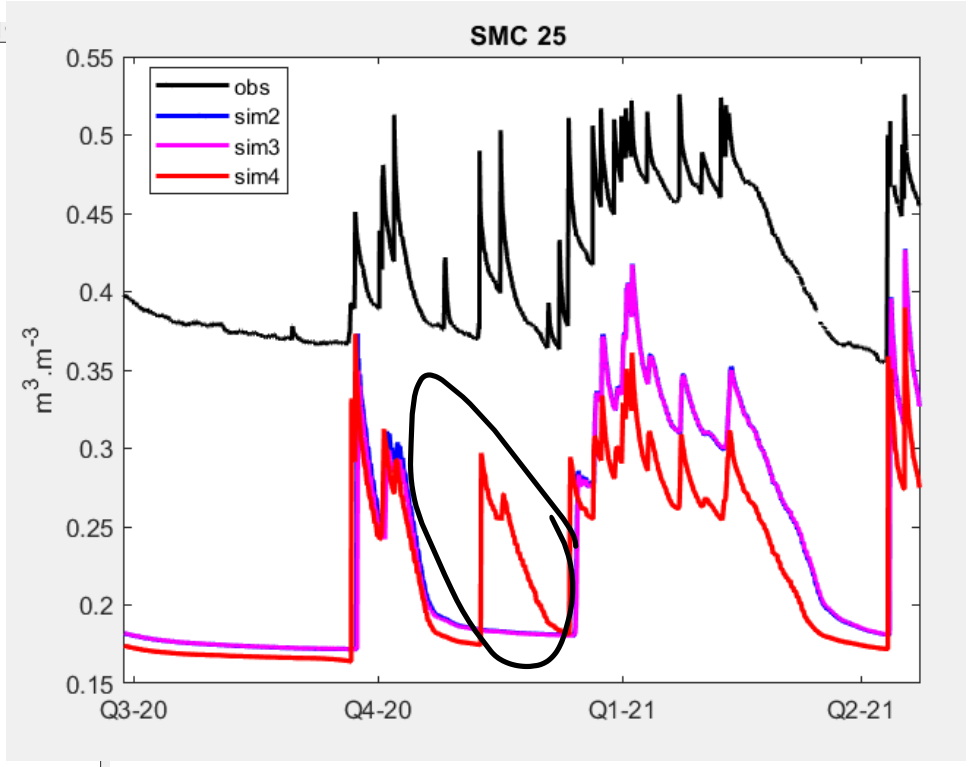




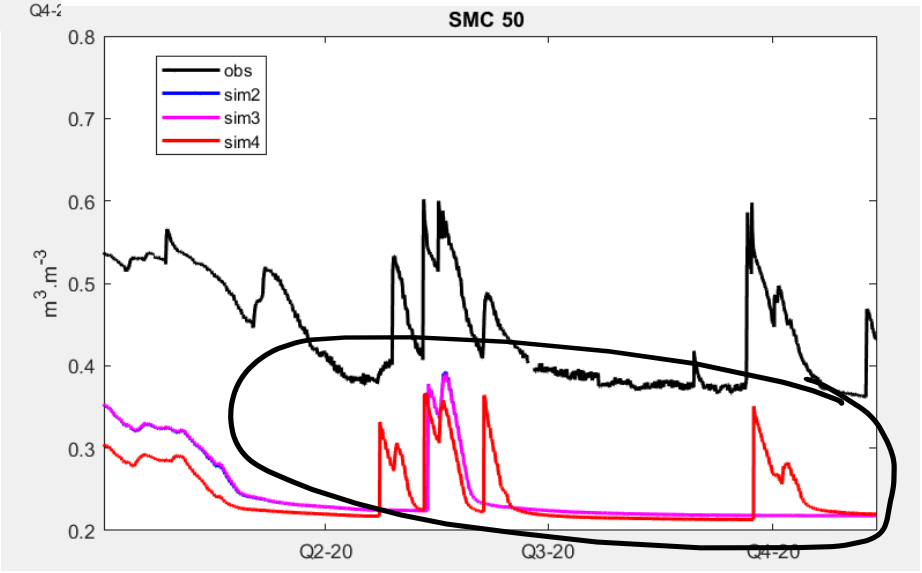
- Change in attenuation coef gamma (energy Swin repartition between vegetation and ground) impacts soil humidity.
- if more energy reaches the groud (sim3) less water in the top part of the soil
- Higher Ksat: lower humidity but faster response (easier circulation)

Below, no difference between 2 and 3, only affects the surface
Ksat larger-> faster circulation

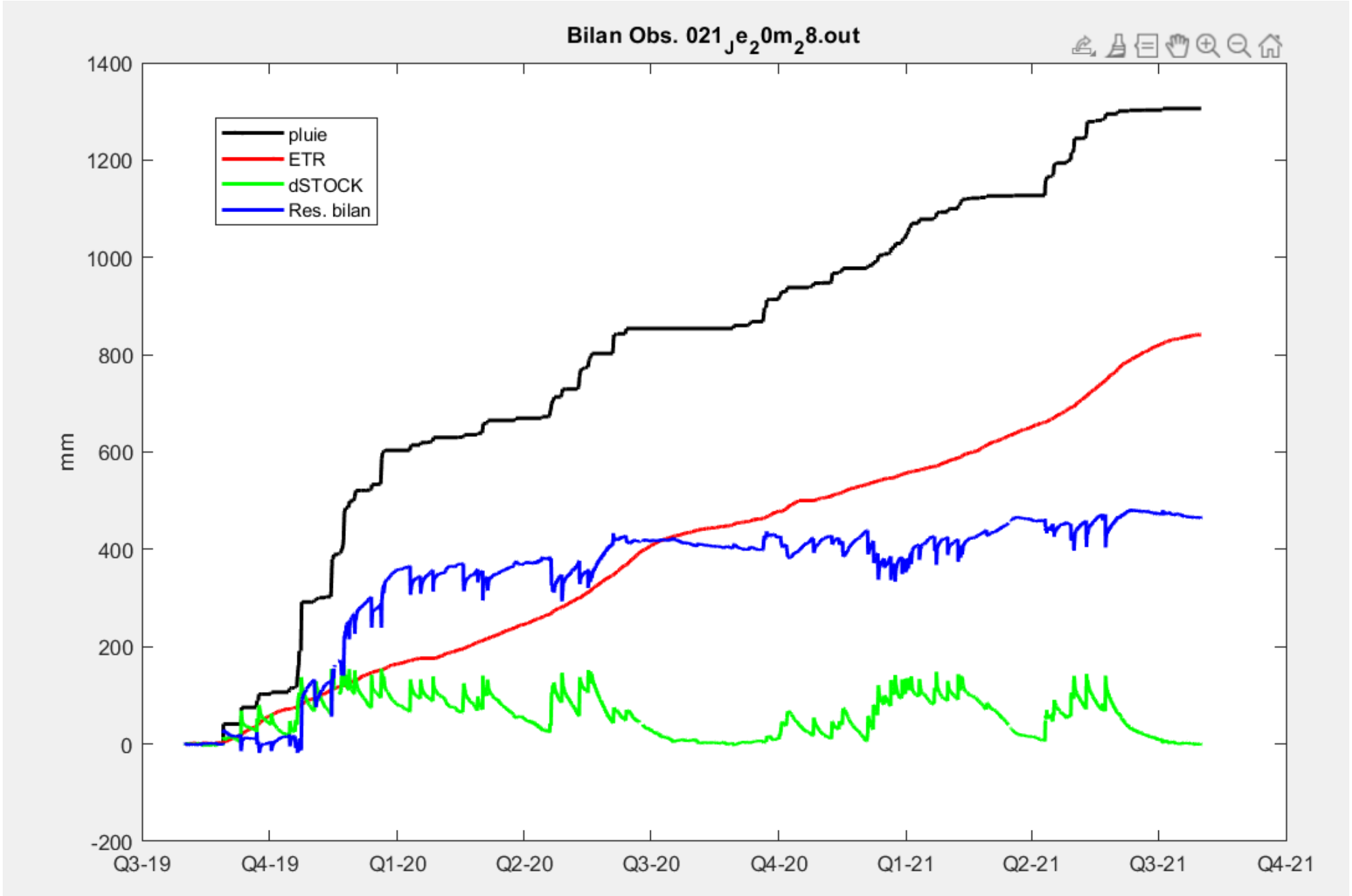




Augmentation de la conductivité permet à l'eau de circuler plus profond et au modèle de simuler les pics de teneur en eau



Bilan des obs (! Rescaling à faire pour les stocks obs avec les cailloux!)

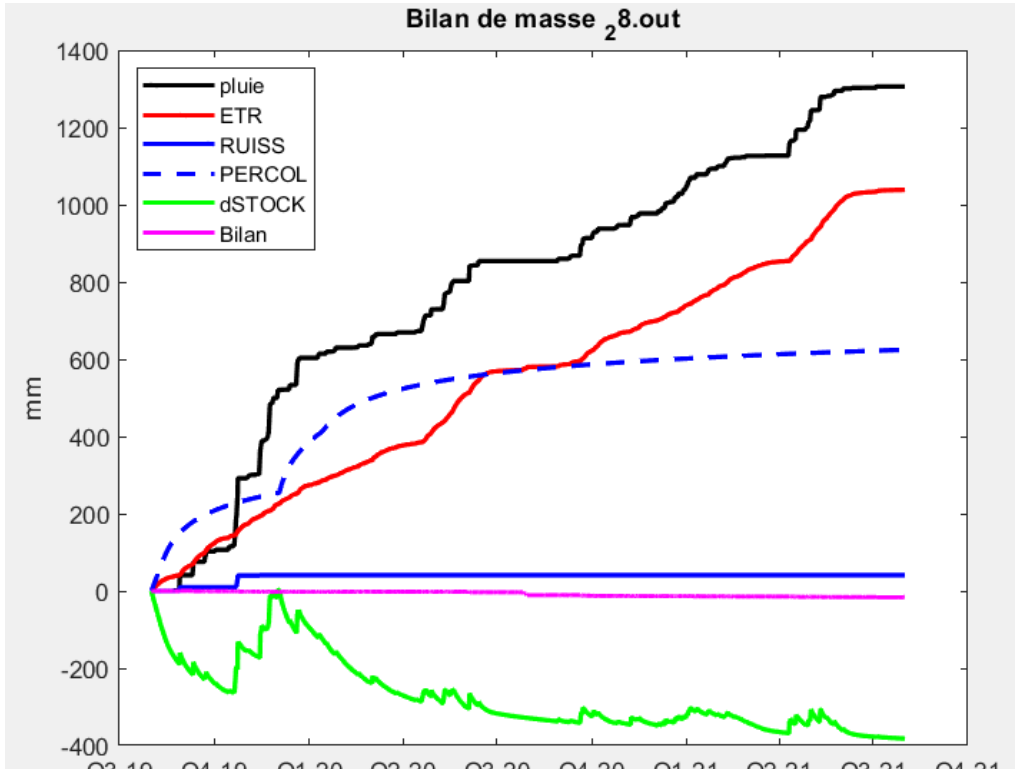


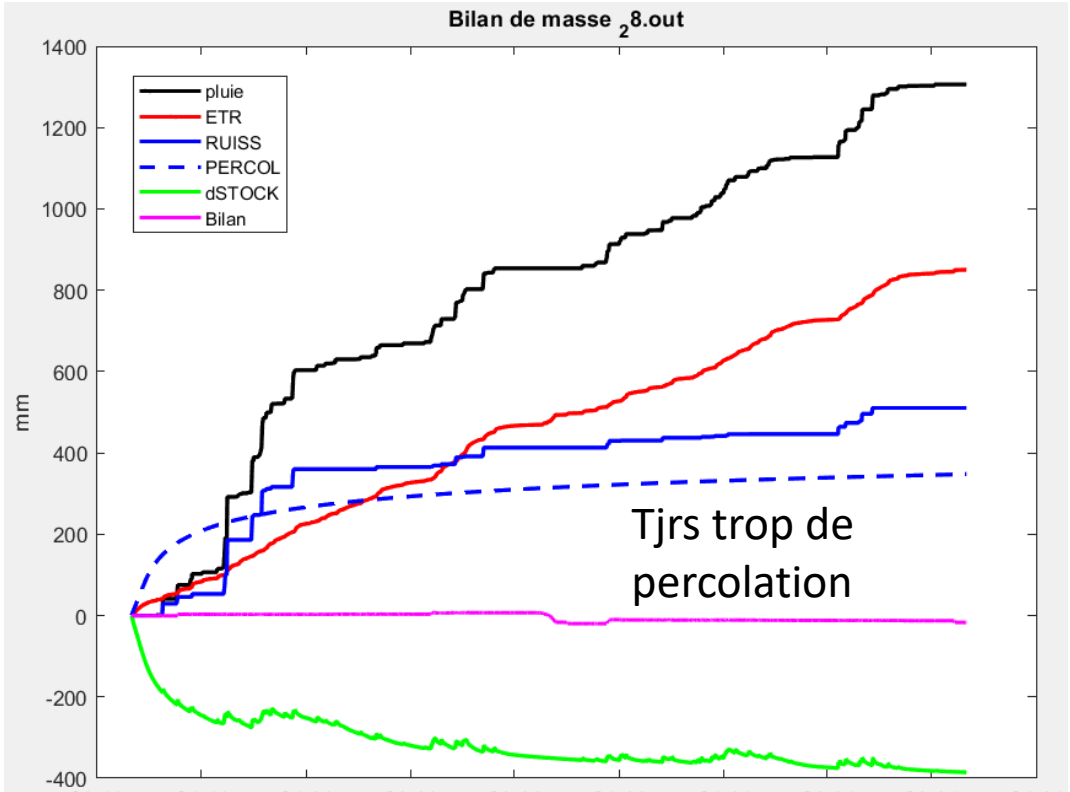
P5 référence avec ksat à environ 10-6 m/s sur tout le profil

```
plcum=          1305.9999999987119
evtcum=         1038.5200262296642
etrcum=         536.70334111080592
evscum=         432.22080050249923
ruissurf=       41.082165771684231
percol=         624.52689397509664
variation de stock=     -382.2886
stock=          1150.2284670086910
interpcum=      69.595884616624l4
bilanmas=       -15.840402986428103
ijour=                  732
t=          63158400.000000000
```

```
plcum=          1305.9999999985439
evtcum=         850.23932954716804
etrcum=         316.01955882468127
evscum=         464.48523886393565
ruissurf=       510.56117981956396
percol=         347.62289293203702
variation de stock=     -385.647762
stock=          1146.8693877353362
interpcum=      69.734531858570136
bilanmas=       -16.775640035565289
ijour=                  731
t=          63158387.217810363
```

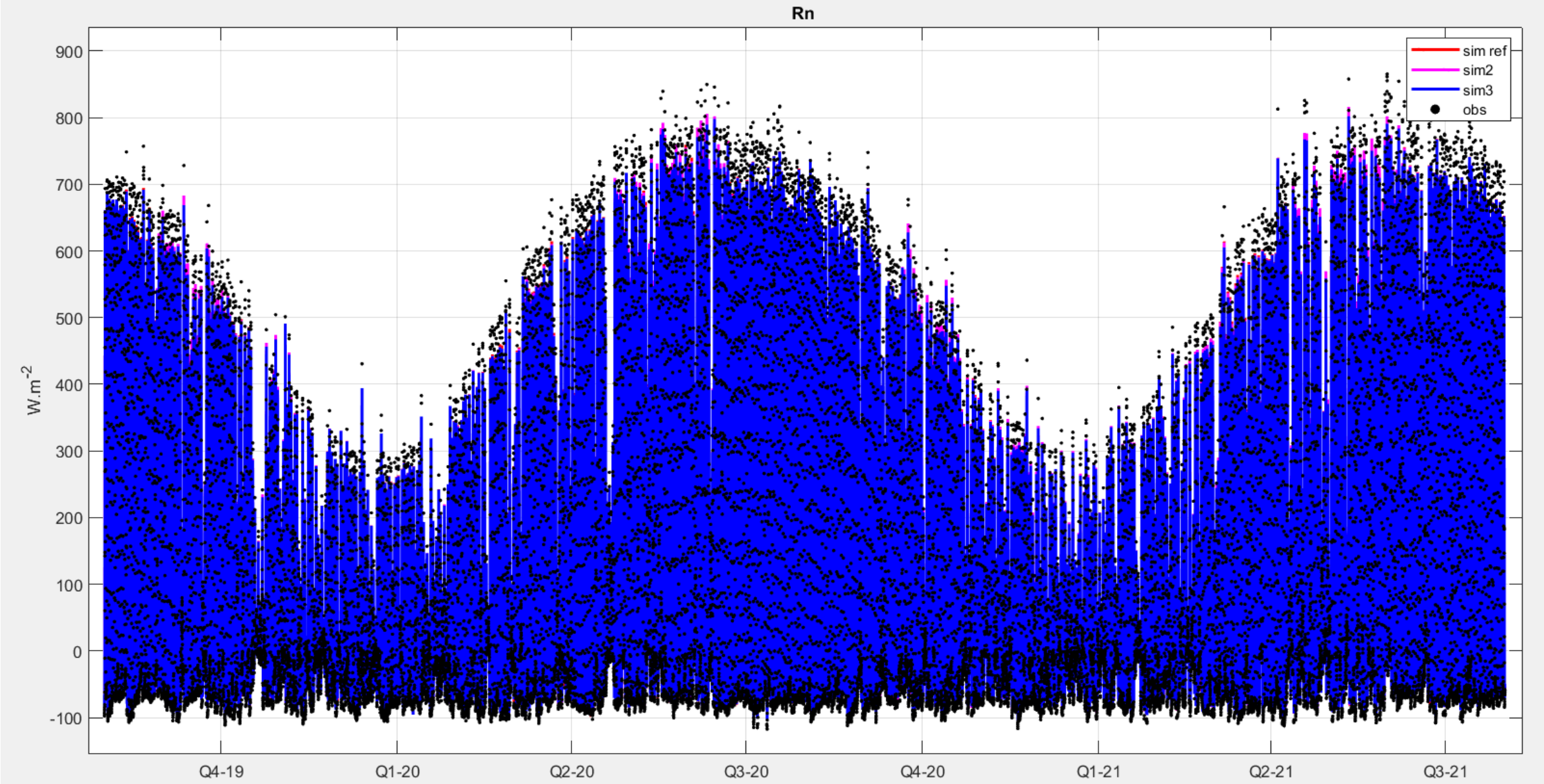
P7 ksat environ 10-6 mais 1ere couche de sol avec un ksat + faible
pour créer un refus d'infiltration donc du ruissellement et tenter de limiter la percolation et la perte de stock



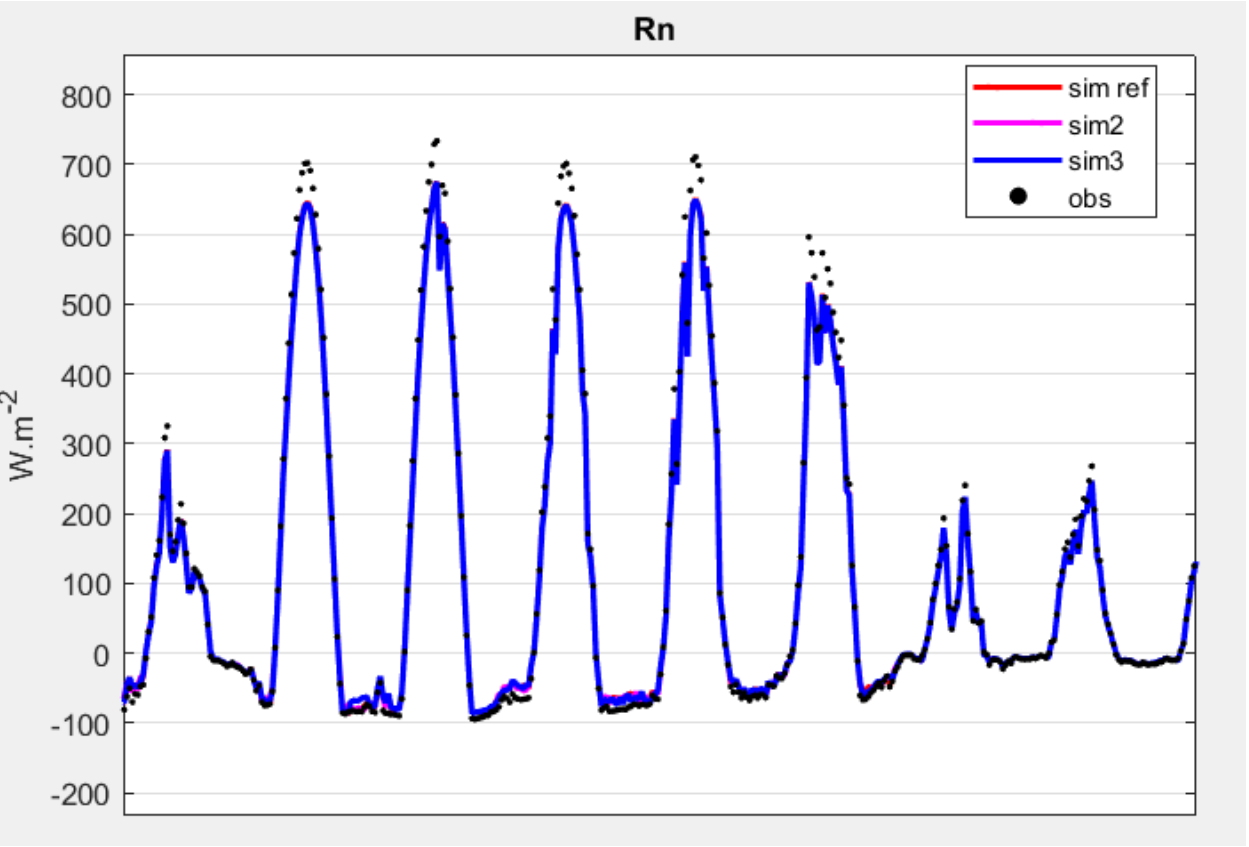


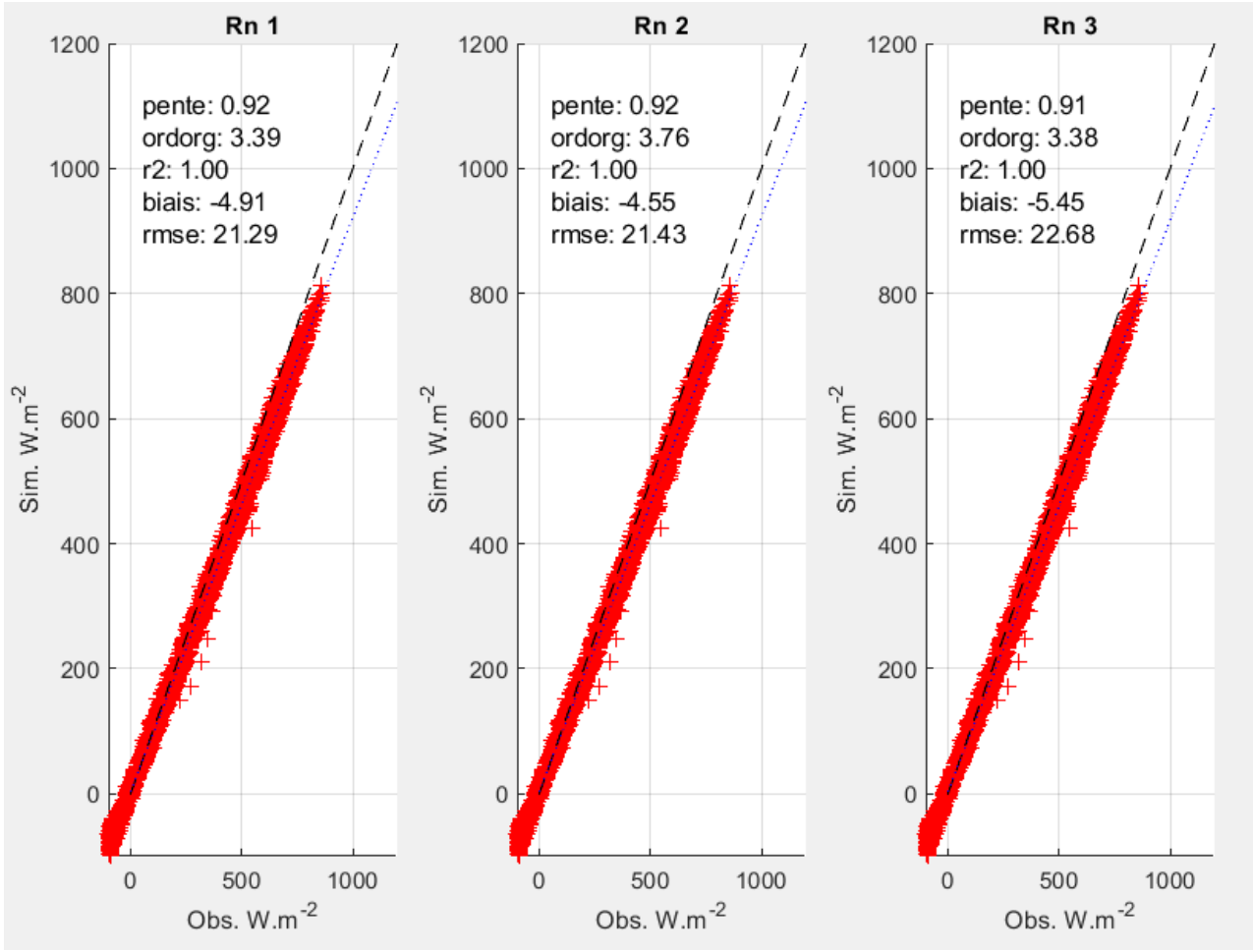
FLUX
simulation de référence p3: (ksat de puechabon)
p5: ksat * 10 (10-6 m/s)
p7: ksat * 10 et horizon à la surface avec ksat permettant un refus à l’infiltration

Rayonnement net

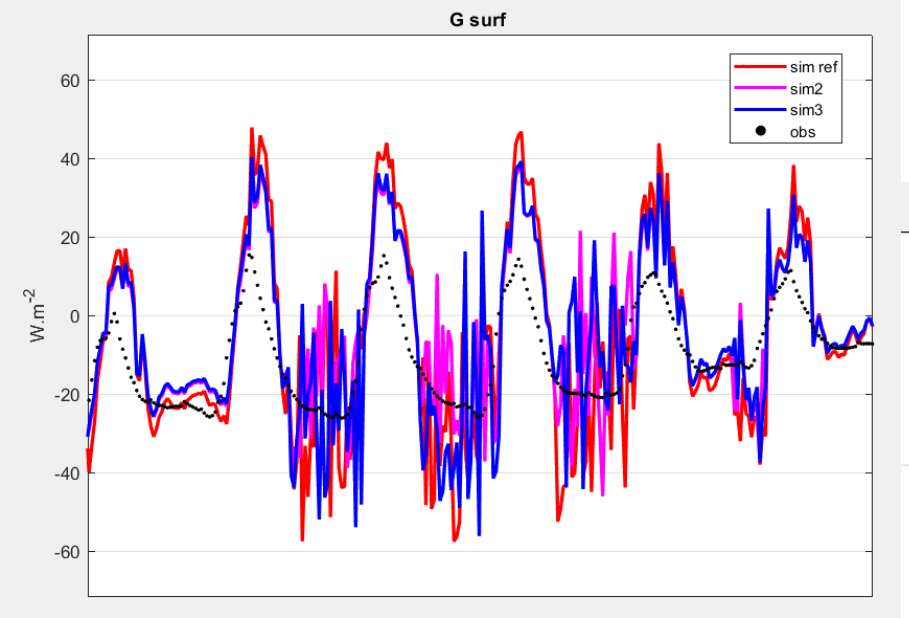


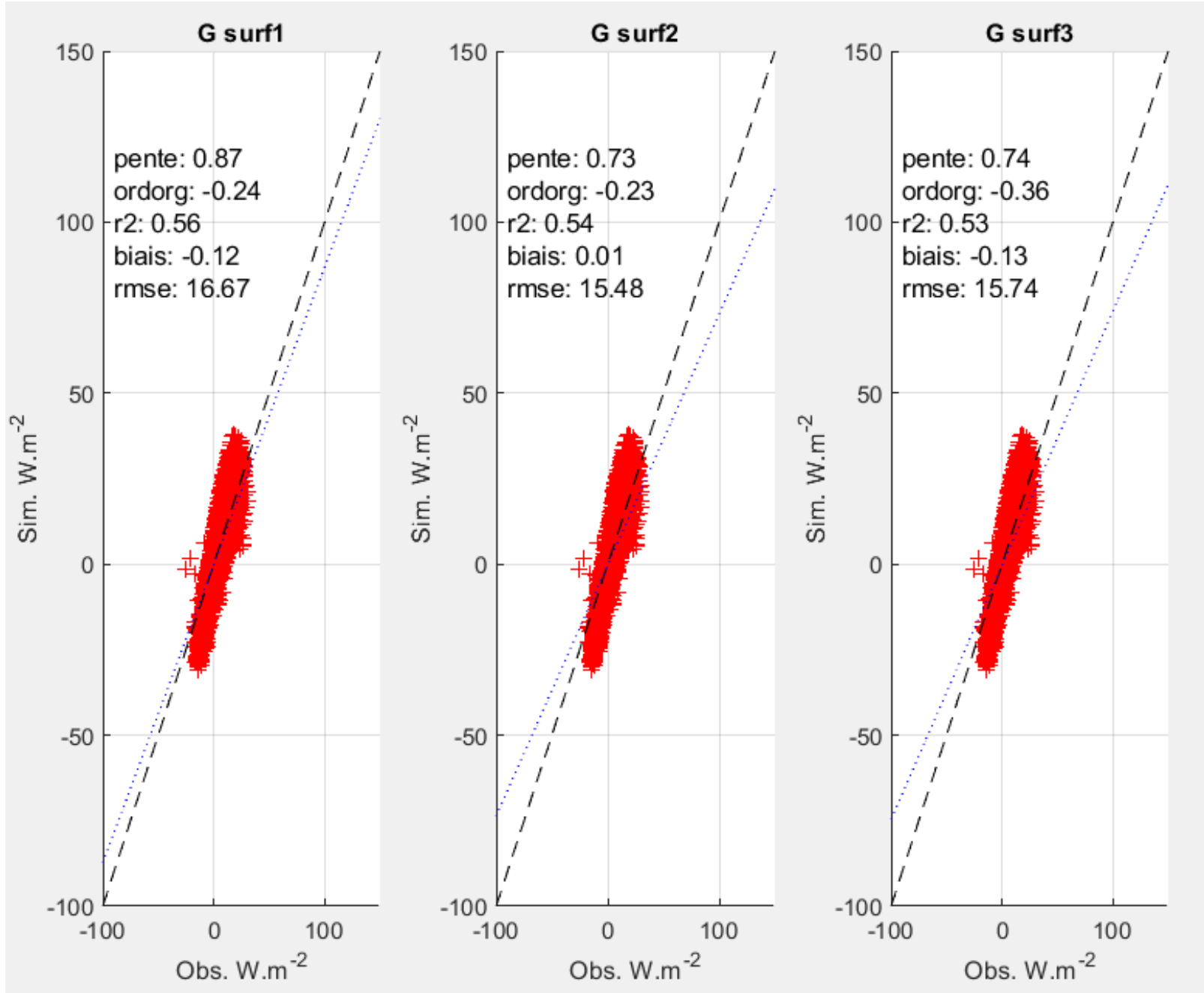
Zoom juin 2020

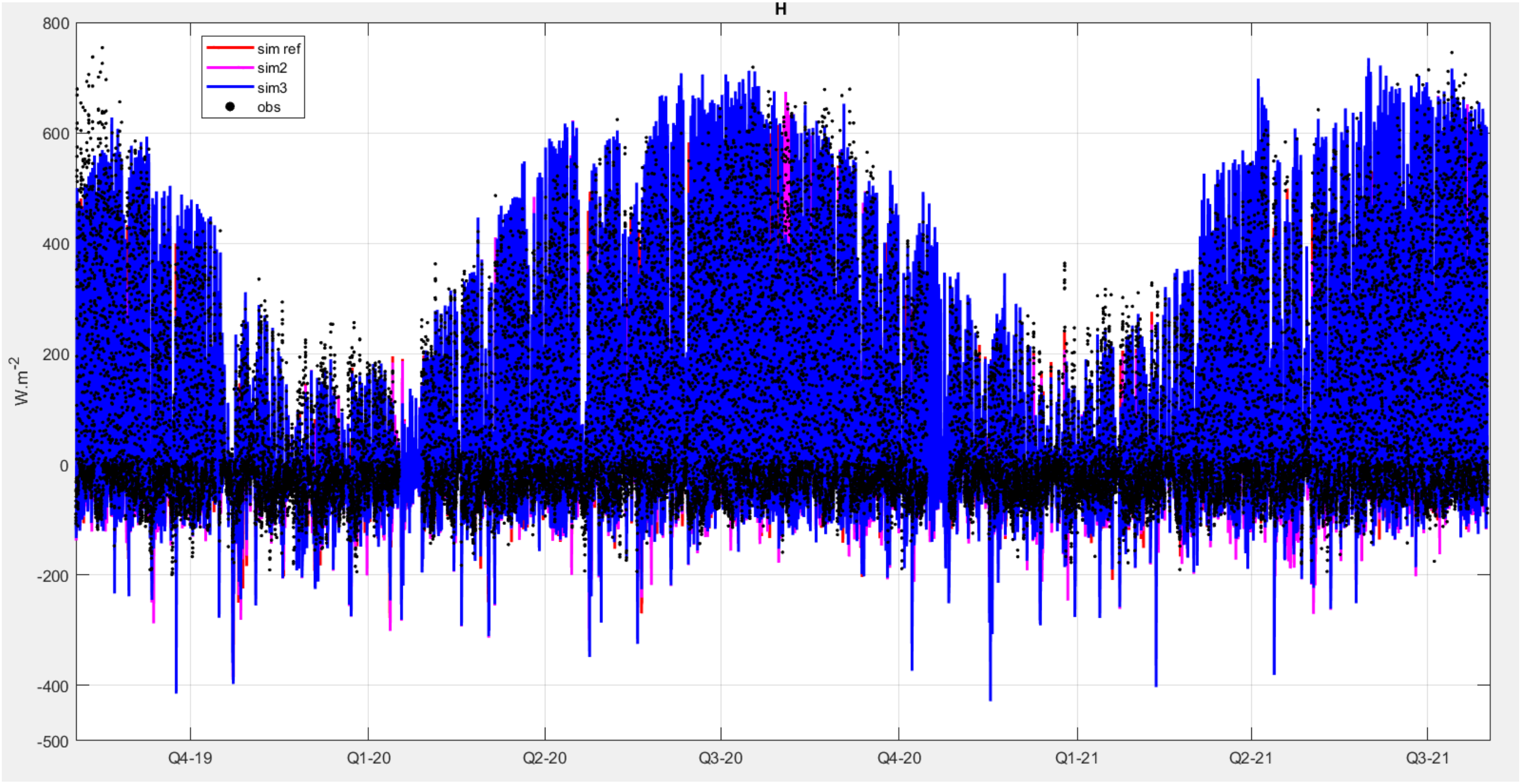


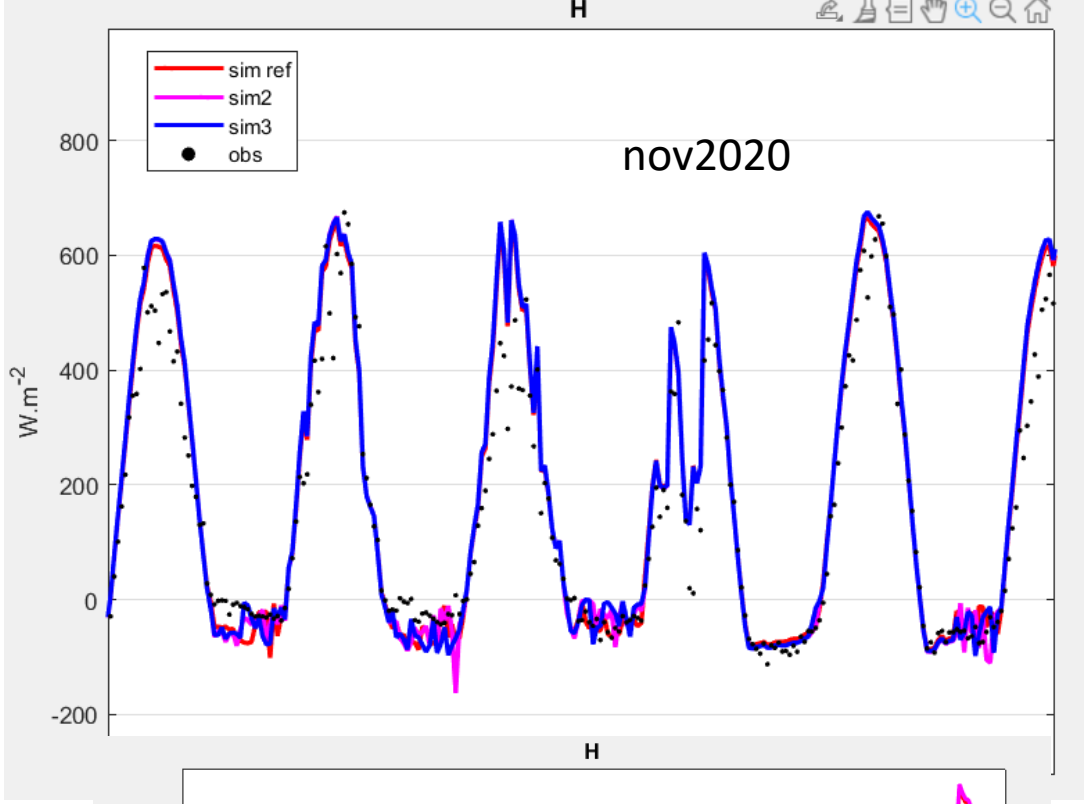


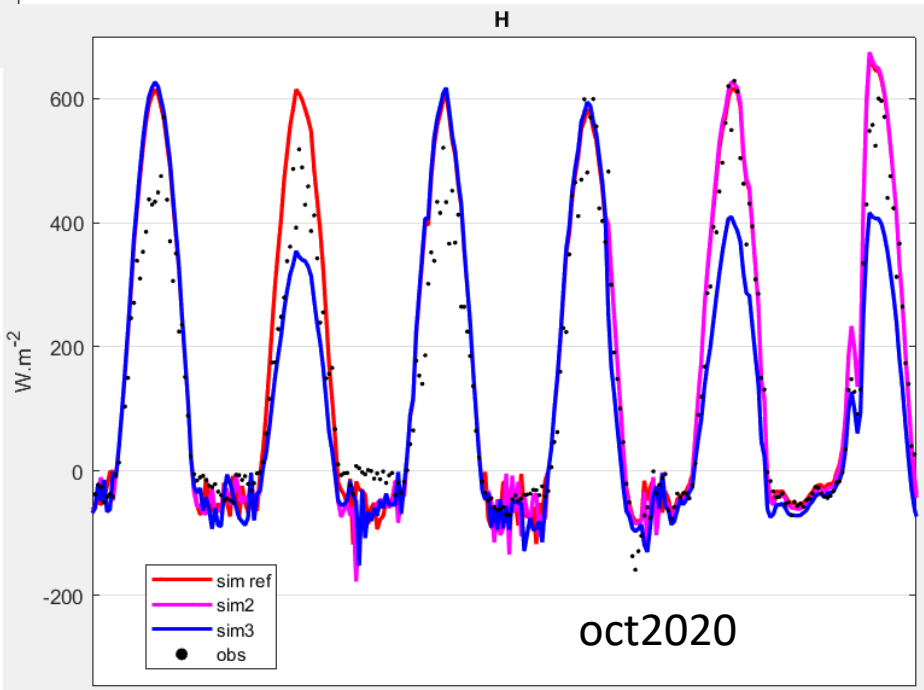
Zoom sur dec 2020

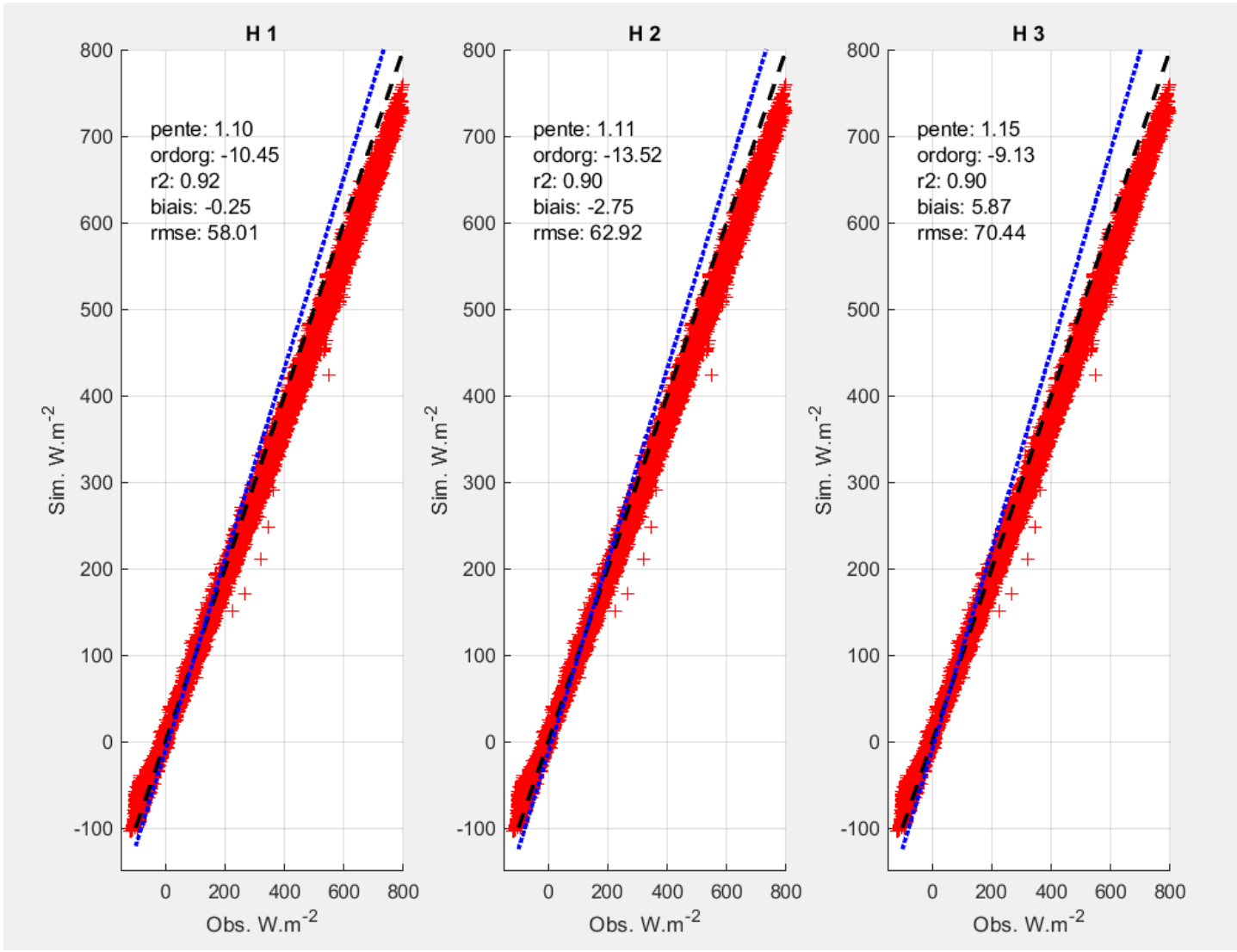



G surf1
pente: 0.87
ordorg: -0.24
r2: 0.56
biais: -0.12
rmse: 16.67
Sim. W.m-2
Obs. W.m-2
G surf2
pente: 0.73
ordorg: -0.23
r2: 0.54
biais: 0.01
rmse: 15.48
Sim. W.m-2
Obs. W.m-2
G surf3
pente: 0.74
ordorg: -0.36
r2: 0.53
biais: -0.13
rmse: 15.74
Sim. W.m-2
Obs. W.m-2

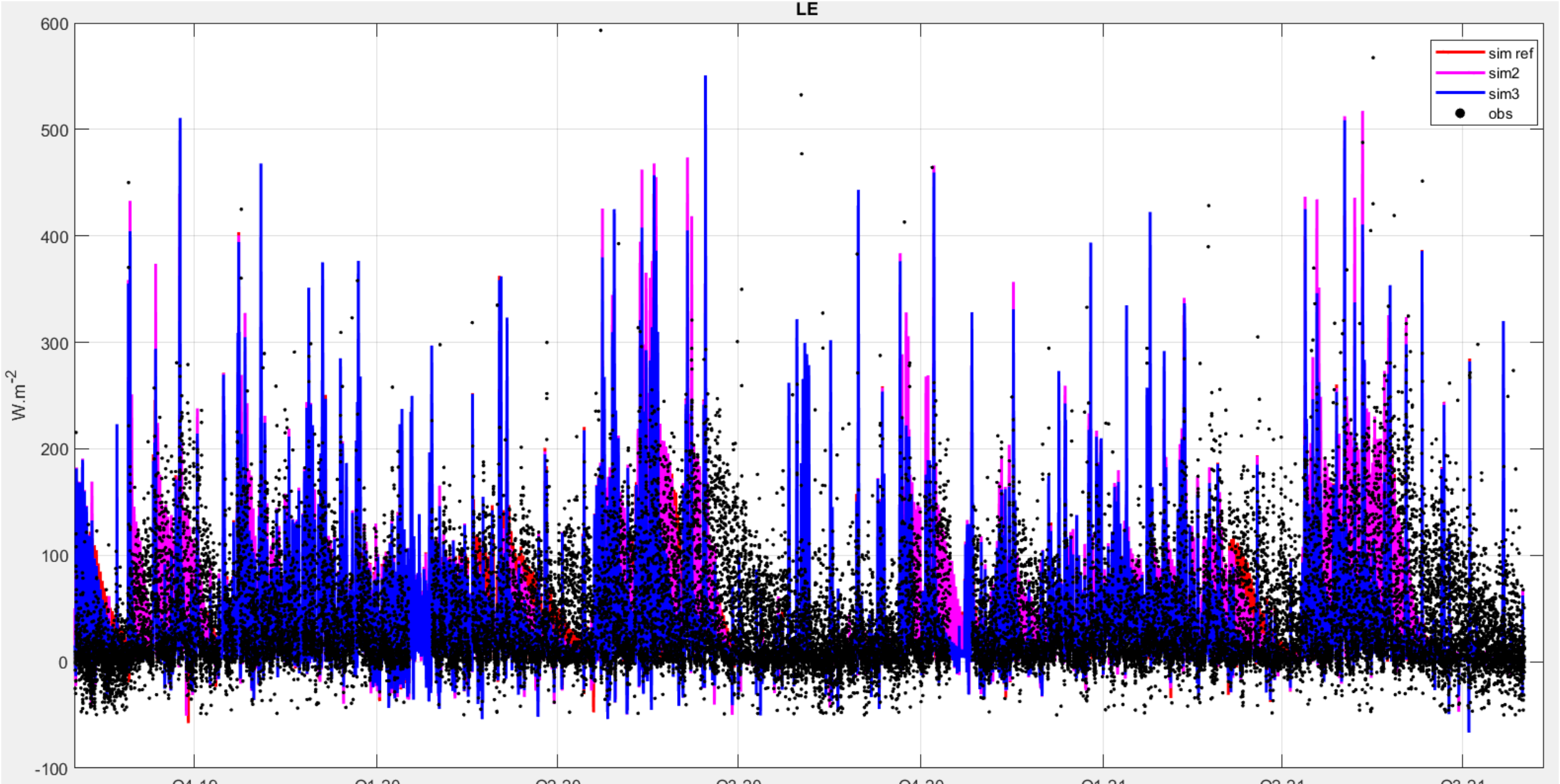

H
sim ref
sim2
sim3
obs
800
600
400
200
0
-200
-400
-500
W.m-2
Q4-19
Q1-20
Q2-20
Q3-20
Q4-20
Q1-21
Q2-21
Q3-21

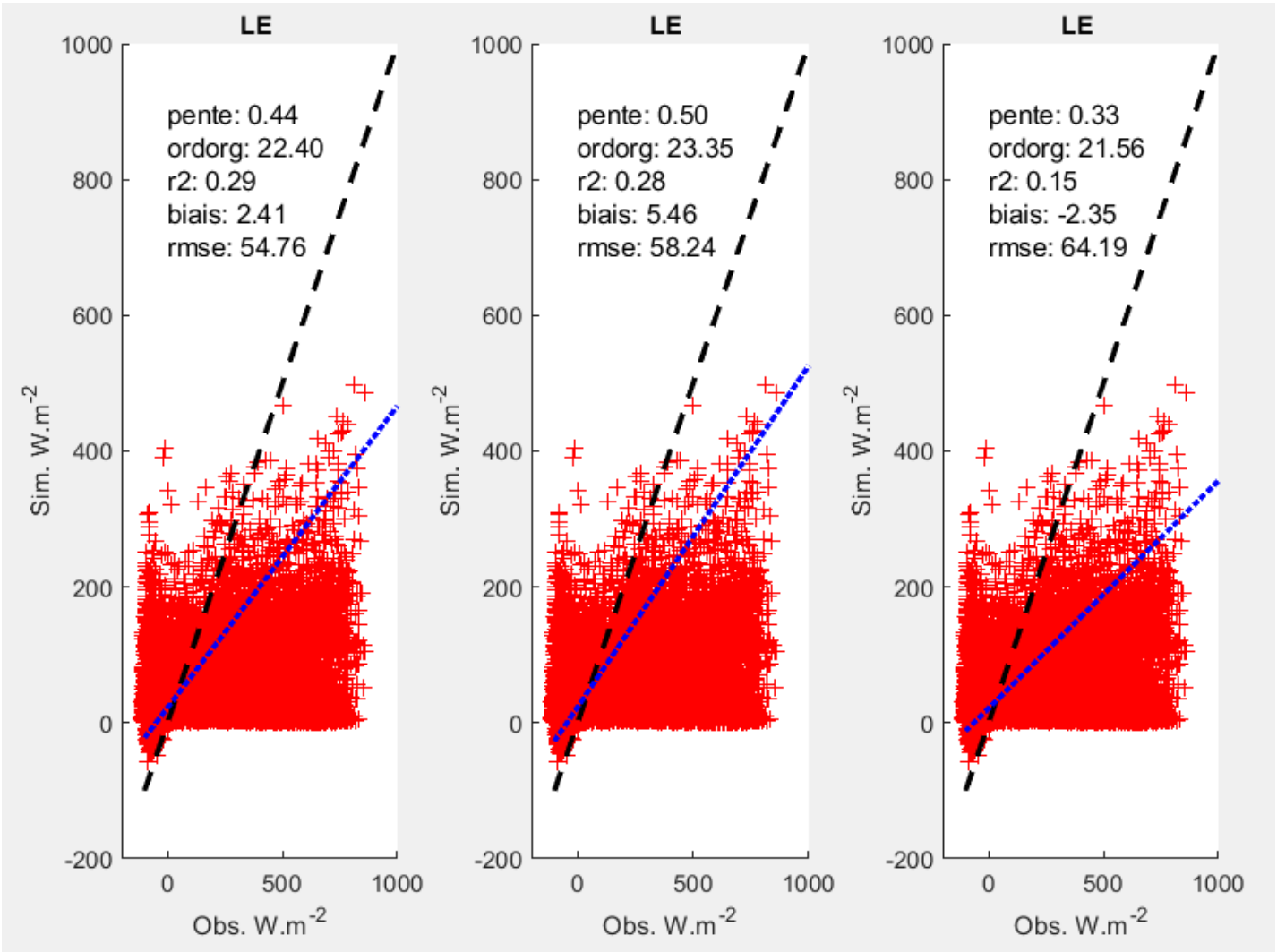

H
sim ref
sim2
sim3
obs
nov2020
W.m-2

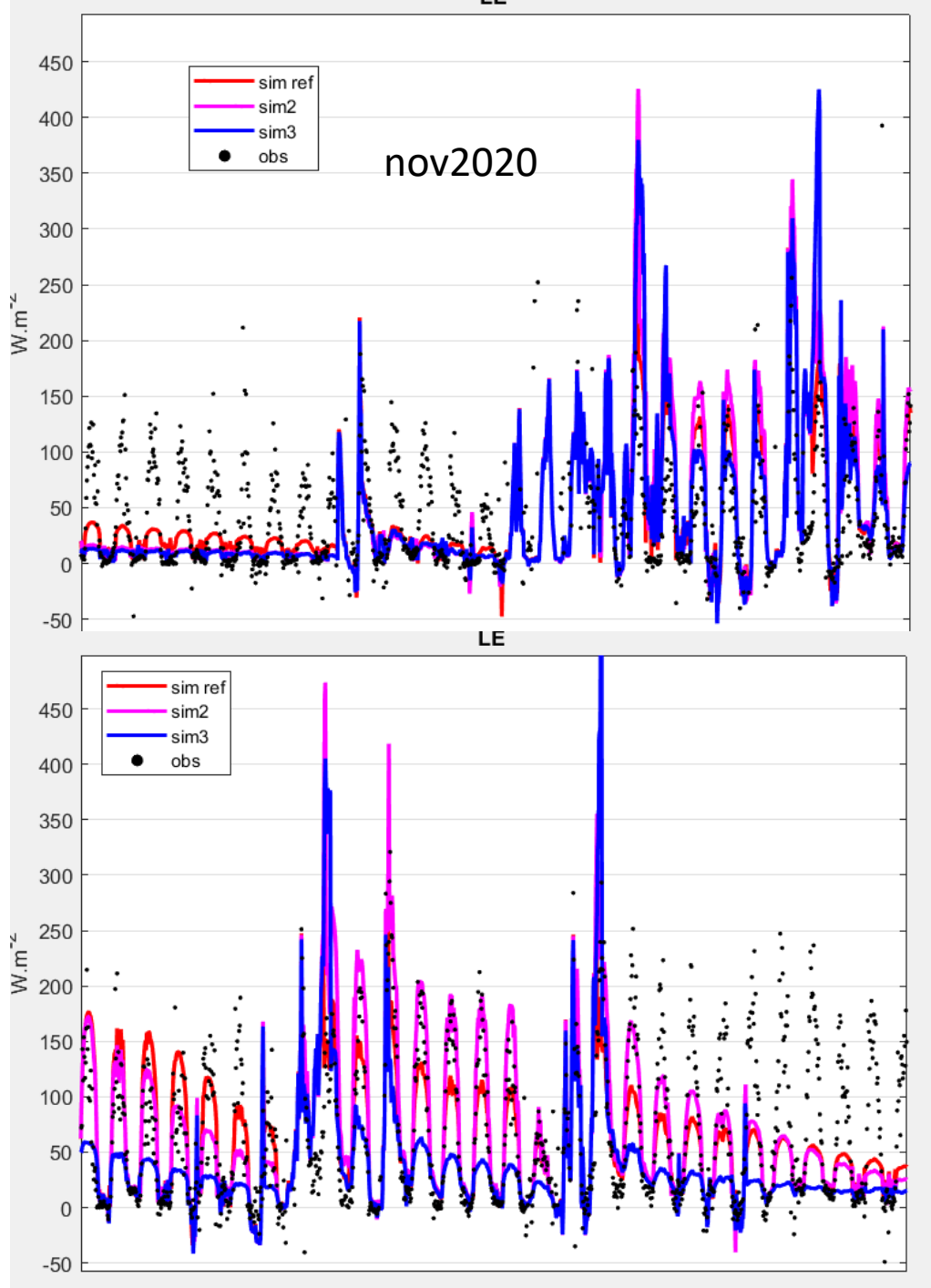

H
sim ref
sim2
sim3
obs
oct2020
W.m-2

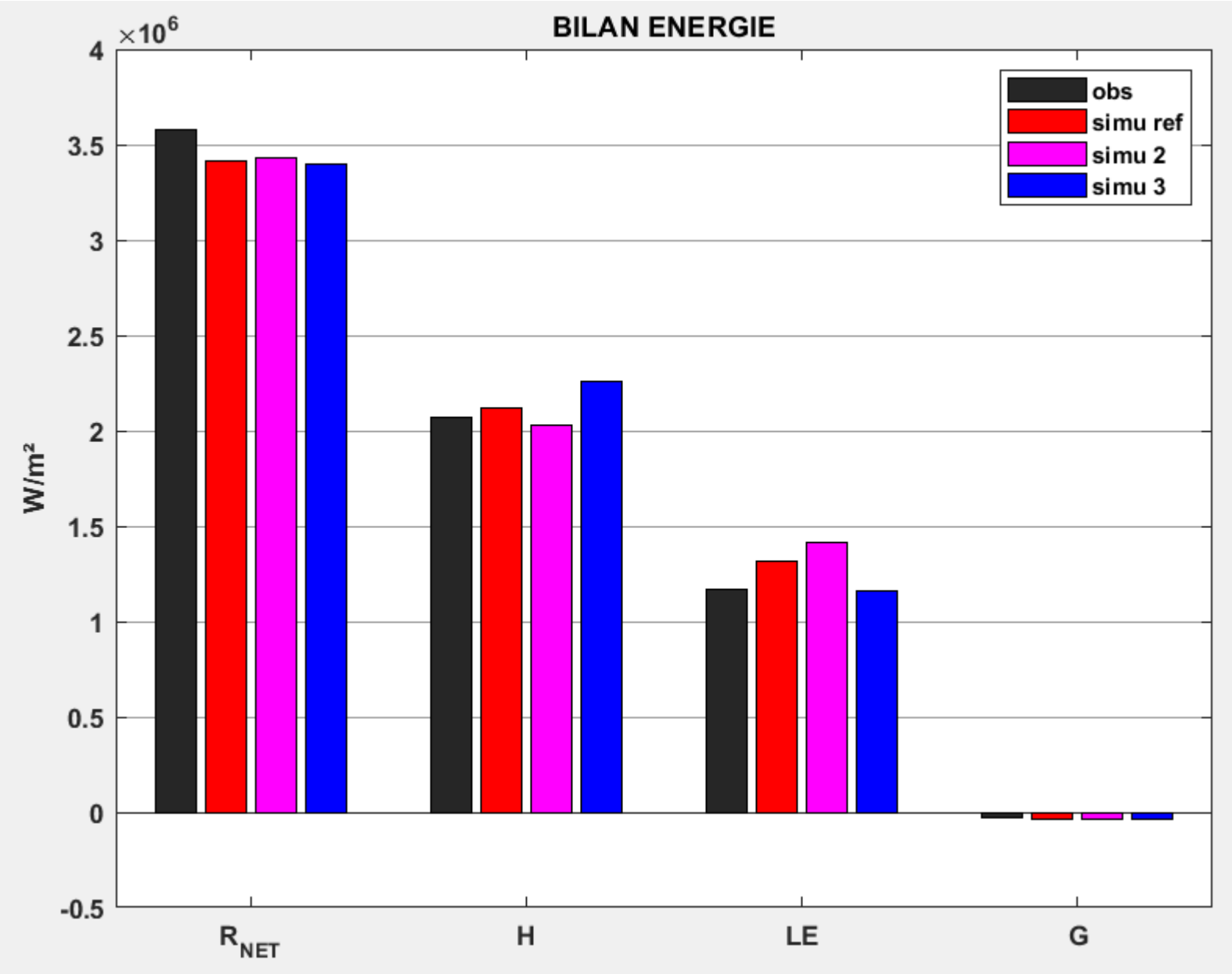

H 1
pente: 1.10
ordorg: -10.45
r2: 0.92
biais: -0.25
rmse: 58.01
H 2
pente: 1.11
ordorg: -13.52
r2: 0.90
biais: -2.75
rmse: 62.92
H 3
pente: 1.15
ordorg: -9.13
r2: 0.90
biais: 5.87
rmse: 70.44
Sim. W.m-2
Obs. W.m-2

CHALEUR LATENTE (LE)




LE
pente: 0.44
ordorg: 22.40
r2: 0.29
biais: 2.41
rmse: 54.76
LE
pente: 0.50
ordorg: 23.35
r2: 0.28
biais: 5.46
rmse: 58.24
LE
pente: 0.33
ordorg: 21.56
r2: 0.15
biais: -2.35
rmse: 64.19
Sim. W.m-2
Obs. W.m-2
1000
800
600
400
200
0
-200
0
500
1000


sim ref
sim2
sim3
obs
nov2020
W.m-2
450
400
350
300
250
200
150
100
50
0
-50
LE



Cumul des flux sur les deux ans de simulation
!!attention!! Il y a des lacunes dans les obs et je n'ai pas compté uniquement les périodes de simulation avec des obs
A REFAIRE

Ordres de grandeur OK