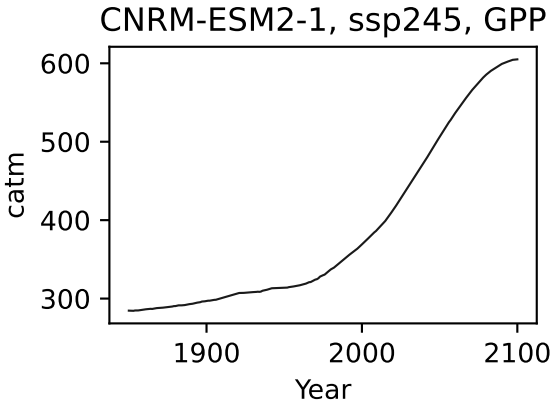
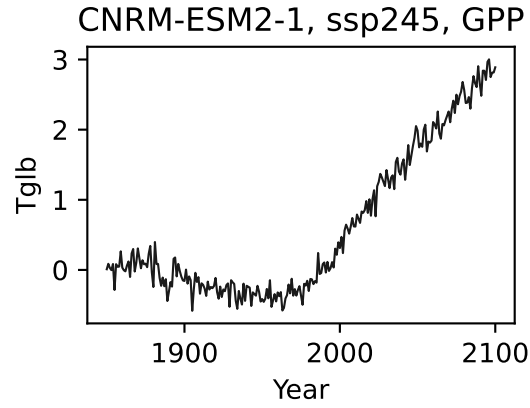
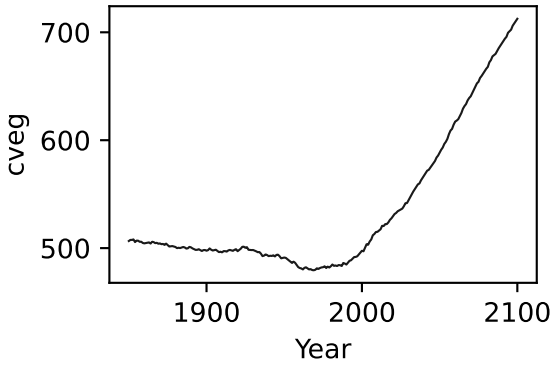
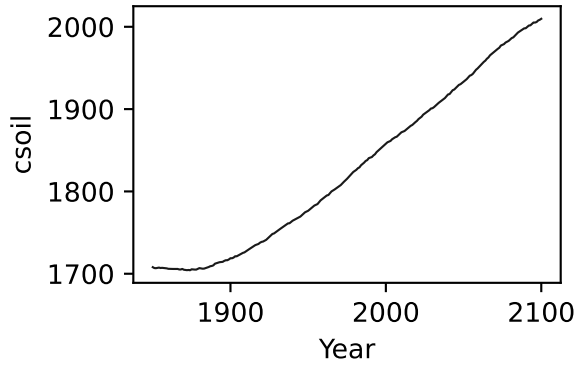
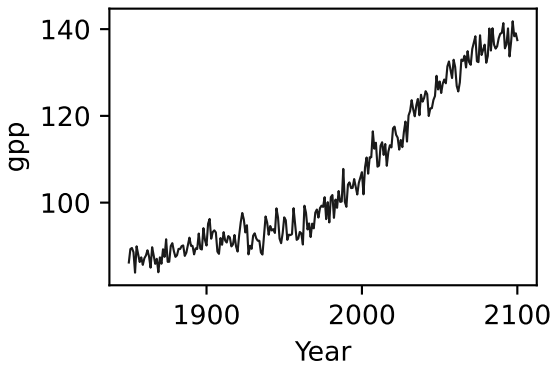
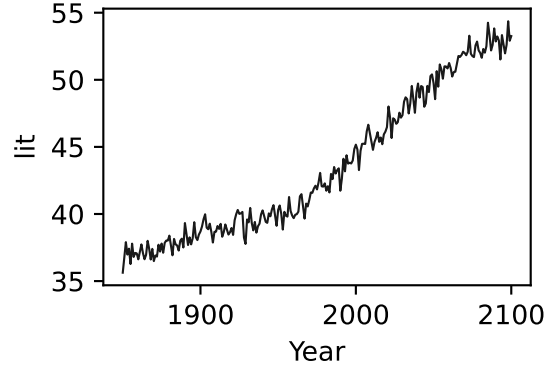

CNRM-ESM2-1, ssp245, GPP
catm
600
500
400
300
1900
2000
2100
Year

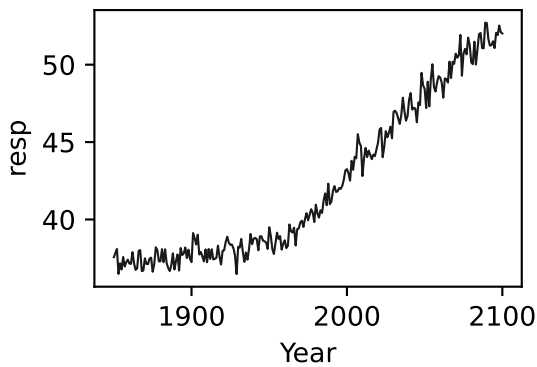

CNRM-ESM2-1, ssp245, GPP
Tglb
3
2
1
0
1900
2000
2100
Year

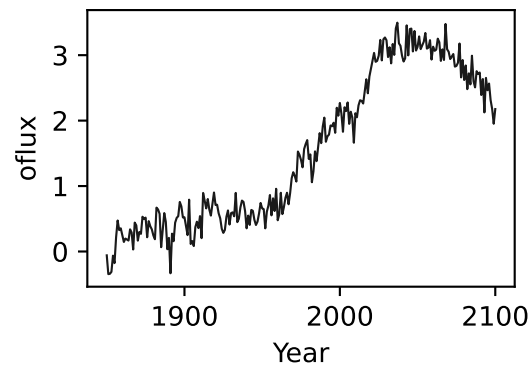

cveg
700
600
500
1900
2000
2100
Year

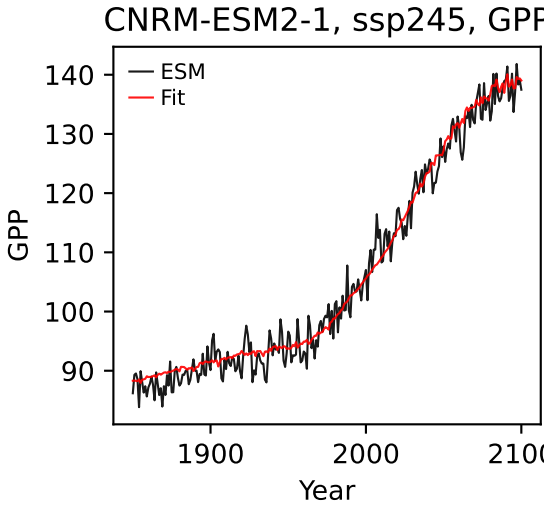

csoil
2000
1900
1800
1700
1900
2000
2100
Year

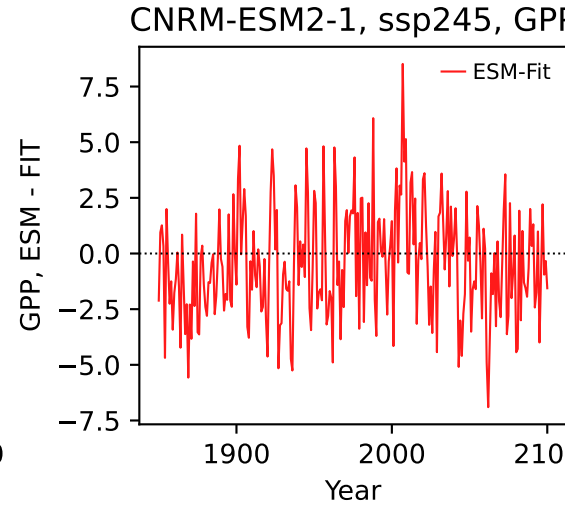

gpp
140
120
100
1900
2000
2100
Year

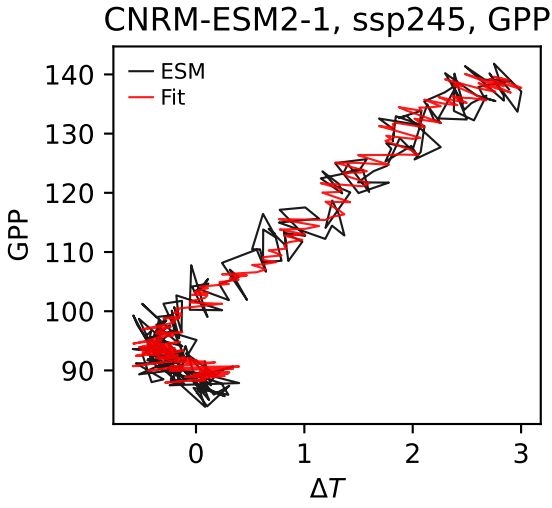

lit
55
50
45
40
35
1900
2000
2100
Year

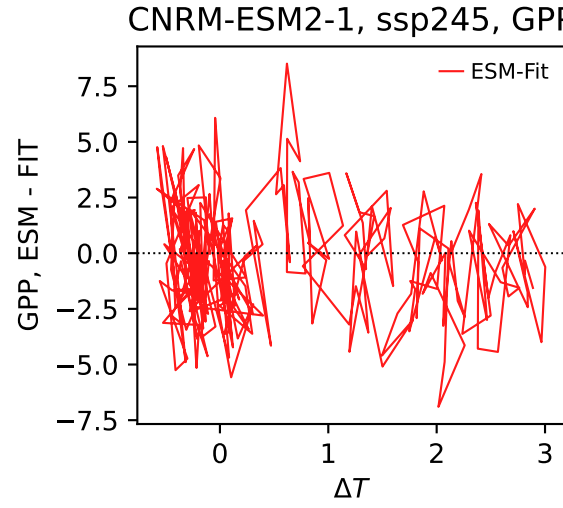

resp
50
45
40
1900
2000
2100
Year

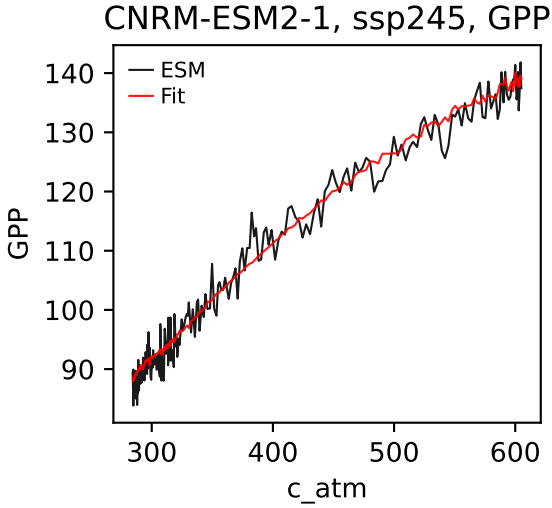

oflux
3
2
1
0
1900
2000
2100
Year

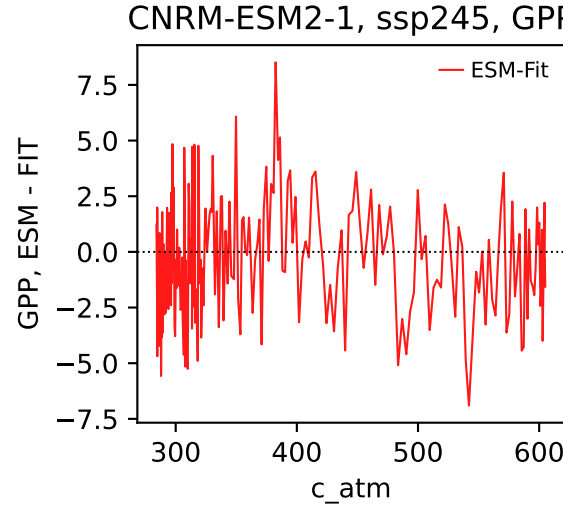

CNRM-ESM2-1, ssp245, GPP
ESM
Fit
GPP
Year

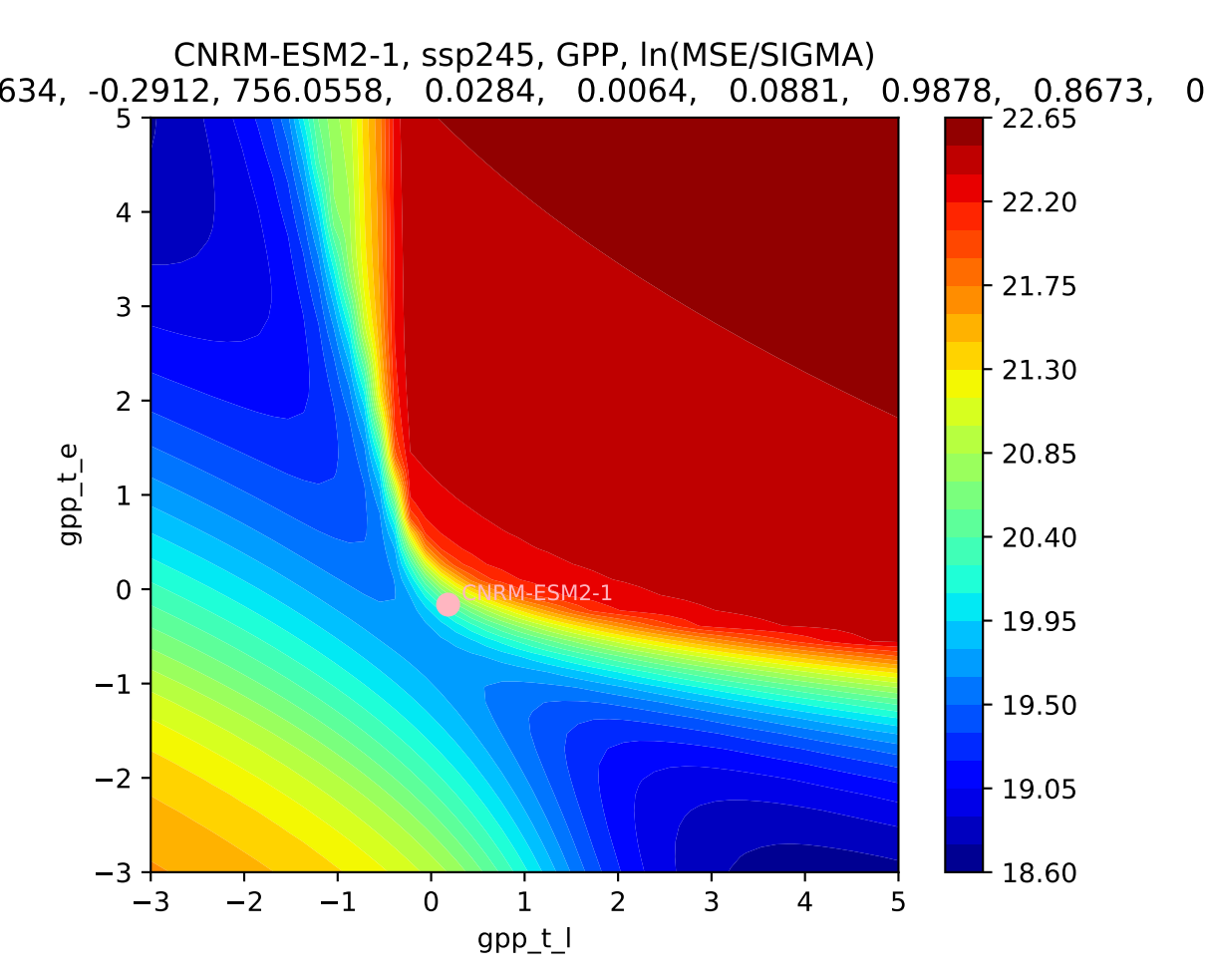

CNRM-ESM2-1, ssp245, GPP
ESM-Fit
GPP, ESM - FIT
Year

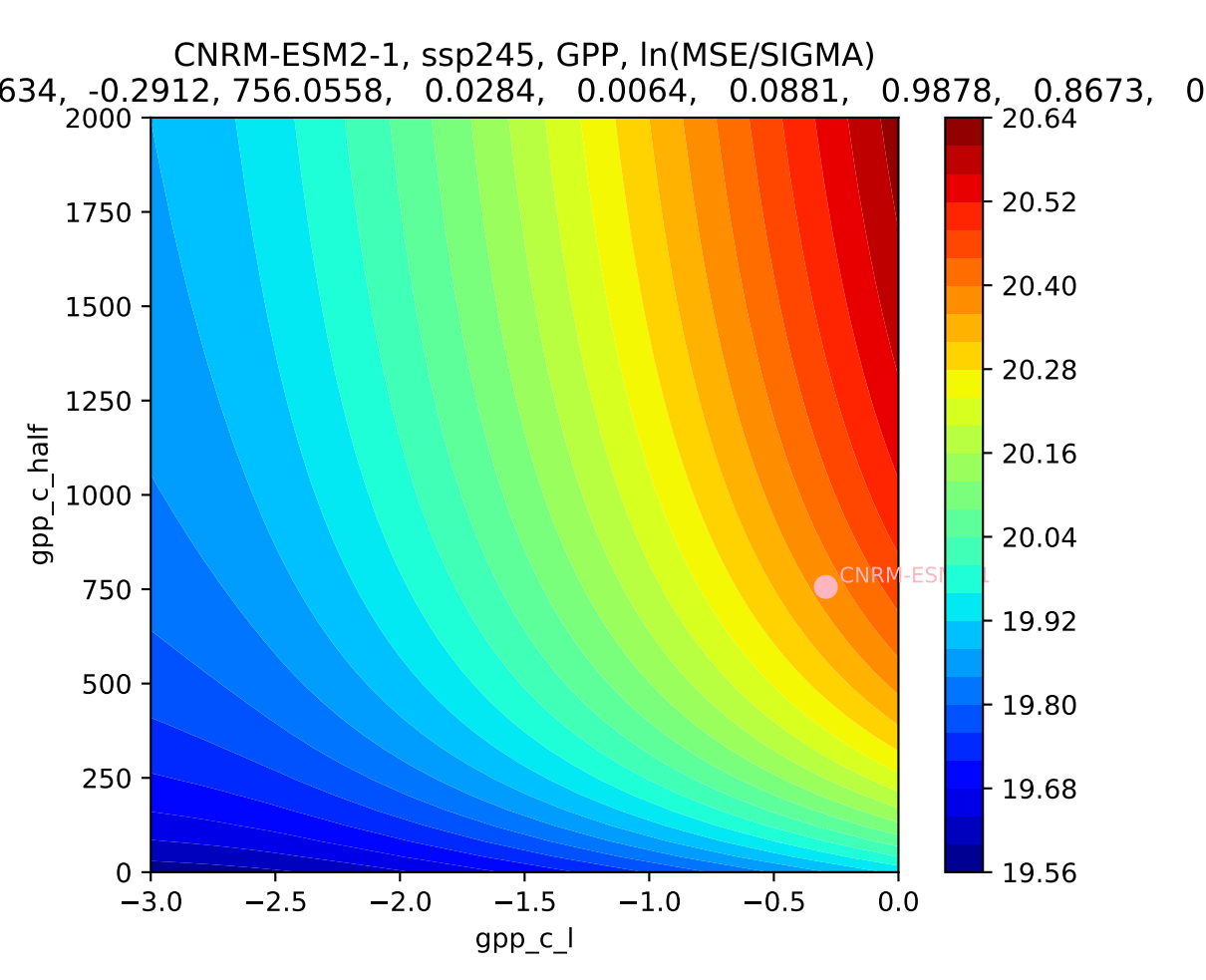

CNRM-ESM2-1, ssp245, GPP
ESM
Fit
GPP
ΔT

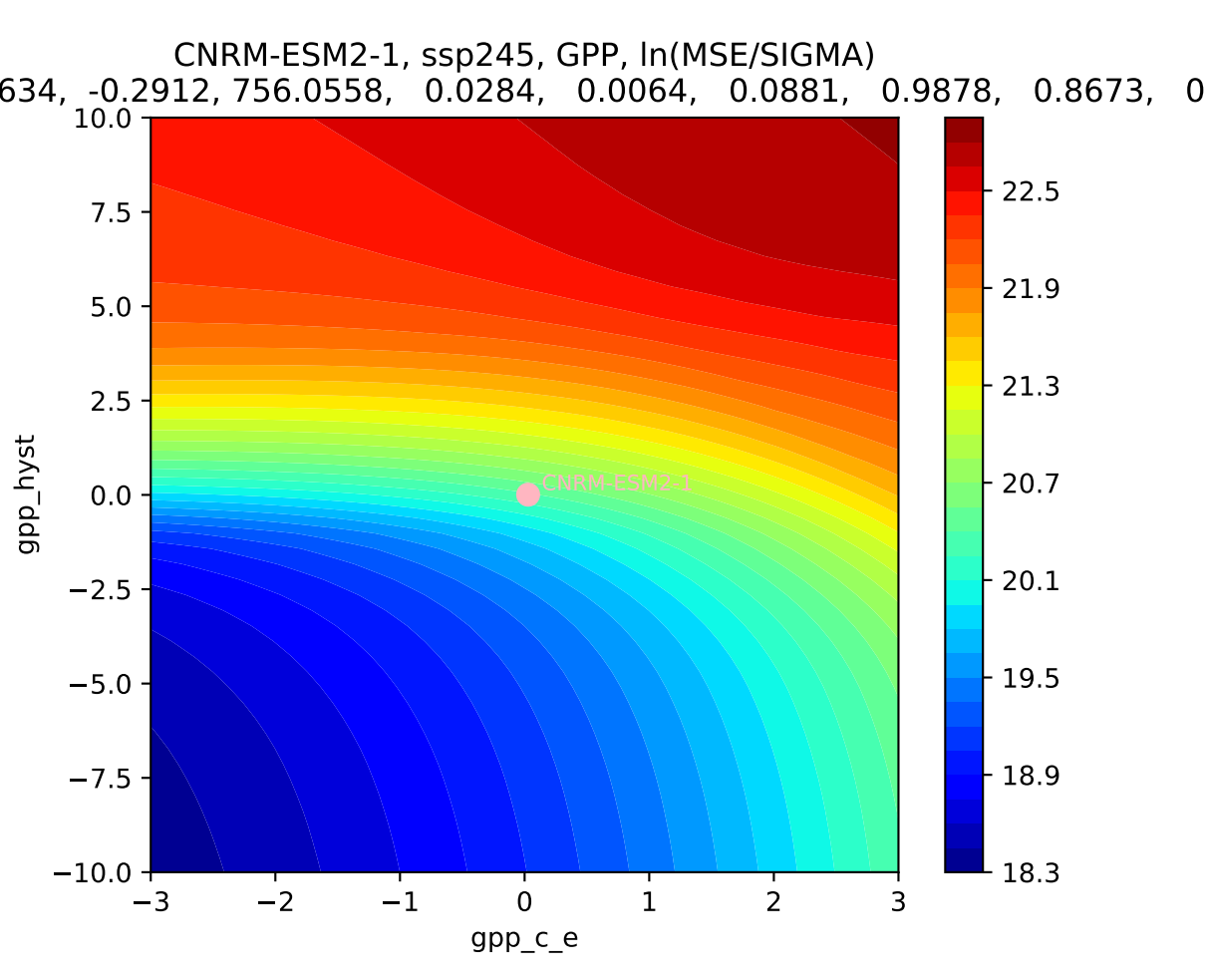

CNRM-ESM2-1, ssp245, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

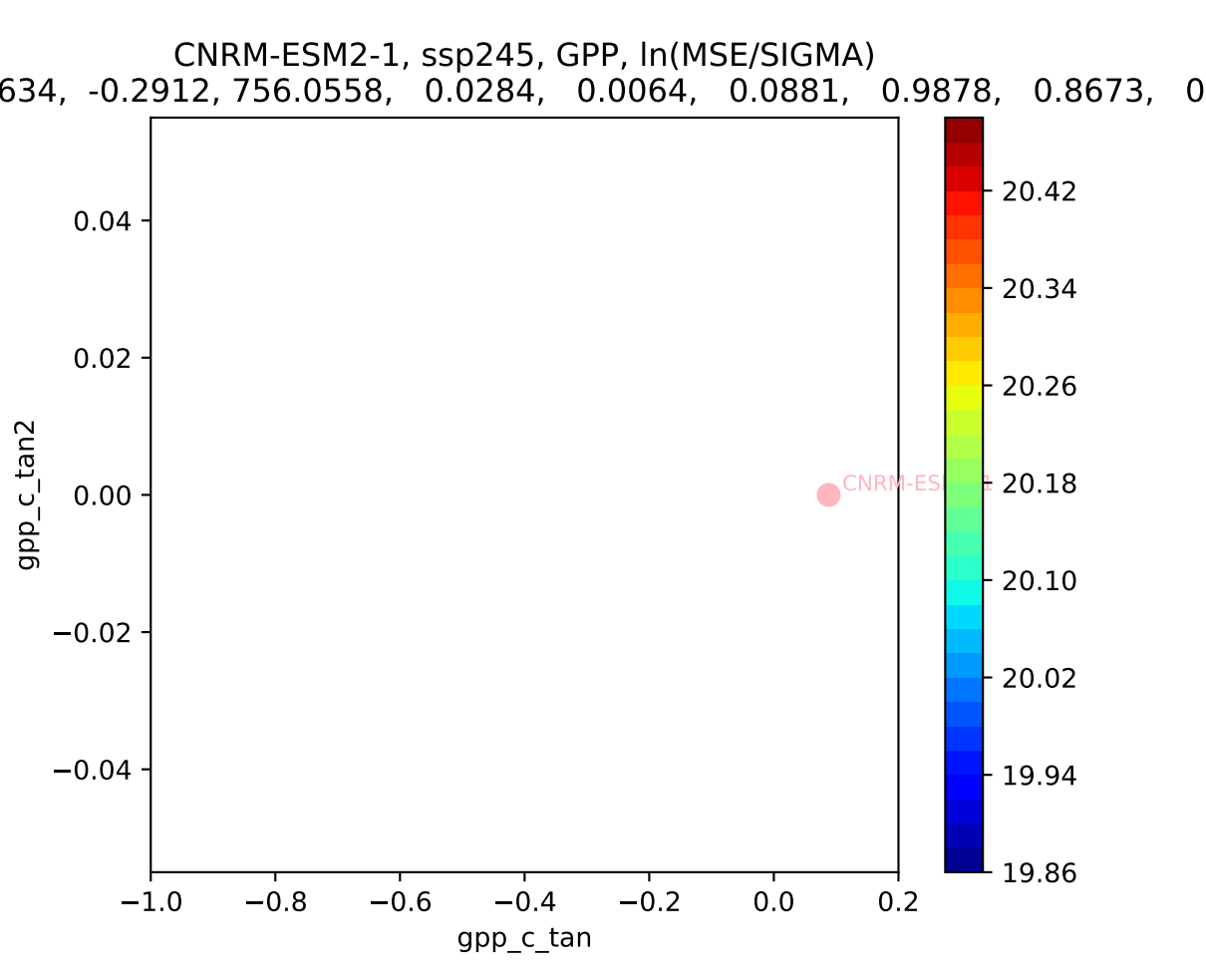

CNRM-ESM2-1, ssp245, GPP
ESM
Fit
GPP
c_atm

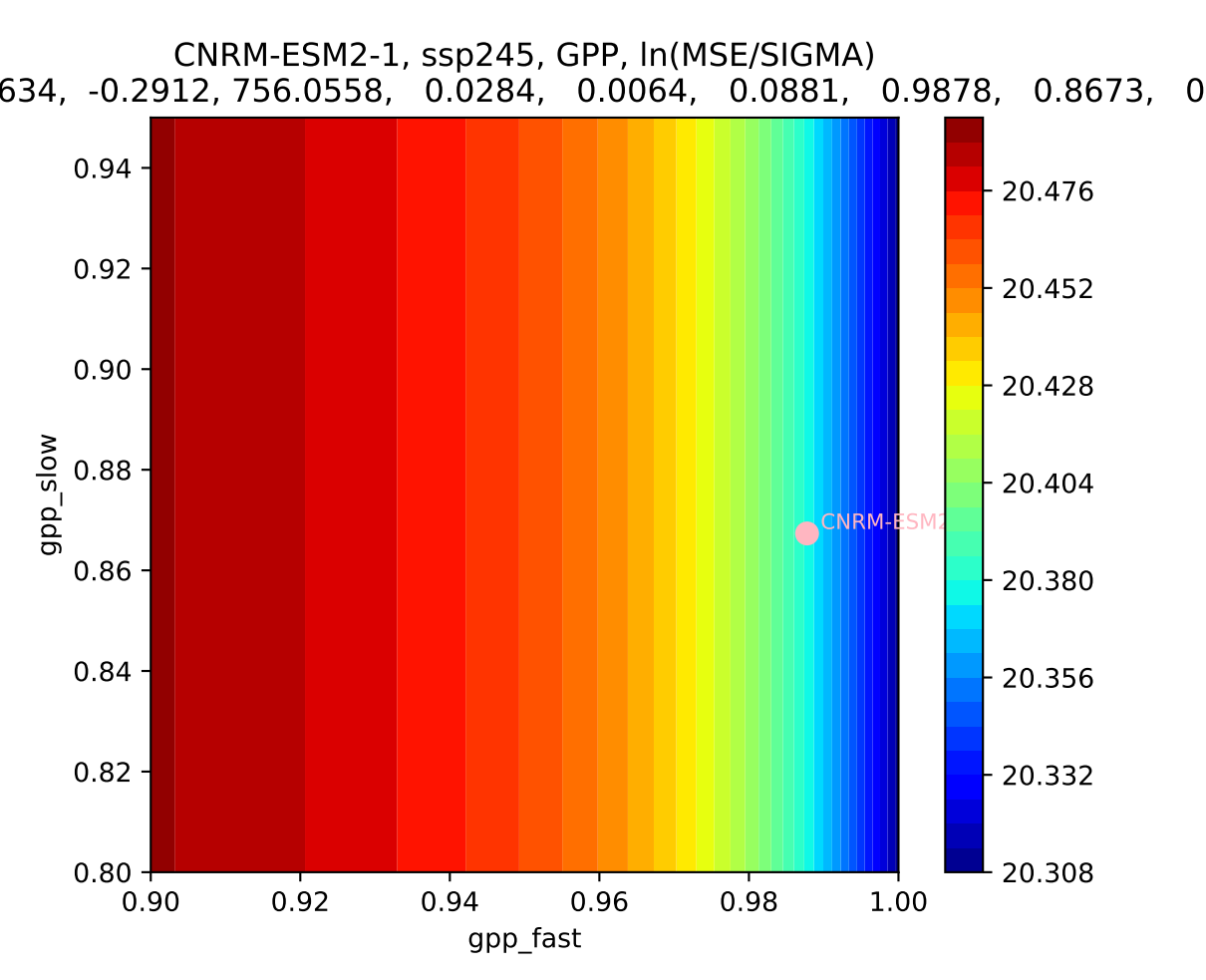

CNRM-ESM2-1, ssp245, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

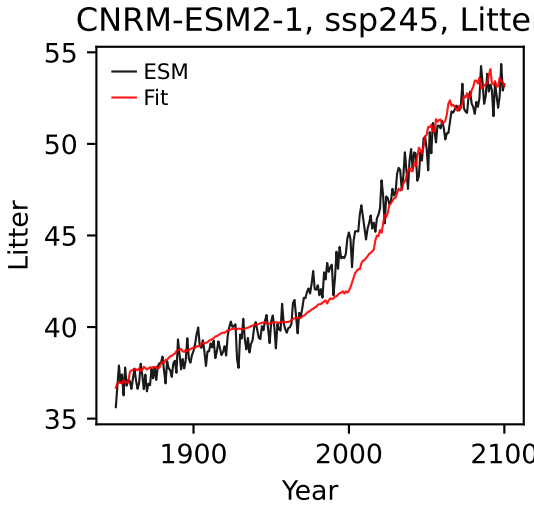

CNRM-ESM2-1, ssp245, GPP, ln(MSE/SIGMA)
634, -0.2912, 756.0558, 0.0284, 0.0064, 0.0881, 0.9878, 0.8673, 0
CNRM-ESM2-1
gpp_t_e
gpp_t_l
22.65
22.20
21.75
21.30
20.85
20.40
19.95
19.50
19.05
18.60

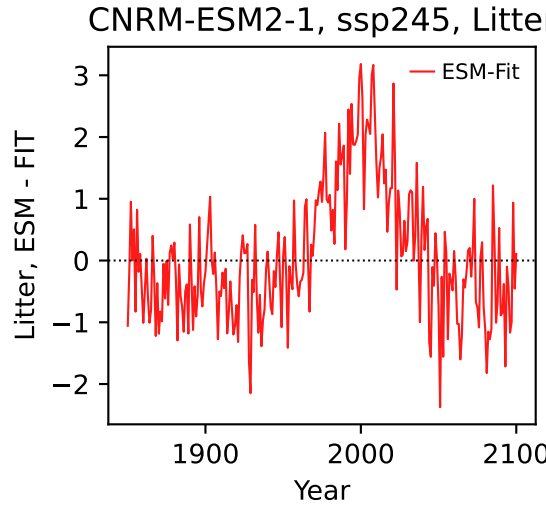

CNRM-ESM2-1, ssp245, GPP, ln(MSE/SIGMA)
634, -0.2912, 756.0558, 0.0284, 0.0064, 0.0881, 0.9878, 0.8673, 0
gpp_c_half
gpp_c_l
2000
1750
1500
1250
1000
750
500
250
0
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
20.64
20.52
20.40
20.28
20.16
20.04
19.92
19.80
19.68
19.56

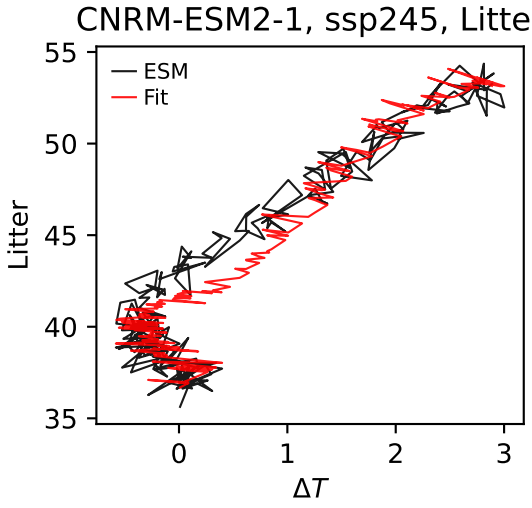

CNRM-ESM2-1, ssp245, GPP, ln(MSE/SIGMA)
634, -0.2912, 756.0558, 0.0284, 0.0064, 0.0881, 0.9878, 0.8673, 0
CNRM-ESM2-1
gpp_hyst
gpp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
22.5
21.9
21.3
20.7
20.1
19.5
18.9
18.3

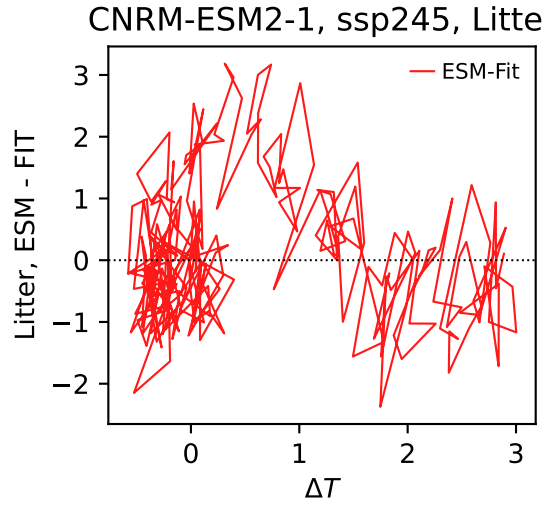

CNRM-ESM2-1, ssp245, GPP, ln(MSE/SIGMA)
634, -0.2912, 756.0558, 0.0284, 0.0064, 0.0881, 0.9878, 0.8673, 0
0.04
0.02
0.00
−0.02
−0.04
gpp_c_tan2
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
gpp_c_tan
CNRM-ES
20.42
20.34
20.26
20.18
20.10
20.02
19.94
19.86

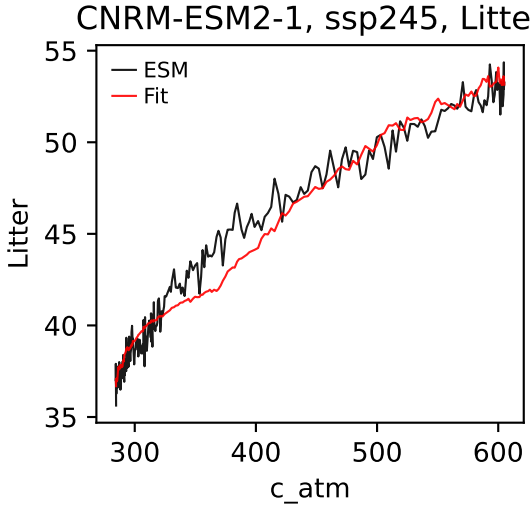

CNRM-ESM2-1, ssp245, GPP, ln(MSE/SIGMA)
634, -0.2912, 756.0558, 0.0284, 0.0064, 0.0881, 0.9878, 0.8673, 0
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
gpp_slow
0.90
0.92
0.94
0.96
0.98
1.00
gpp_fast
20.476
20.452
20.428
20.404
20.380
20.356
20.332
20.308

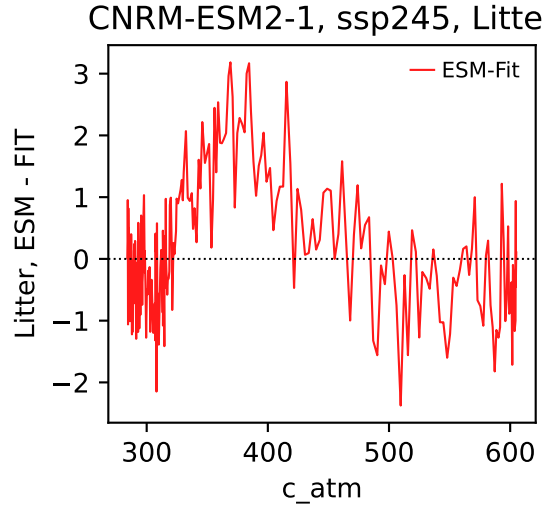

CNRM-ESM2-1, ssp245, Litter
ESM
Fit
Litter
Year
55
50
45
40
35
1900
2000
2100

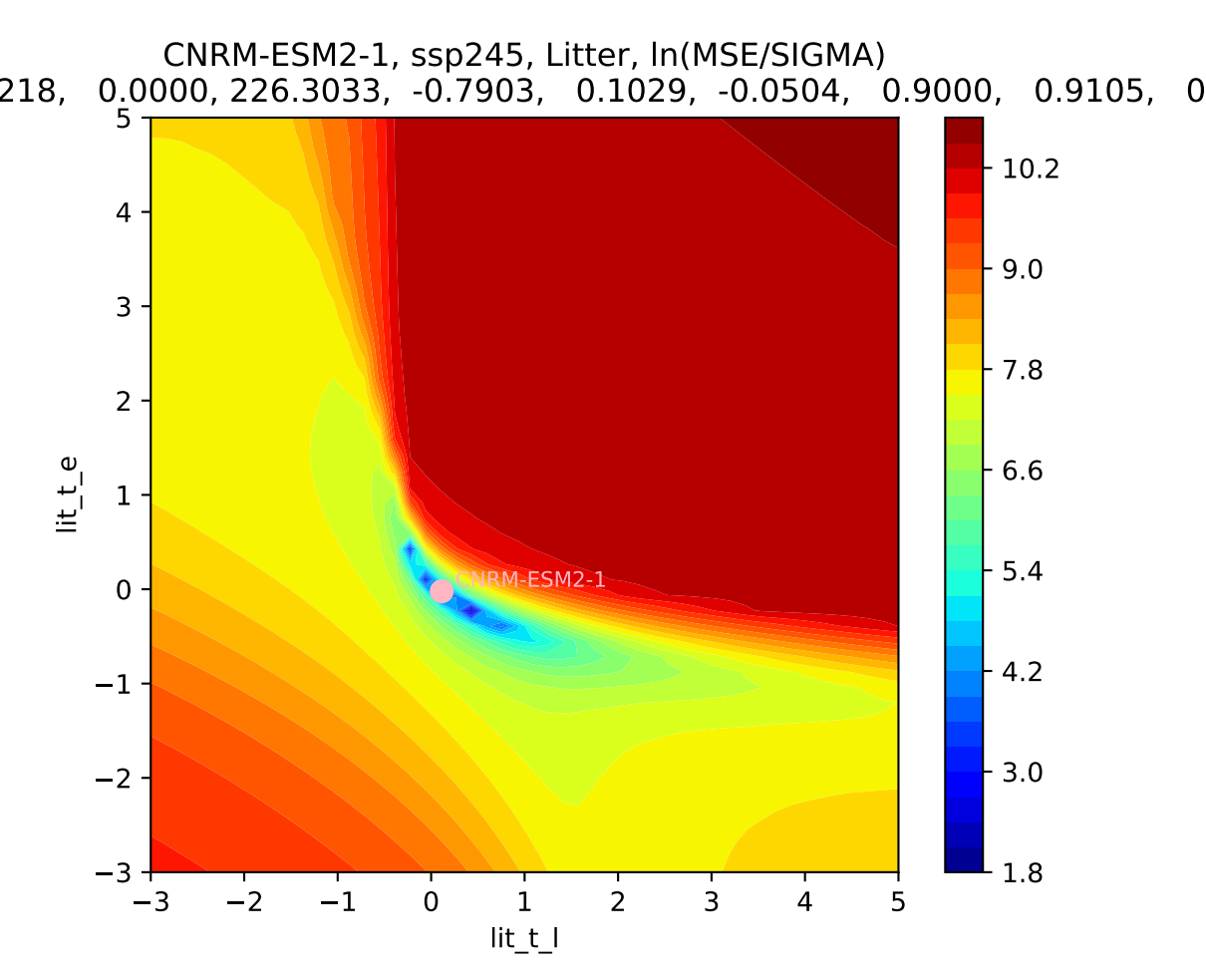

CNRM-ESM2-1, ssp245, Litter
ESM-Fit
Litter, ESM - FIT
Year
3
2
1
0
−1
−2
1900
2000
2100

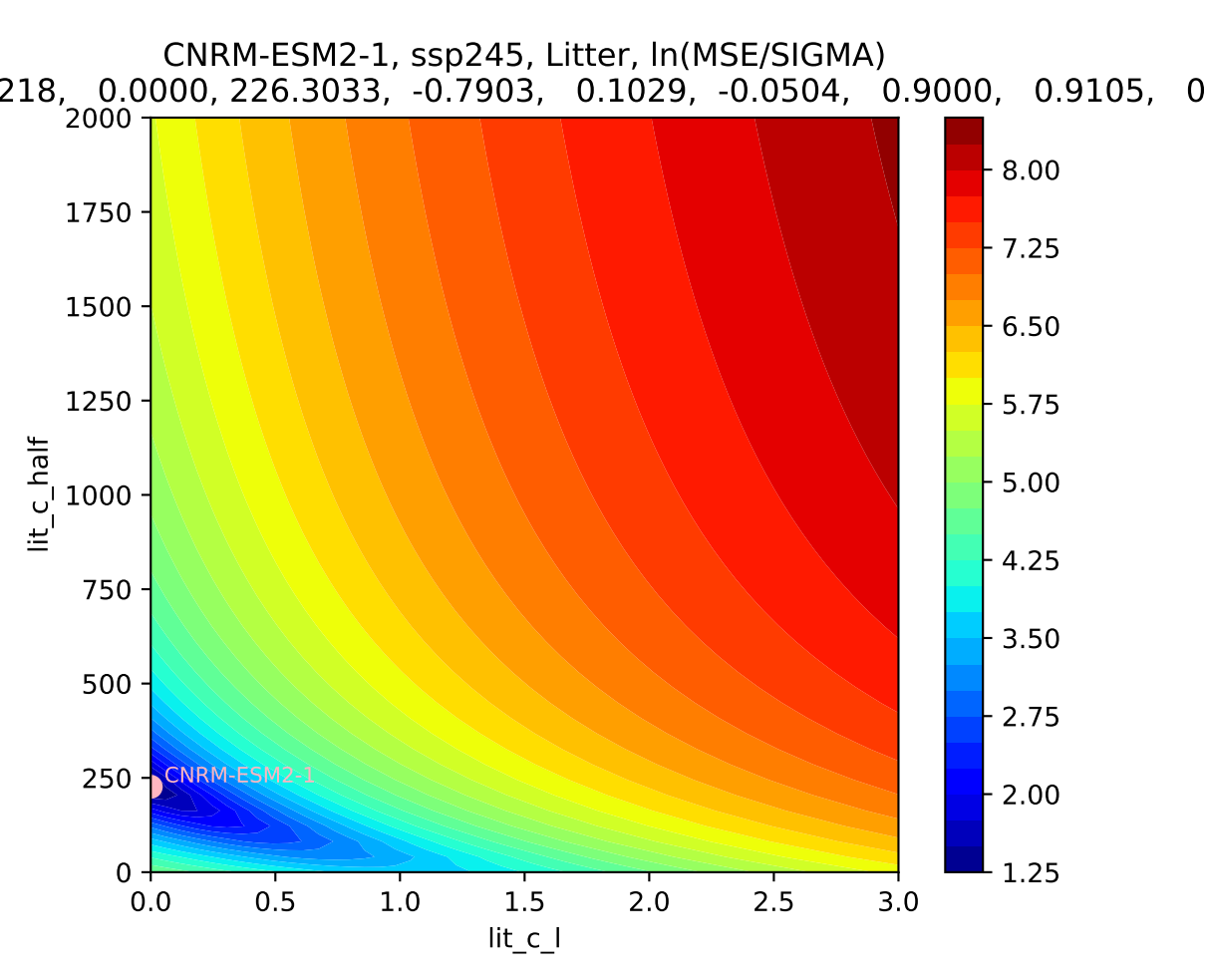

CNRM-ESM2-1, ssp245, Litter
ESM
Fit
Litter
ΔT
55
50
45
40
35
0
1
2
3

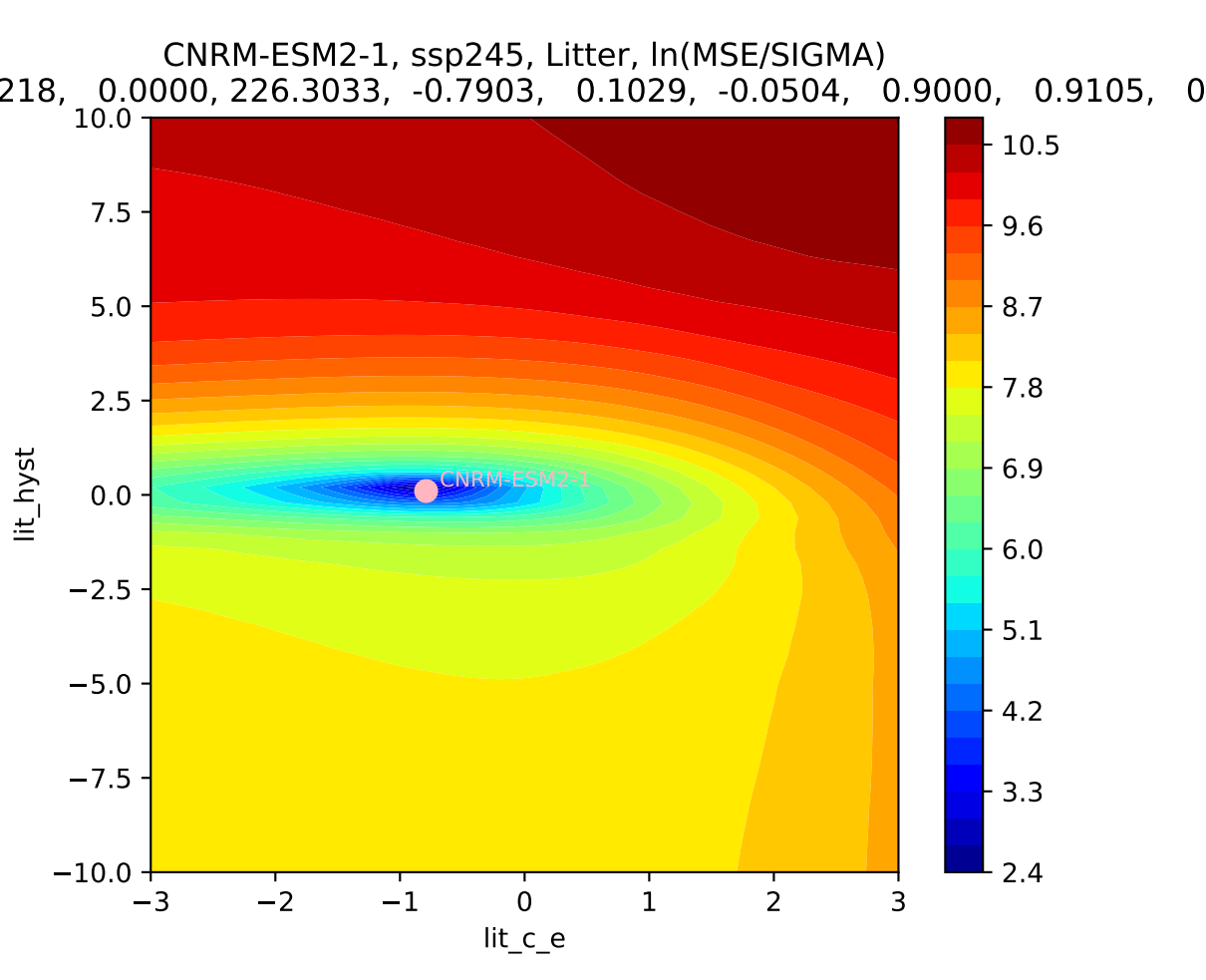

CNRM-ESM2-1, ssp245, Litter
ESM-Fit
Litter, ESM - FIT
ΔT
3
2
1
0
−1
−2
0
1
2
3

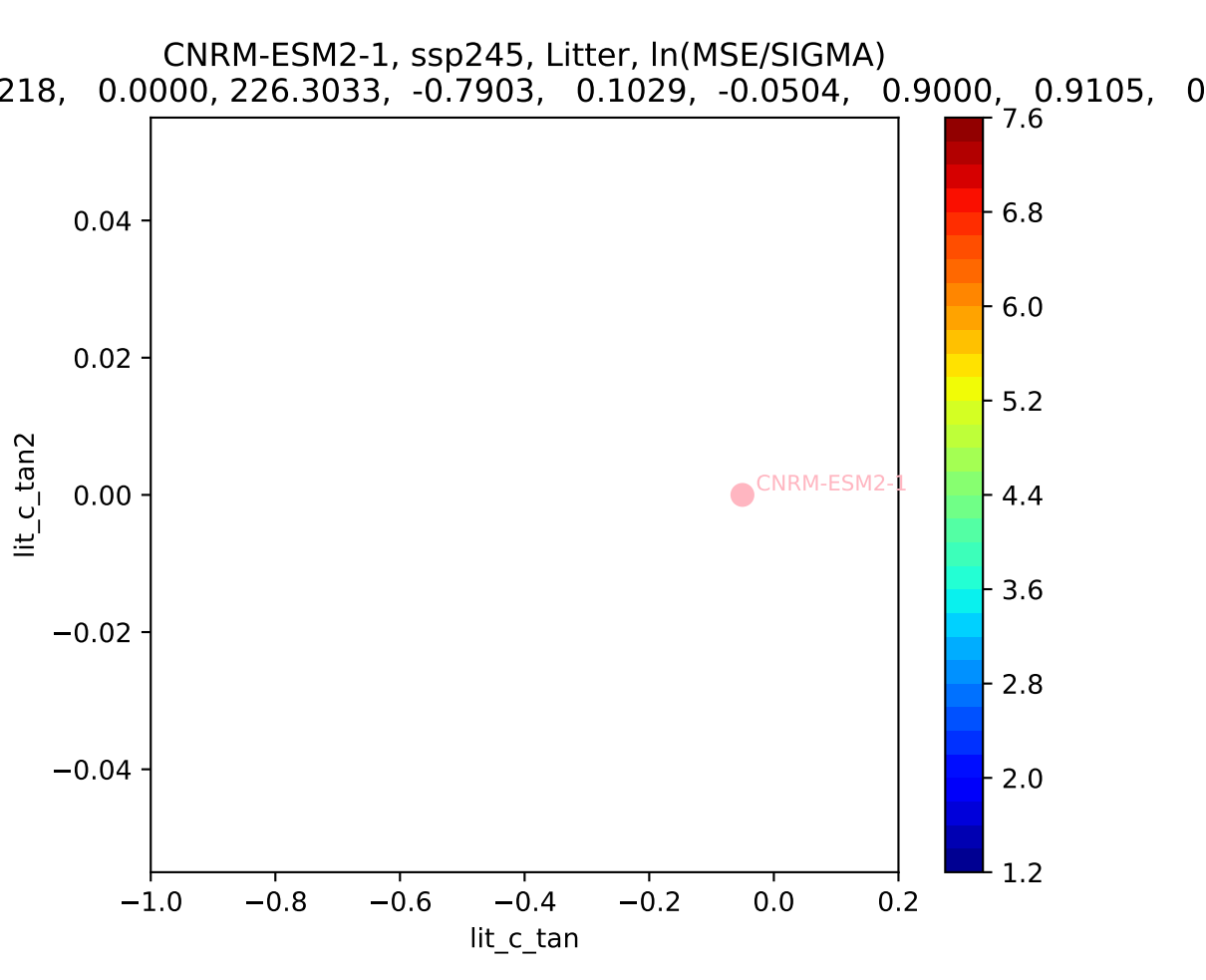

CNRM-ESM2-1, ssp245, Litter
ESM
Fit
Litter
c_atm
55
50
45
40
35
300
400
500
600

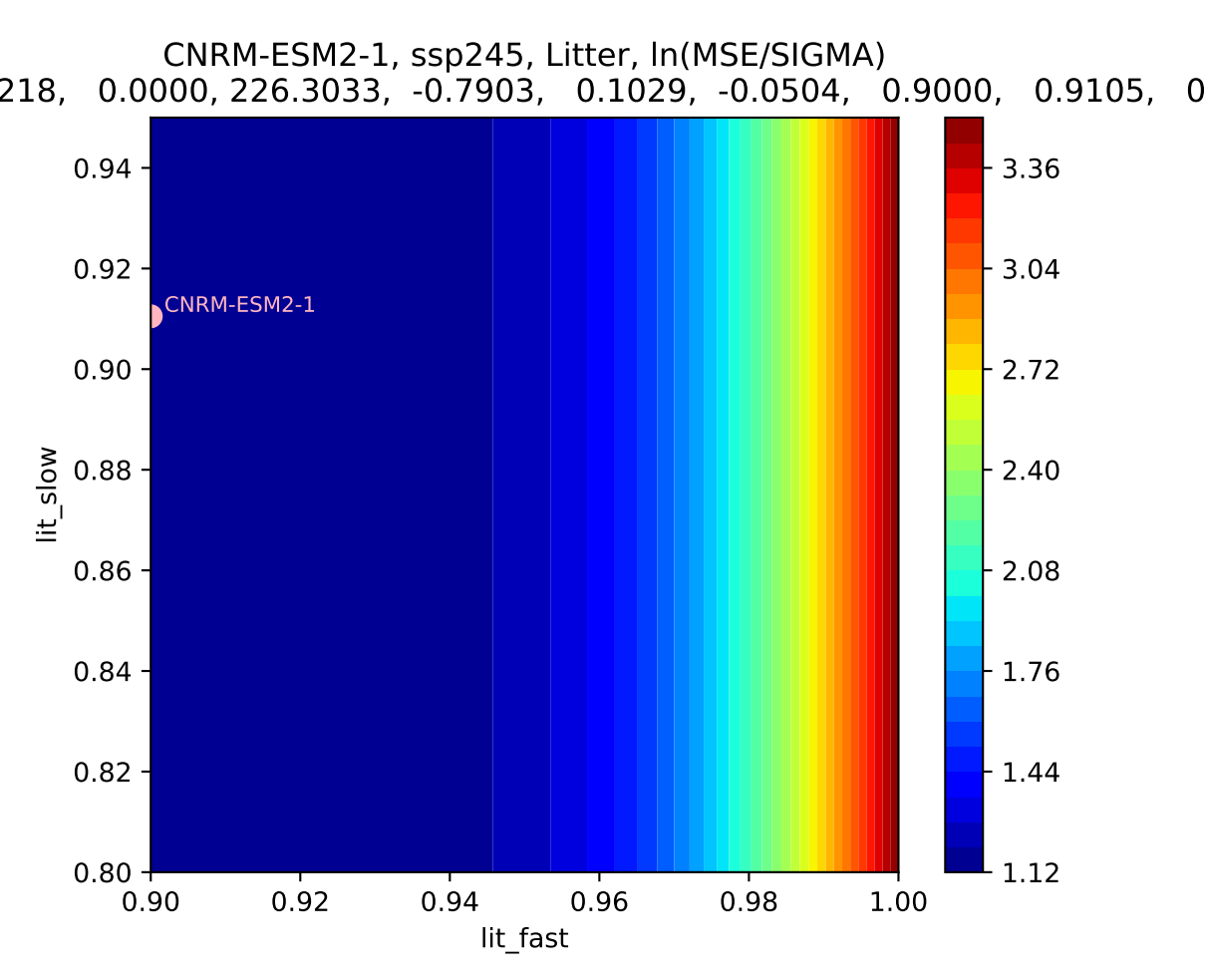

CNRM-ESM2-1, ssp245, Litter
ESM-Fit
Litter, ESM - FIT
c_atm
3
2
1
0
−1
−2
300
400
500
600

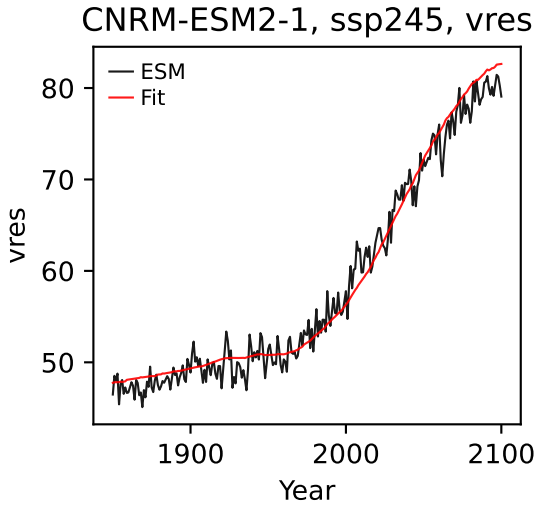

CNRM-ESM2-1, ssp245, Litter, ln(MSE/SIGMA)
218, 0.0000, 226.3033, -0.7903, 0.1029, -0.0504, 0.9000, 0.9105, 0
CNRM-ESM2-1
lit_t_e
lit_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
10.2
9.0
7.8
6.6
5.4
4.2
3.0
1.8

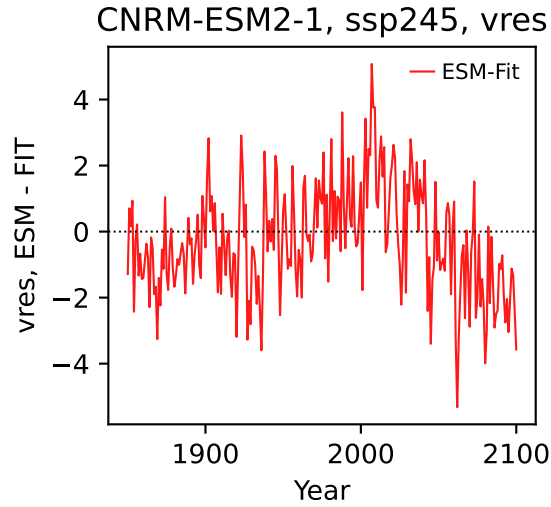

CNRM-ESM2-1, ssp245, Litter, ln(MSE/SIGMA)
218, 0.0000, 226.3033, -0.7903, 0.1029, -0.0504, 0.9000, 0.9105, 0
lit_c_half
lit_c_l
CNRM-ESM2-1
0
250
500
750
1000
1250
1500
1750
2000
0.0
0.5
1.0
1.5
2.0
2.5
3.0
8.00
7.25
6.50
5.75
5.00
4.25
3.50
2.75
2.00
1.25

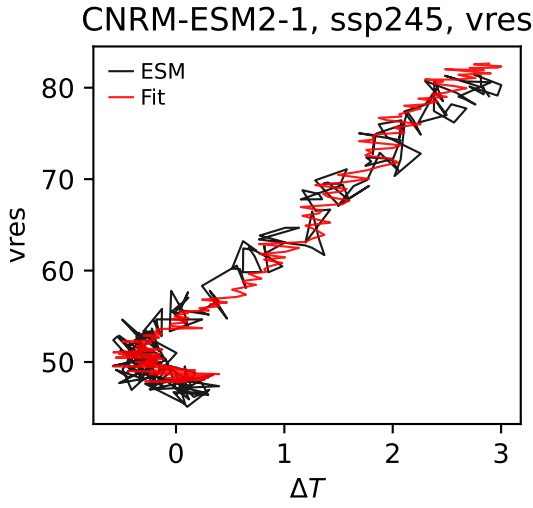

CNRM-ESM2-1, ssp245, Litter, ln(MSE/SIGMA)
218, 0.0000, 226.3033, -0.7903, 0.1029, -0.0504, 0.9000, 0.9105, 0
CNRM-ESM2-1
lit_hyst
lit_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
10.5
9.6
8.7
7.8
6.9
6.0
5.1
4.2
3.3
2.4

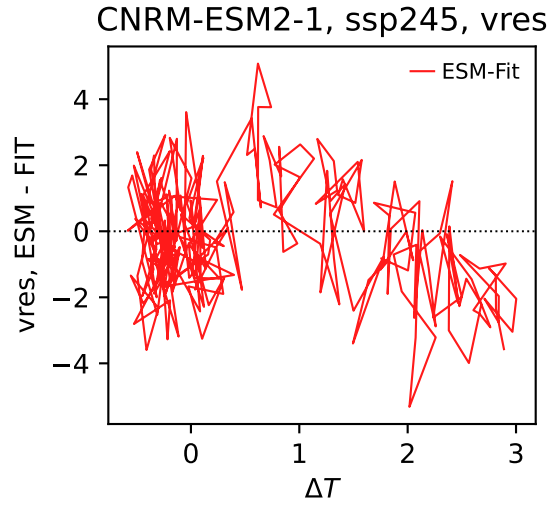

CNRM-ESM2-1, ssp245, Litter, ln(MSE/SIGMA)
218, 0.0000, 226.3033, -0.7903, 0.1029, -0.0504, 0.9000, 0.9105, 0
CNRM-ESM2-1
lit_c_tan2
lit_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.6
6.8
6.0
5.2
4.4
3.6
2.8
2.0
1.2

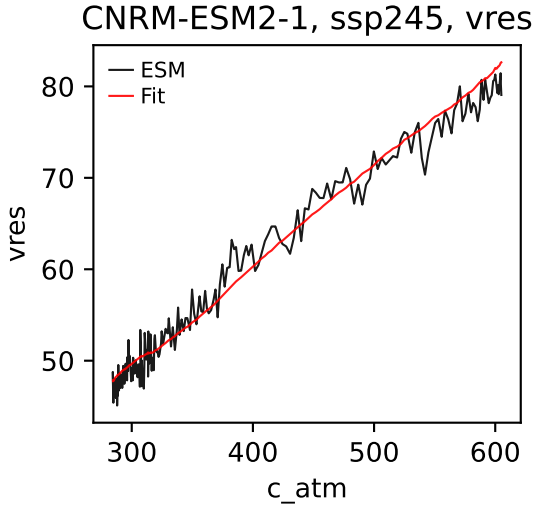

CNRM-ESM2-1, ssp245, Litter, ln(MSE/SIGMA)
218, 0.0000, 226.3033, -0.7903, 0.1029, -0.0504, 0.9000, 0.9105, 0
CNRM-ESM2-1
lit_slow
lit_fast
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
0.90
0.92
0.94
0.96
0.98
1.00
3.36
3.04
2.72
2.40
2.08
1.76
1.44
1.12

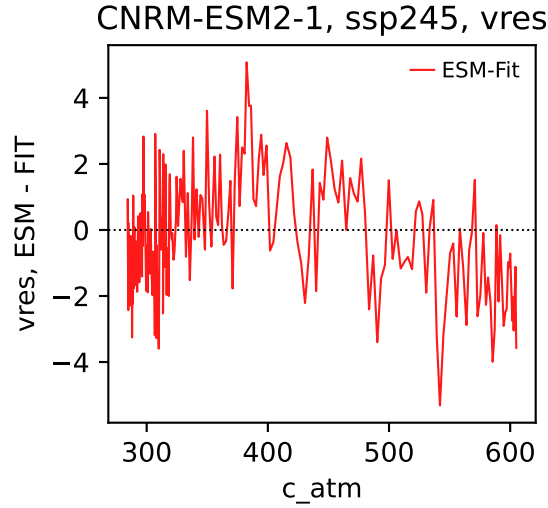

CNRM-ESM2-1, ssp245, vres
ESM
Fit
vres
Year

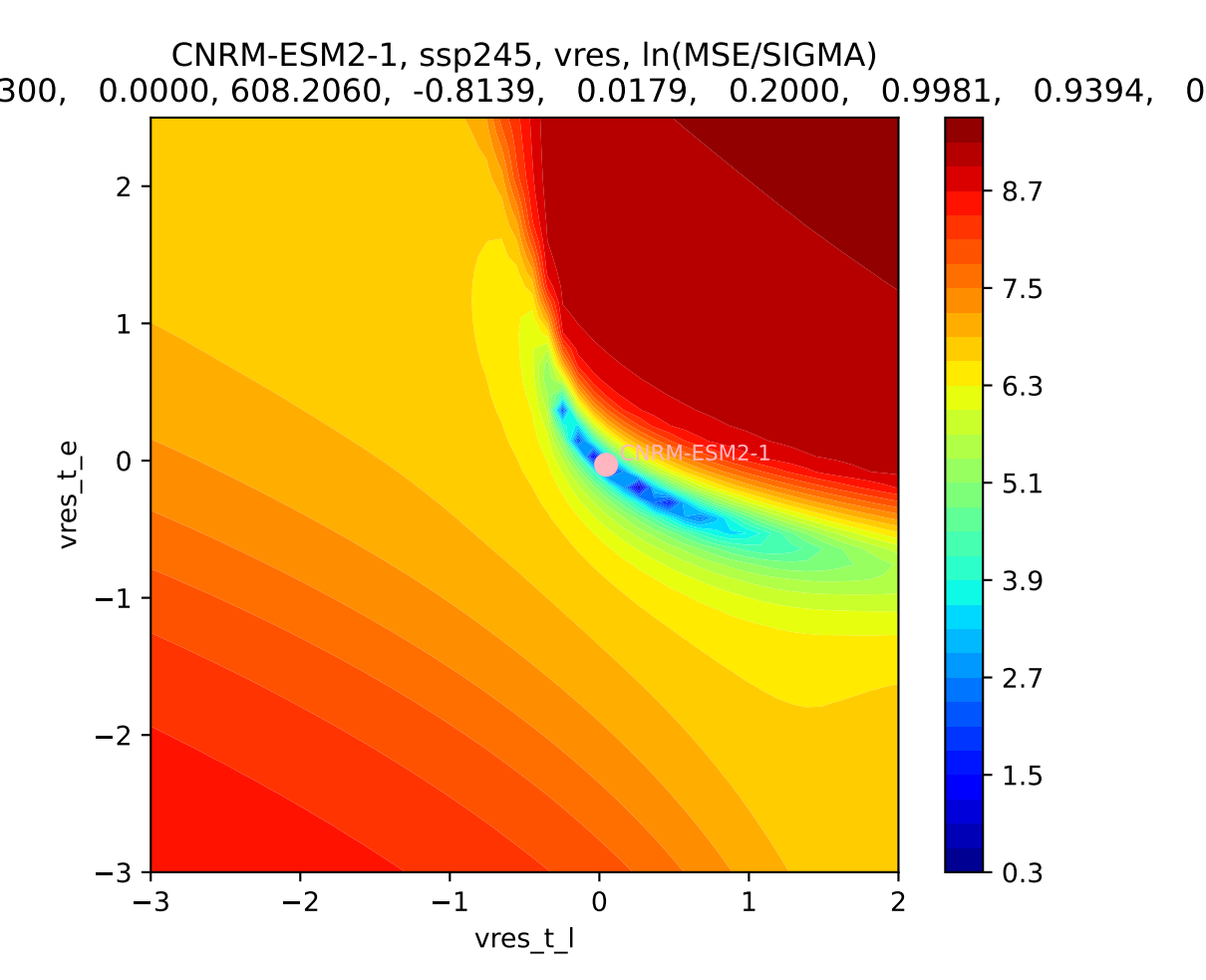

CNRM-ESM2-1, ssp245, vres
ESM-Fit
vres, ESM - FIT
Year

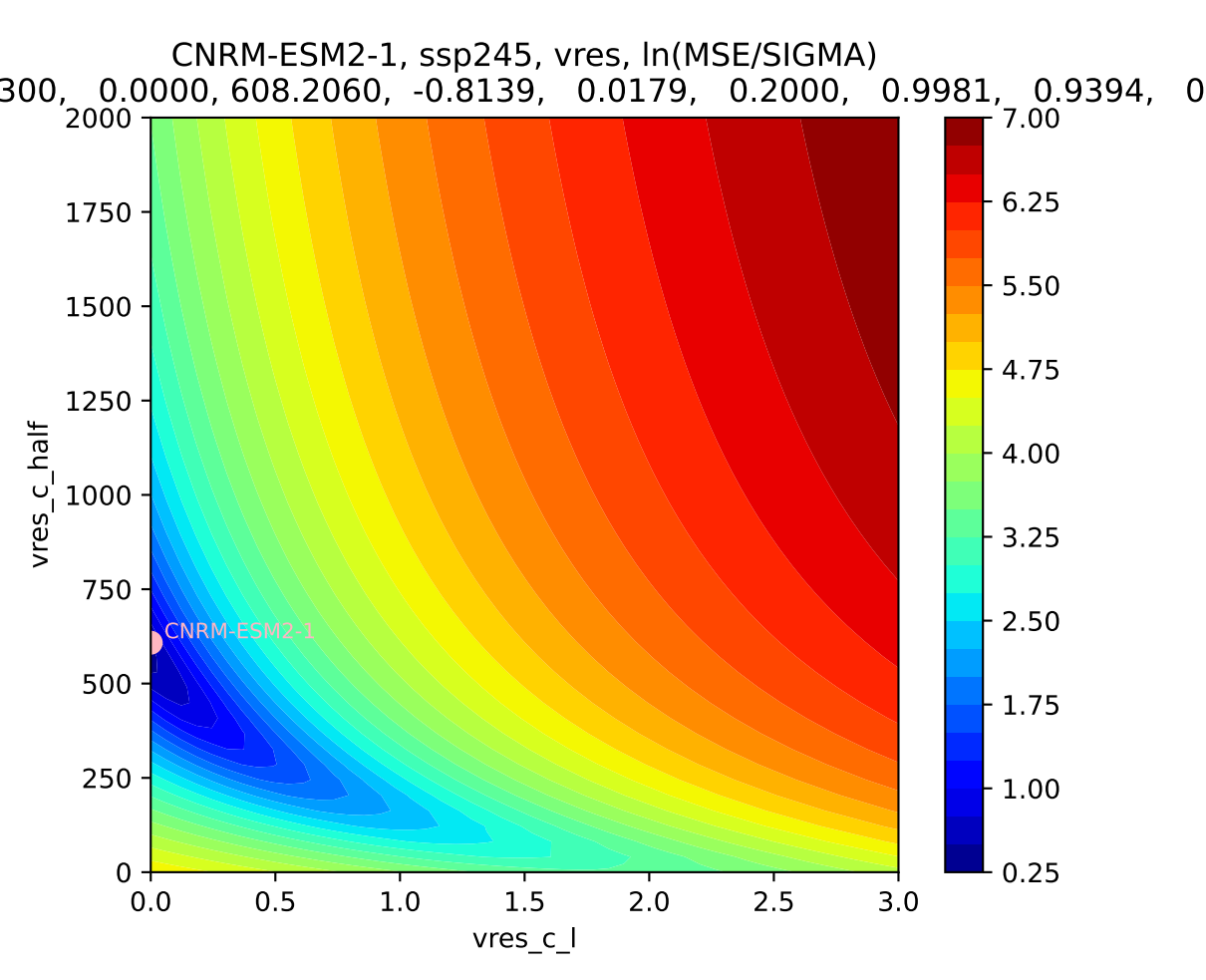

CNRM-ESM2-1, ssp245, vres
ESM
Fit
vres
ΔT

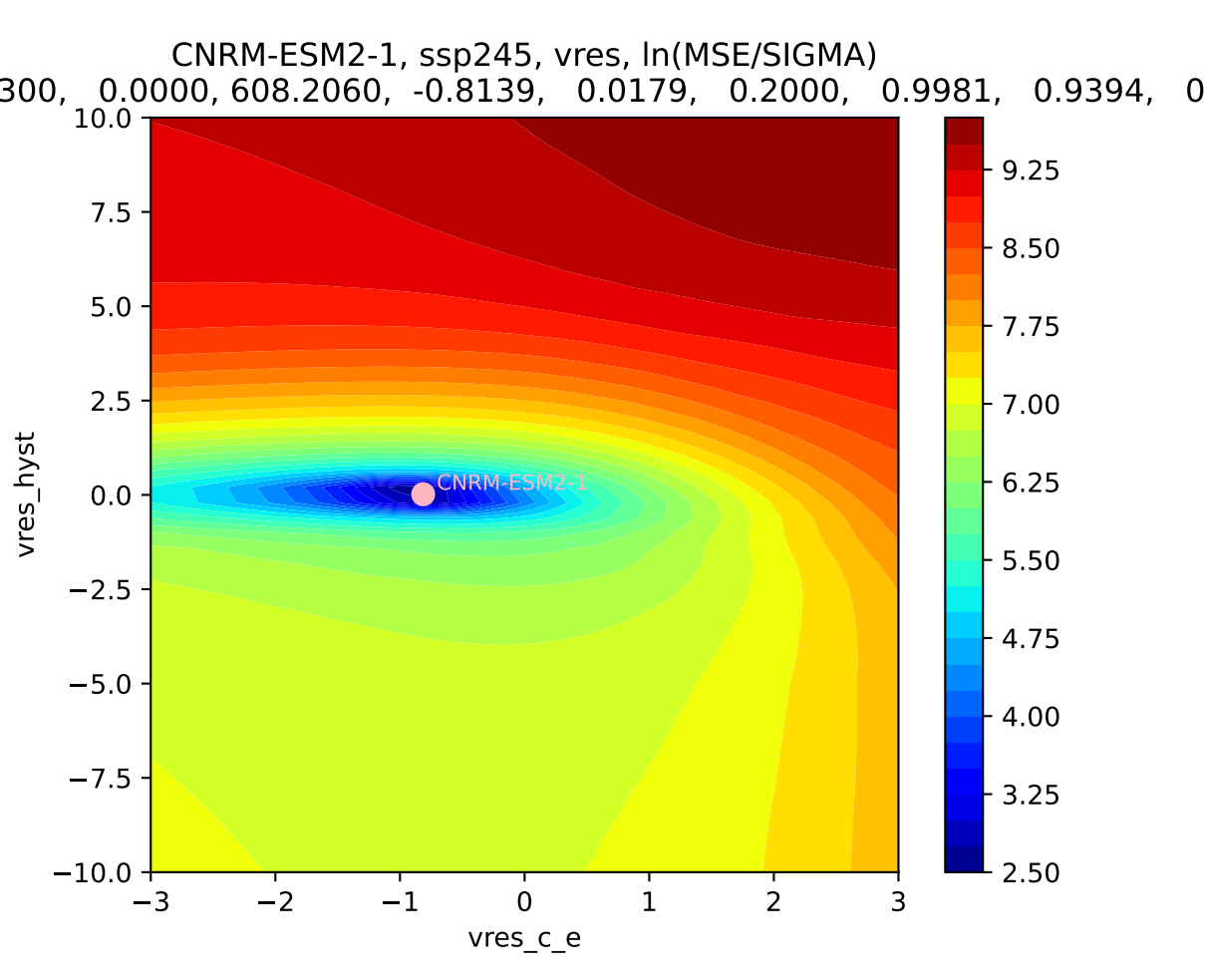

CNRM-ESM2-1, ssp245, vres
ESM-Fit
vres, ESM - FIT
ΔT

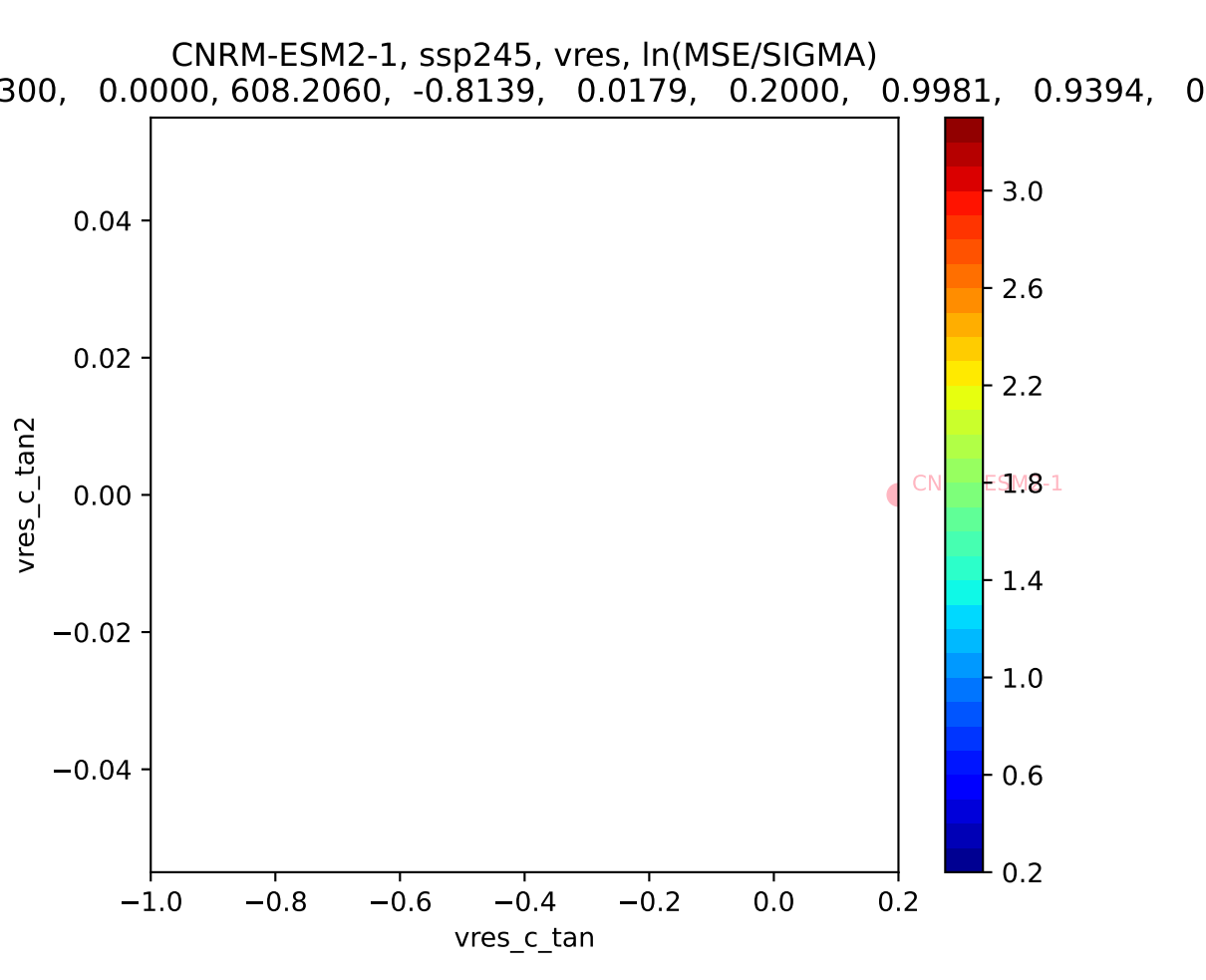

CNRM-ESM2-1, ssp245, vres
ESM
Fit
vres
c_atm

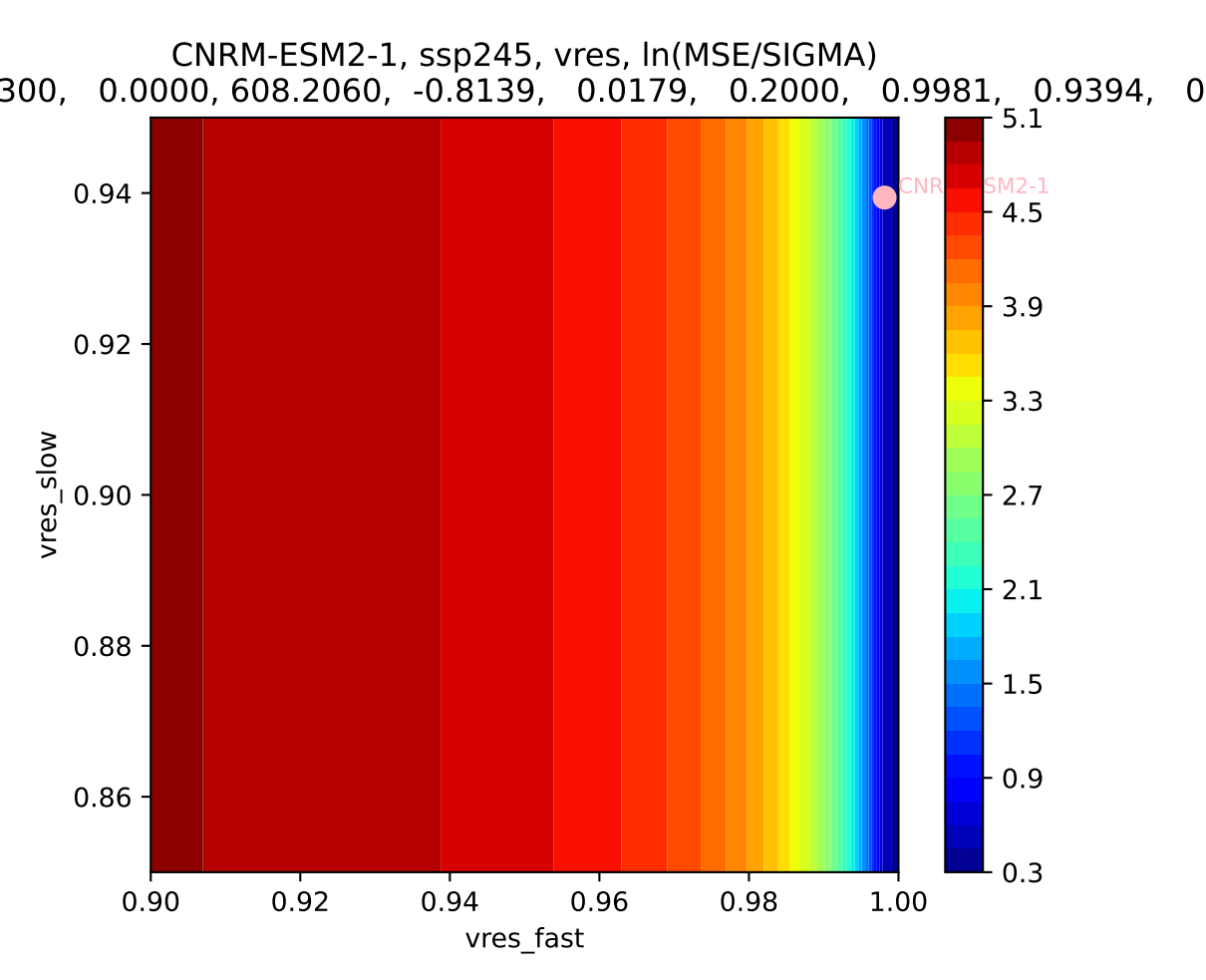

CNRM-ESM2-1, ssp245, vres
ESM-Fit
vres, ESM - FIT
c_atm

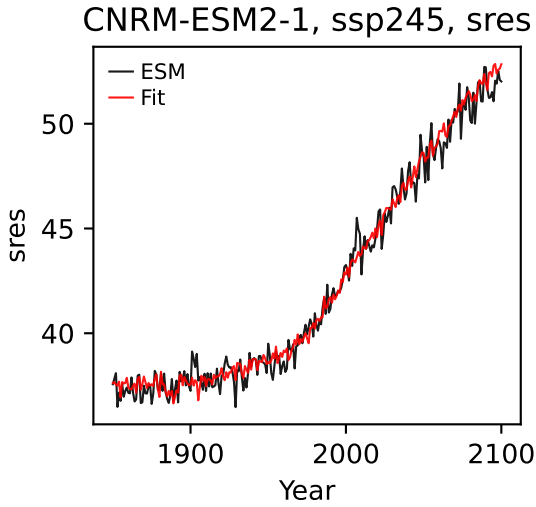

CNRM-ESM2-1, ssp245, vres, ln(MSE/SIGMA)
300, 0.0000, 608.2060, -0.8139, 0.0179, 0.2000, 0.9981, 0.9394, 0
CNRM-ESM2-1
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3

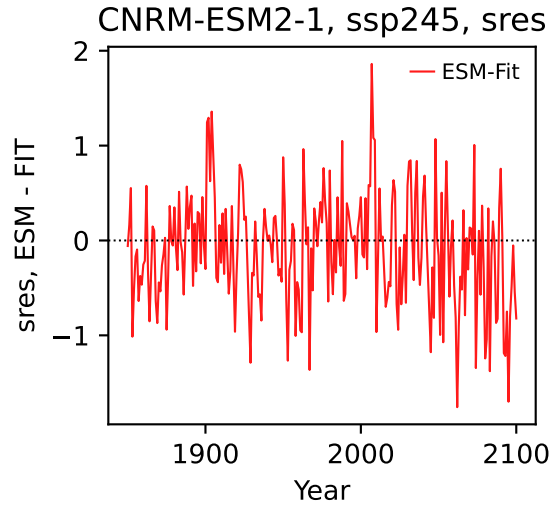

CNRM-ESM2-1, ssp245, vres, ln(MSE/SIGMA)
300, 0.0000, 608.2060, -0.8139, 0.0179, 0.2000, 0.9981, 0.9394, 0
vres_c_half
vres_c_l
CNRM-ESM2-1
0
250
500
750
1000
1250
1500
1750
2000
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0.25
1.00
1.75
2.50
3.25
4.00
4.75
5.50
6.25
7.00

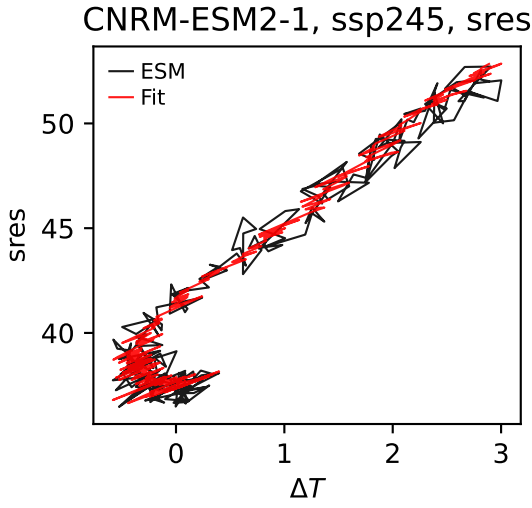

CNRM-ESM2-1, ssp245, vres, ln(MSE/SIGMA)
300, 0.0000, 608.2060, -0.8139, 0.0179, 0.2000, 0.9981, 0.9394, 0
CNRM-ESM2-1
vres_hyst
vres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
9.25
8.50
7.75
7.00
6.25
5.50
4.75
4.00
3.25
2.50

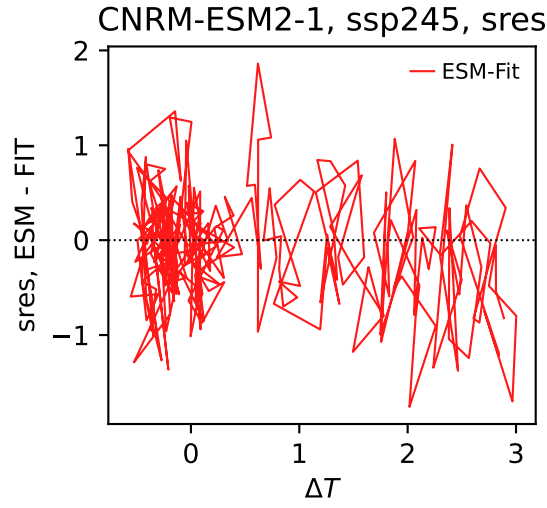

CNRM-ESM2-1, ssp245, vres, ln(MSE/SIGMA)
300, 0.0000, 608.2060, -0.8139, 0.0179, 0.2000, 0.9981, 0.9394, 0
0.04
0.02
0.00
−0.02
−0.04
vres_c_tan2
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
vres_c_tan
3.0
2.6
2.2
1.8
1.4
1.0
0.6
0.2

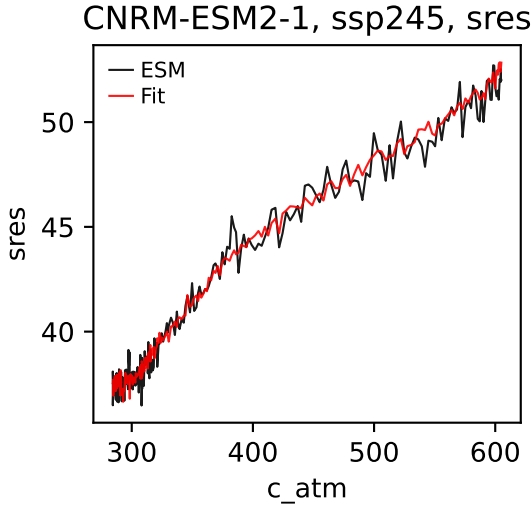

CNRM-ESM2-1, ssp245, vres, ln(MSE/SIGMA)
300, 0.0000, 608.2060, -0.8139, 0.0179, 0.2000, 0.9981, 0.9394, 0
CNRM-ESM2-1
vres_slow
vres_fast
0.94
0.92
0.90
0.88
0.86
0.90
0.92
0.94
0.96
0.98
1.00
5.1
4.5
3.9
3.3
2.7
2.1
1.5
0.9
0.3

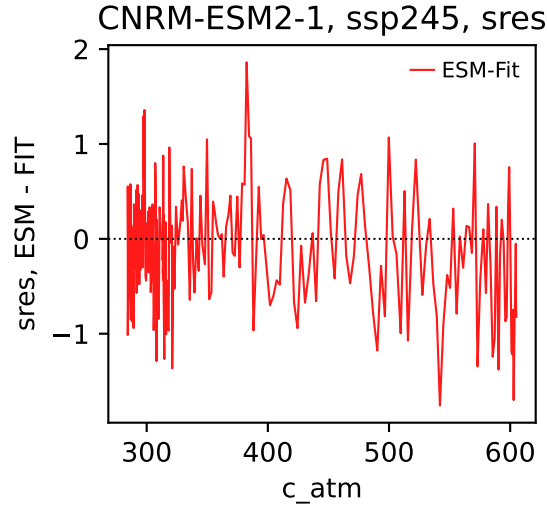

CNRM-ESM2-1, ssp245, sres
ESM
Fit
sres
Year

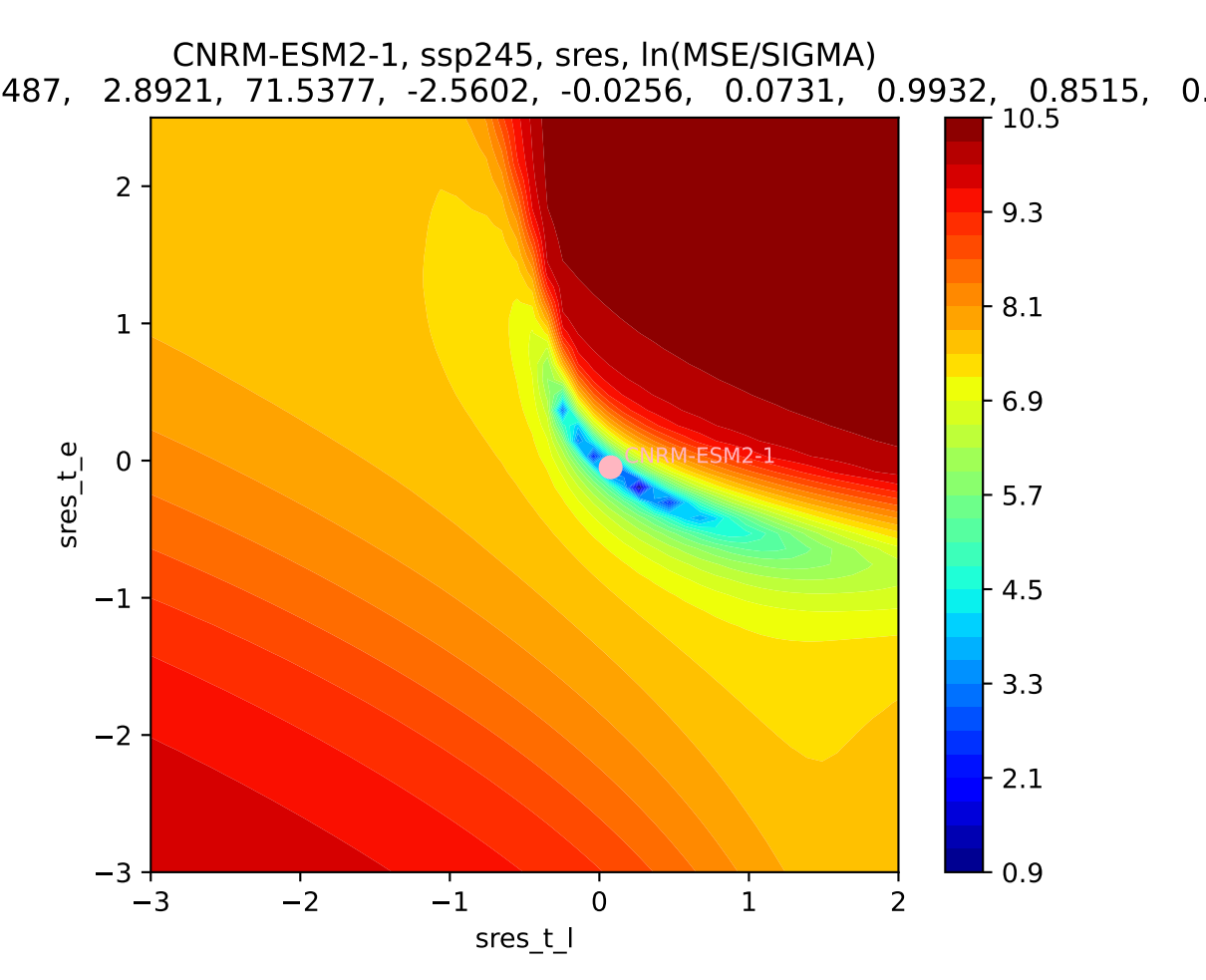

CNRM-ESM2-1, ssp245, sres
ESM-Fit
sres, ESM - FIT
Year

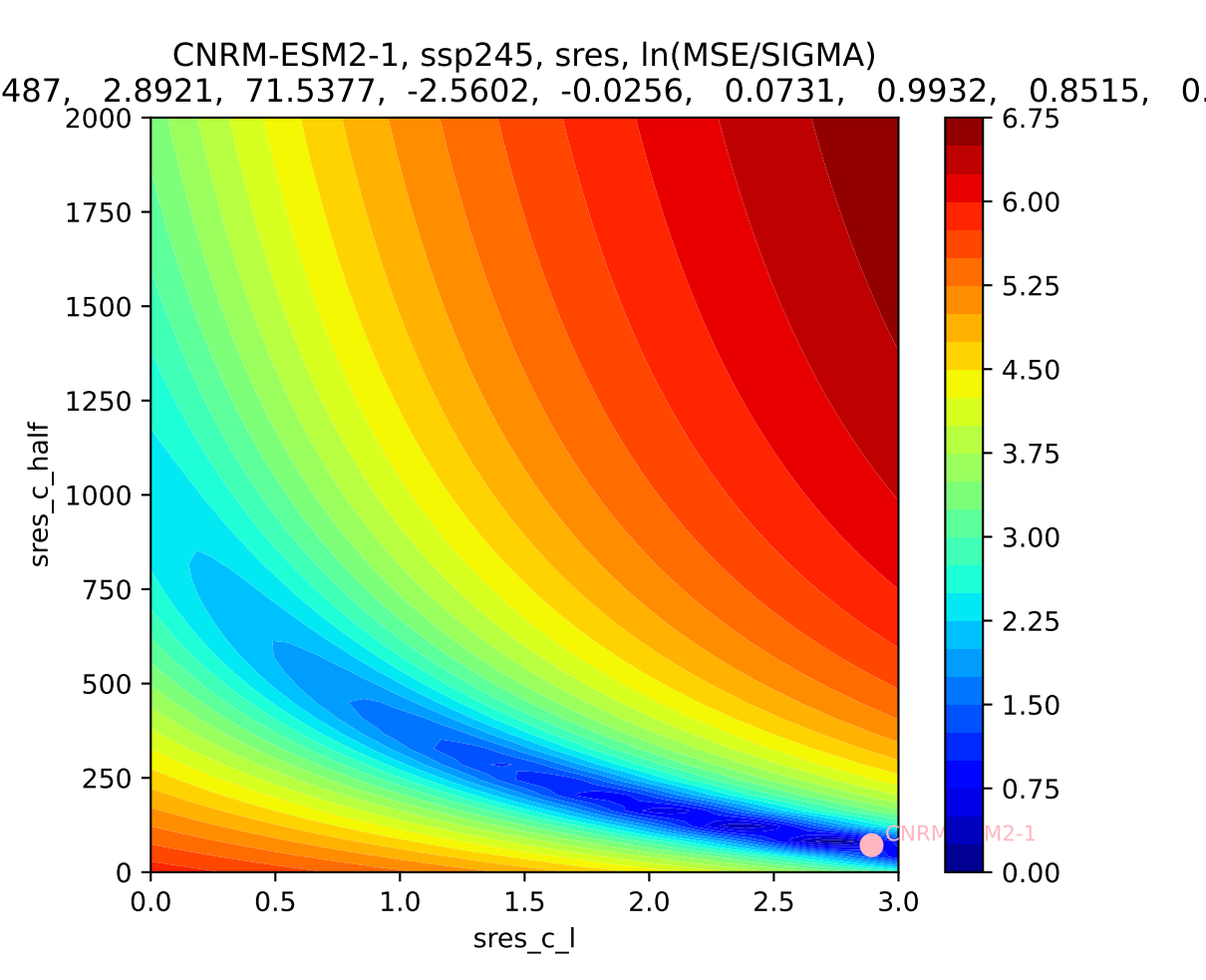

CNRM-ESM2-1, ssp245, sres
ESM
Fit
sres
ΔT

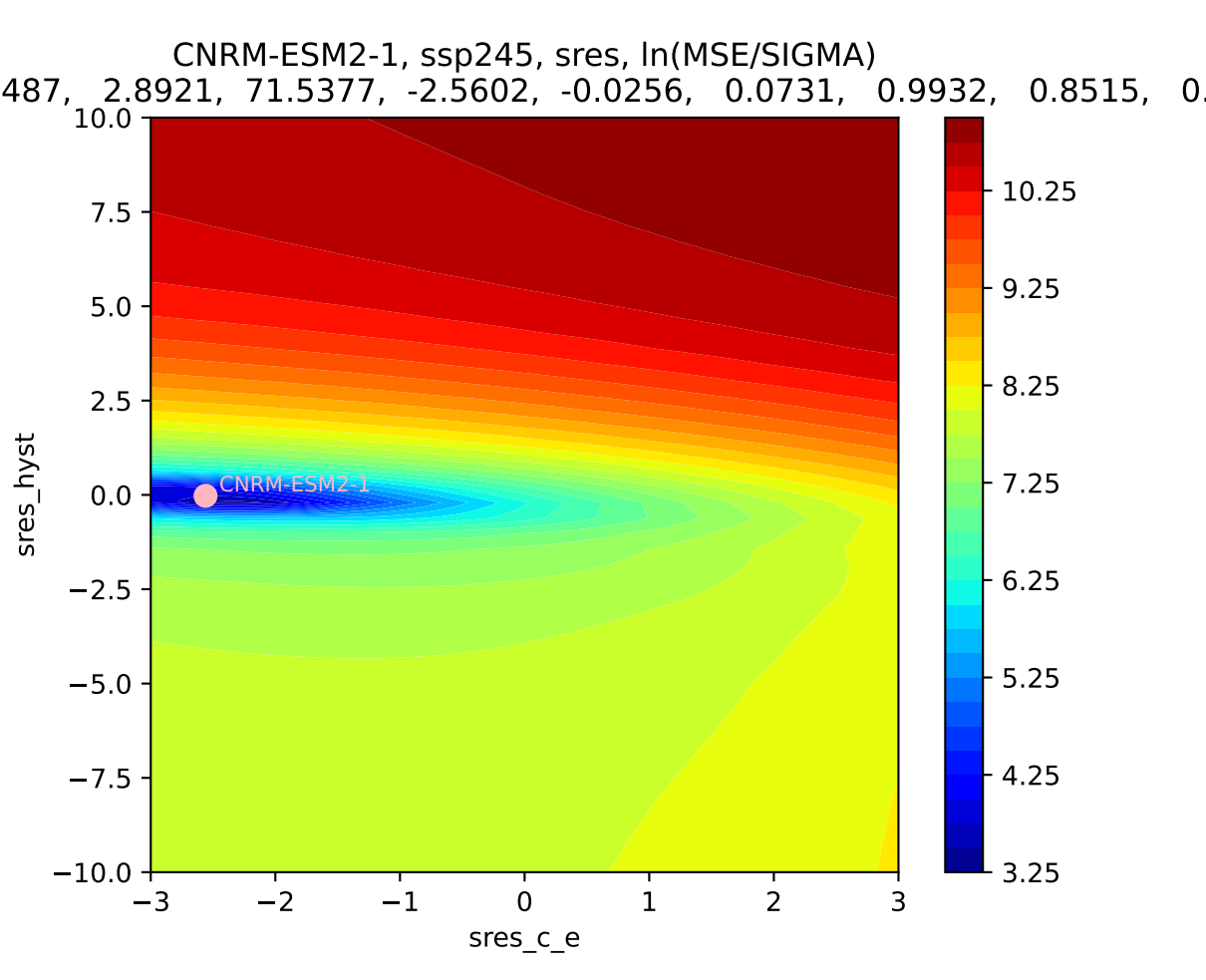

CNRM-ESM2-1, ssp245, sres
ESM-Fit
sres, ESM - FIT
ΔT


CNRM-ESM2-1, ssp245, sres
ESM
Fit
sres
c_atm


CNRM-ESM2-1, ssp245, sres
ESM-Fit
sres, ESM - FIT
c_atm


CNRM-ESM2-1, ssp245, sres, ln(MSE/SIGMA)
487, 2.8921, 71.5377, -2.5602, -0.0256, 0.0731, 0.9932, 0.8515, 0.
CNRM-ESM2-1
sres_t_e
sres_t_l
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
10.5
9.3
8.1
6.9
5.7
4.5
3.3
2.1
0.9


CNRM-ESM2-1, ssp245, sres, ln(MSE/SIGMA)
487, 2.8921, 71.5377, -2.5602, -0.0256, 0.0731, 0.9932, 0.8515, 0.
sres_c_half
sres_c_l
2000
1750
1500
1250
1000
750
500
250
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
6.75
6.00
5.25
4.50
3.75
3.00
2.25
1.50
0.75
0.00
CNRM-ESM2-1


CNRM-ESM2-1, ssp245, sres, ln(MSE/SIGMA)
487, 2.8921, 71.5377, -2.5602, -0.0256, 0.0731, 0.9932, 0.8515, 0.
CNRM-ESM2-1
sres_hyst
sres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
10.25
9.25
8.25
7.25
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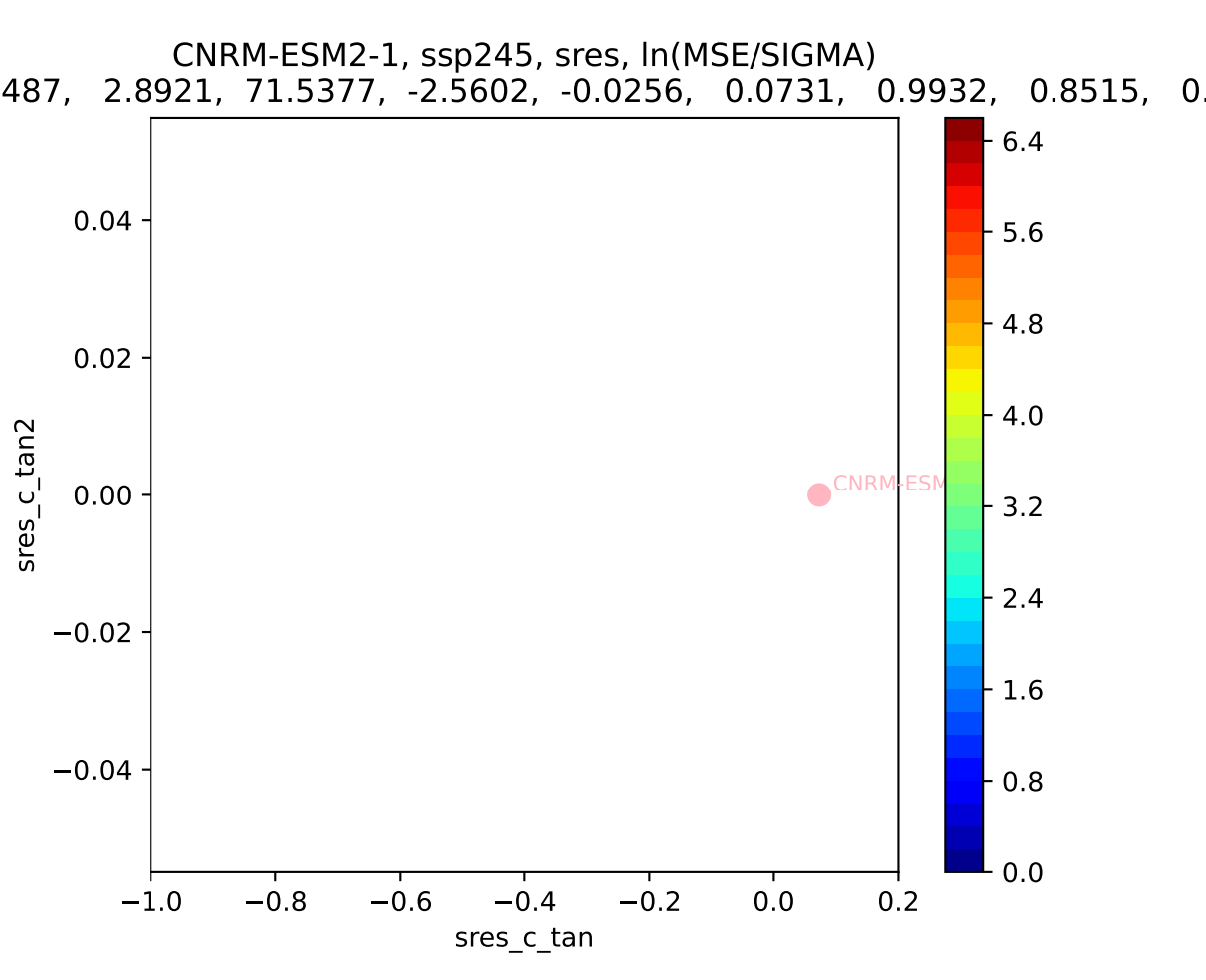
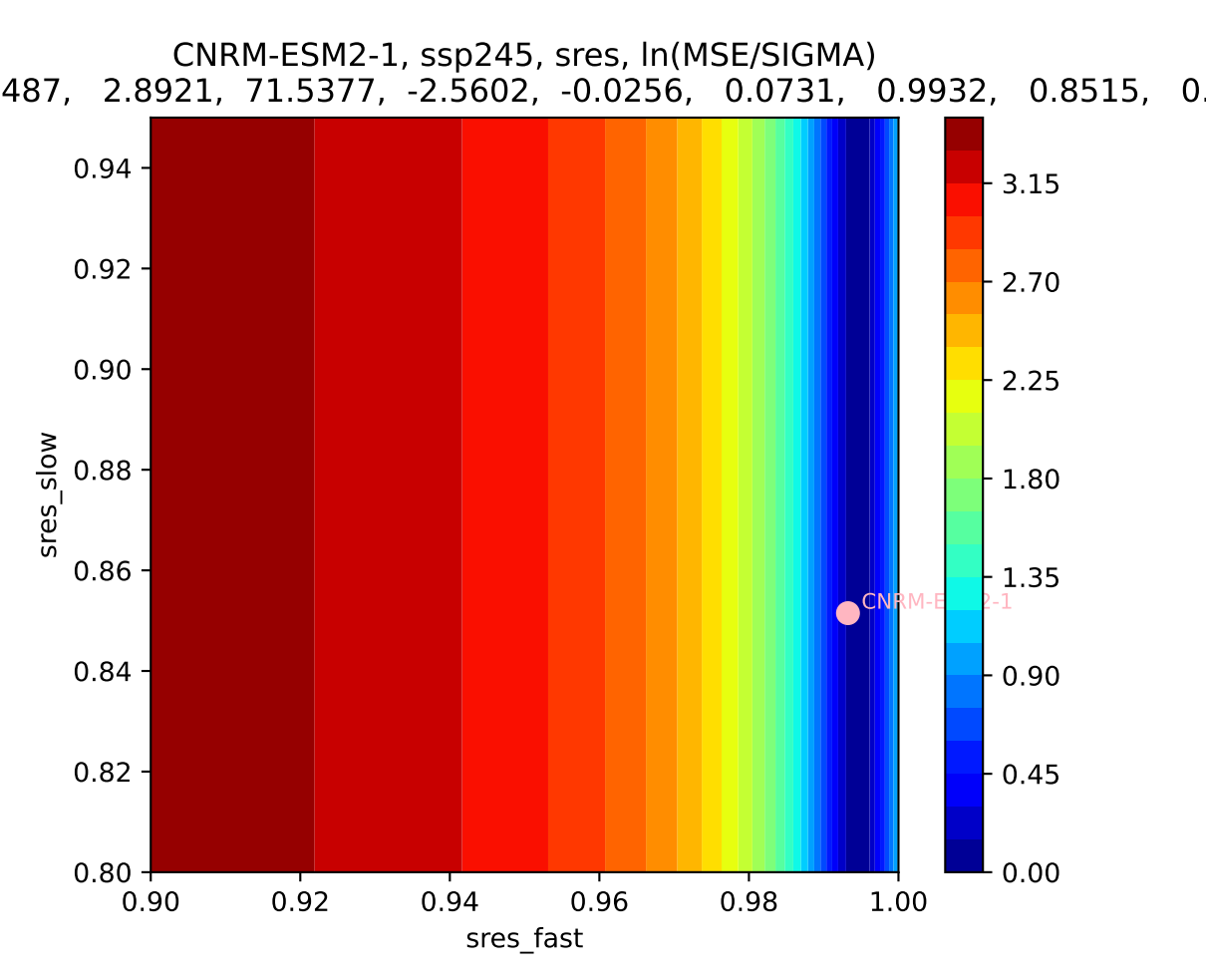
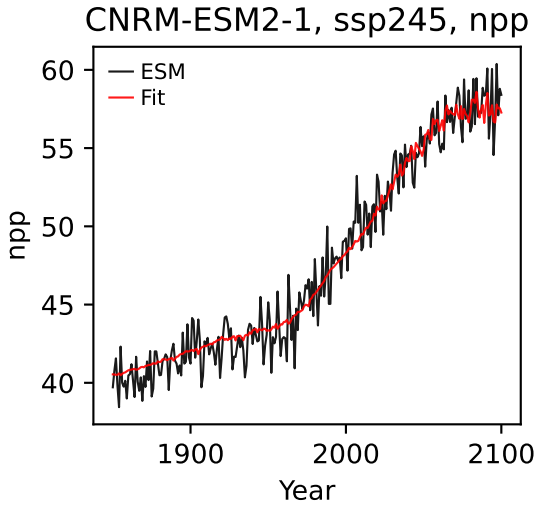
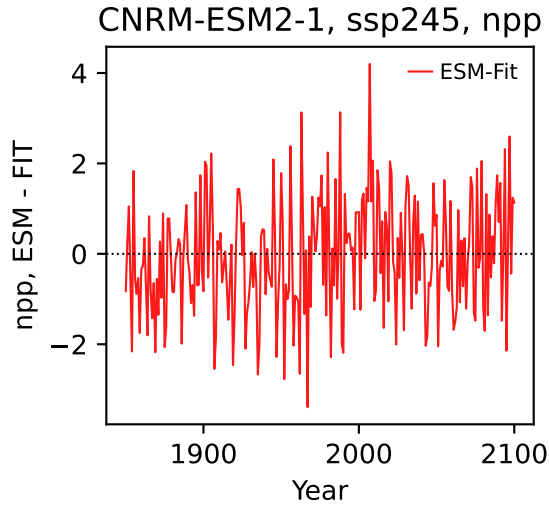
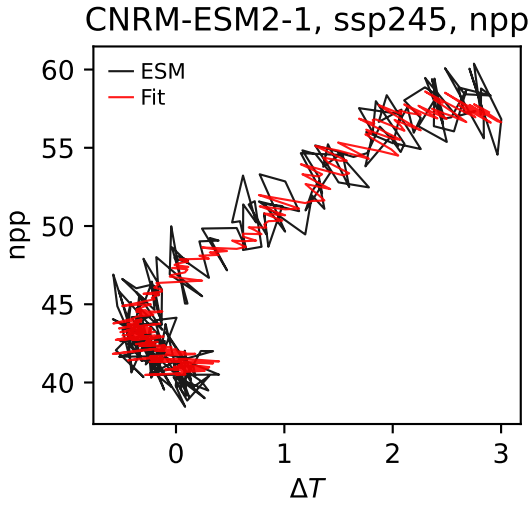
5.25
4.25
3.25

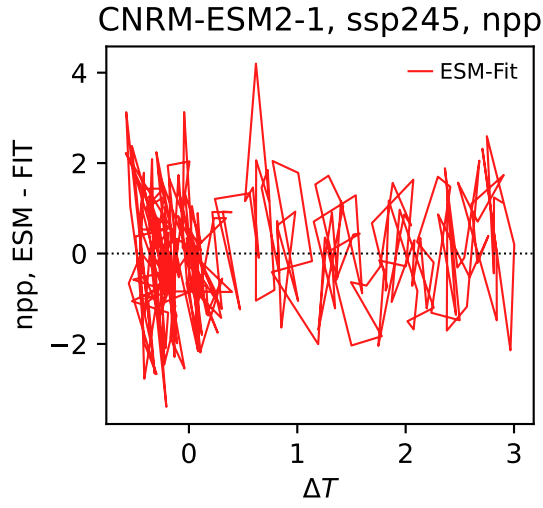

CNRM-ESM2-1, ssp245, sres, ln(MSE/SIGMA)
487, 2.8921, 71.5377, -2.5602, -0.0256, 0.0731, 0.9932, 0.8515, 0.
0.04
0.02
0.00
−0.02
−0.04
sres_c_tan2
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
sres_c_tan
6.4
5.6
4.8
4.0
3.2
2.4
1.6
0.8
0.0

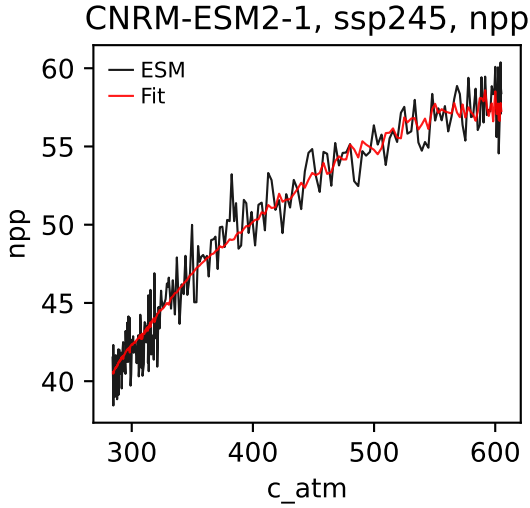

CNRM-ESM2-1, ssp245, sres, ln(MSE/SIGMA)
487, 2.8921, 71.5377, -2.5602, -0.0256, 0.0731, 0.9932, 0.8515, 0.
sres_slow
sres_fast
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
0.90
0.92
0.94
0.96
0.98
1.00
3.15
2.70
2.25
1.80
1.35
0.90
0.45
0.00

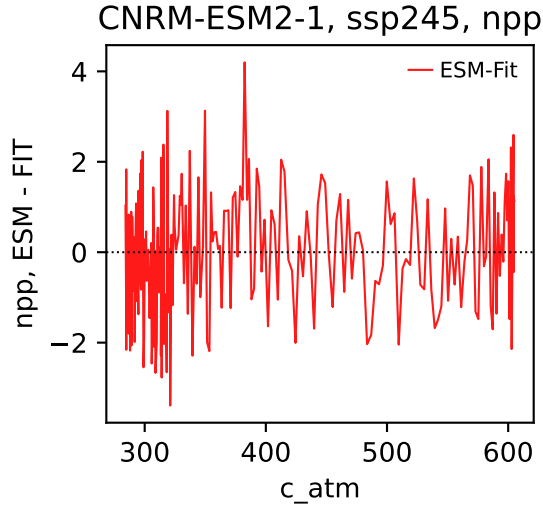

CNRM-ESM2-1, ssp245, npp
ESM
Fit
npp
Year

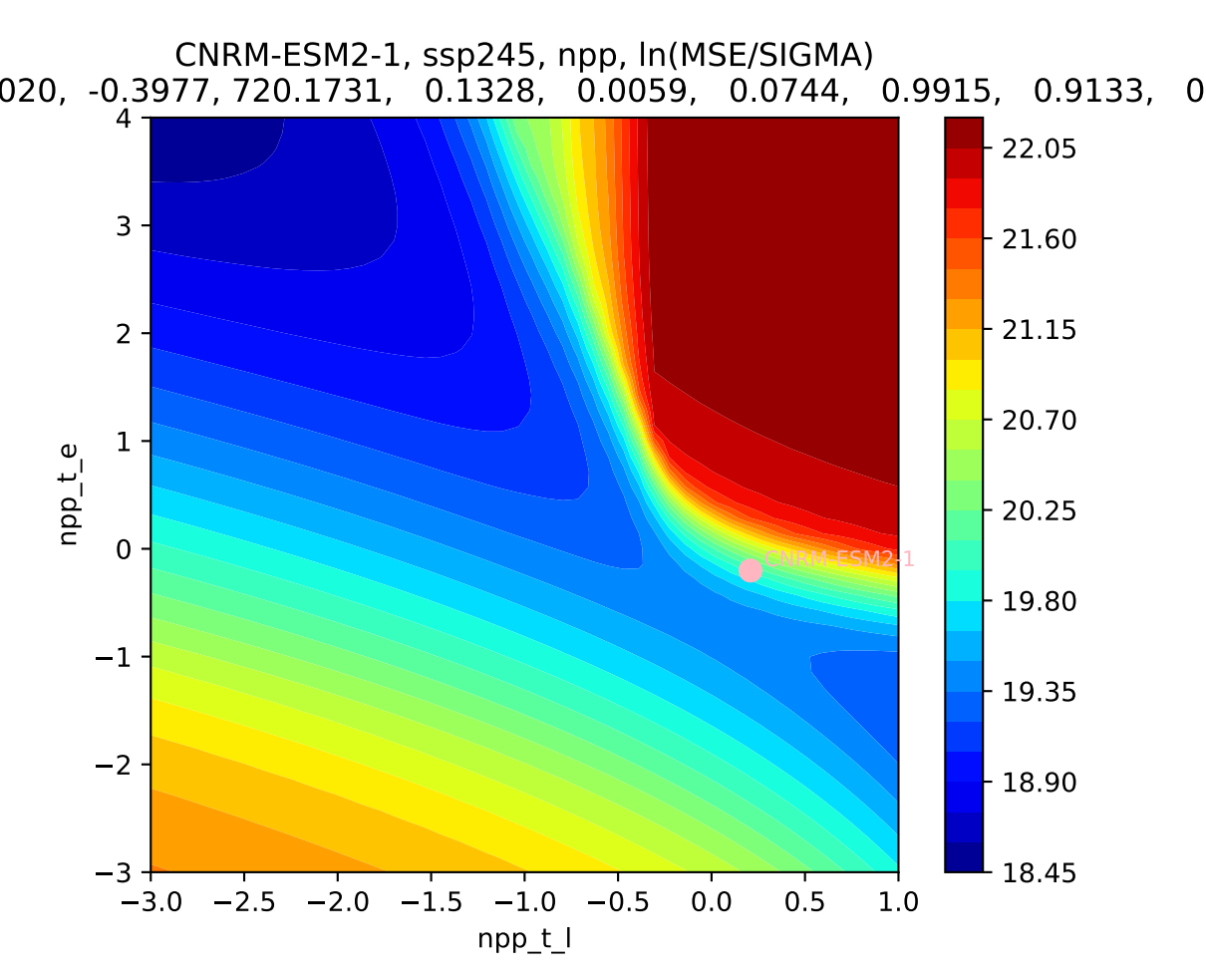

CNRM-ESM2-1, ssp245, npp
ESM-Fit
npp, ESM - FIT
Year

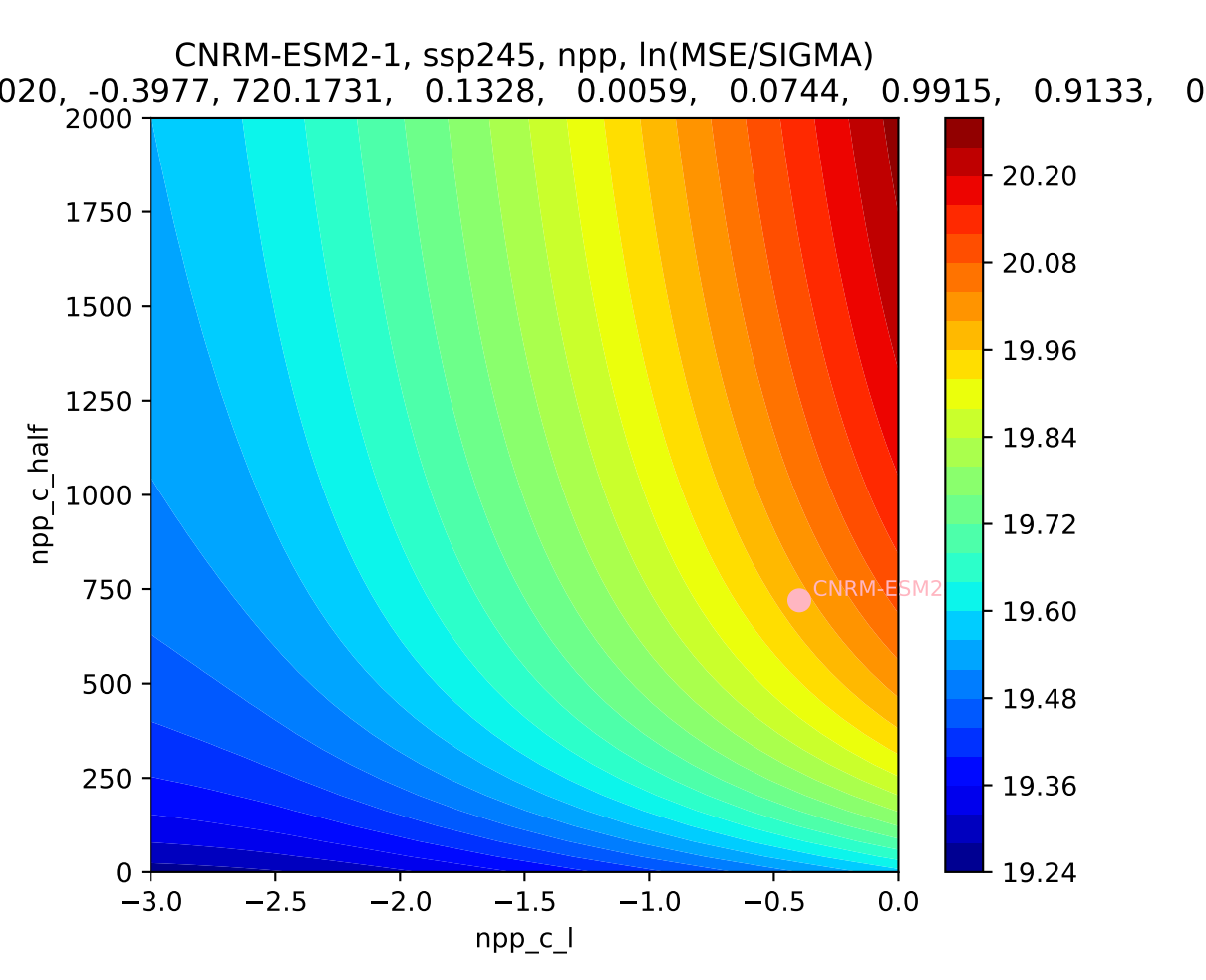

CNRM-ESM2-1, ssp245, npp
ESM
Fit
npp
ΔT

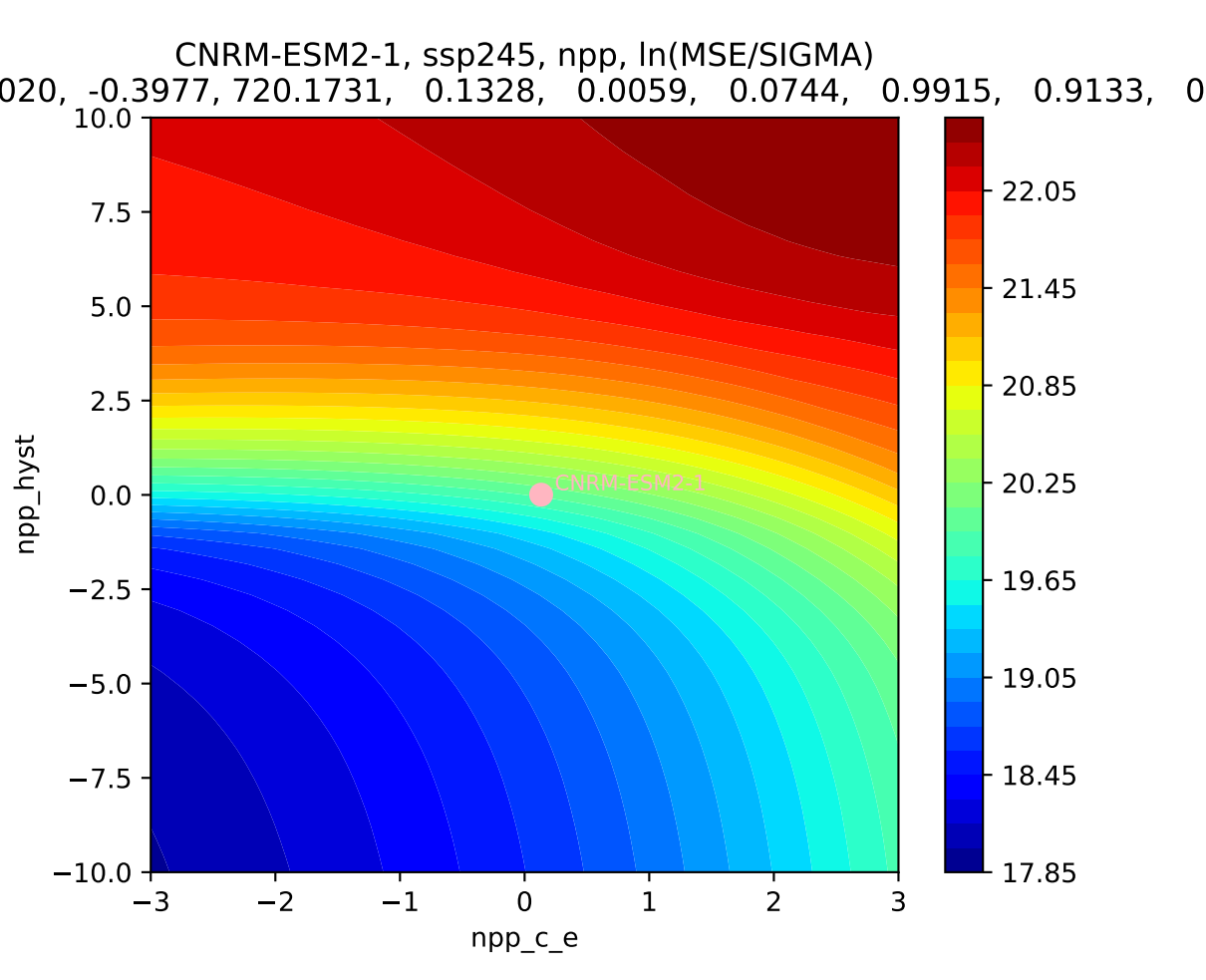

CNRM-ESM2-1, ssp245, npp
ESM-Fit
npp, ESM - FIT
ΔT

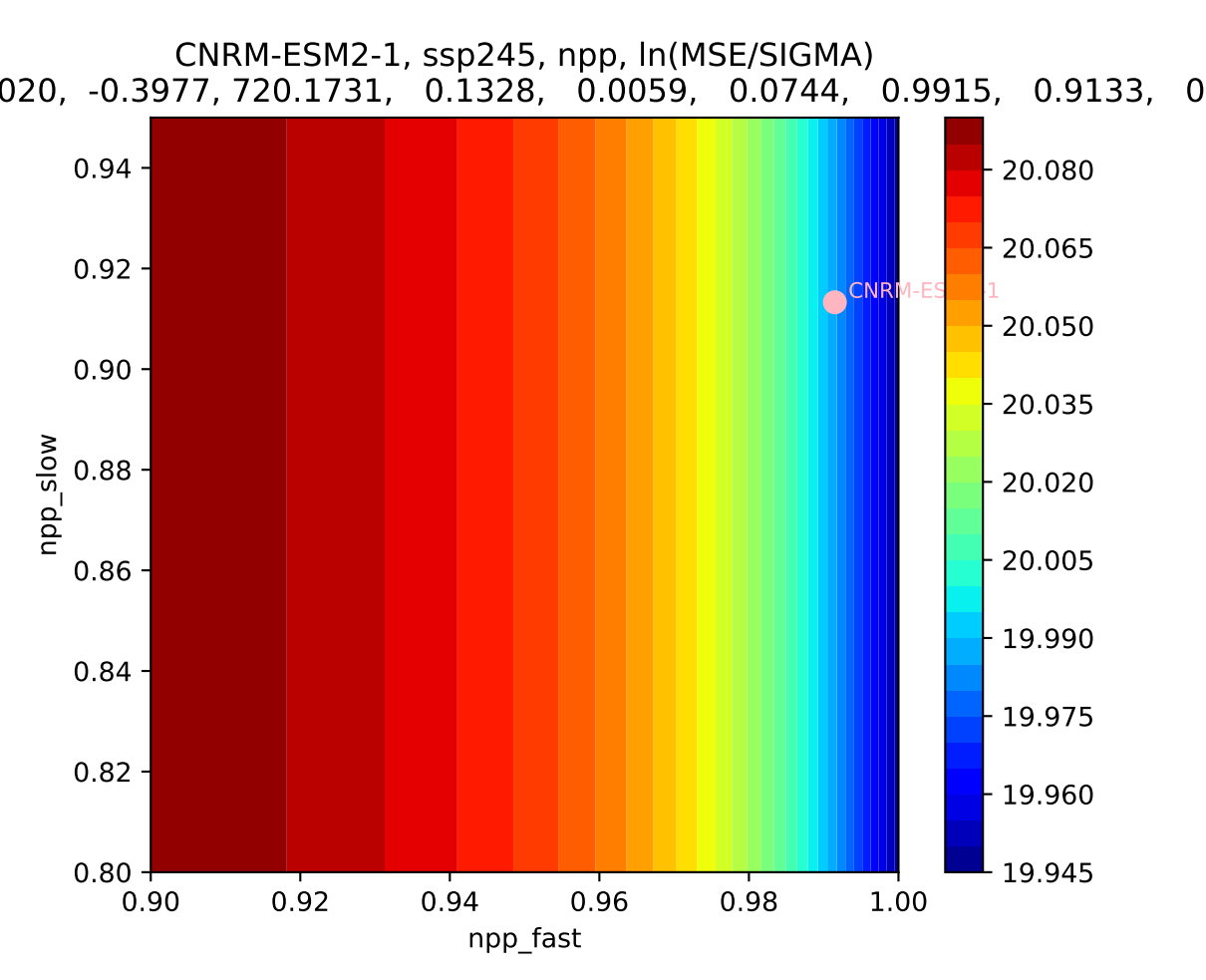

CNRM-ESM2-1, ssp245, npp
ESM
Fit
npp
c_atm

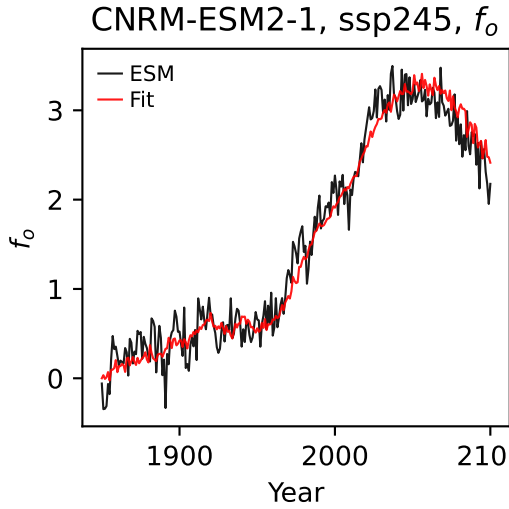

CNRM-ESM2-1, ssp245, npp
ESM-Fit
npp, ESM - FIT
c_atm

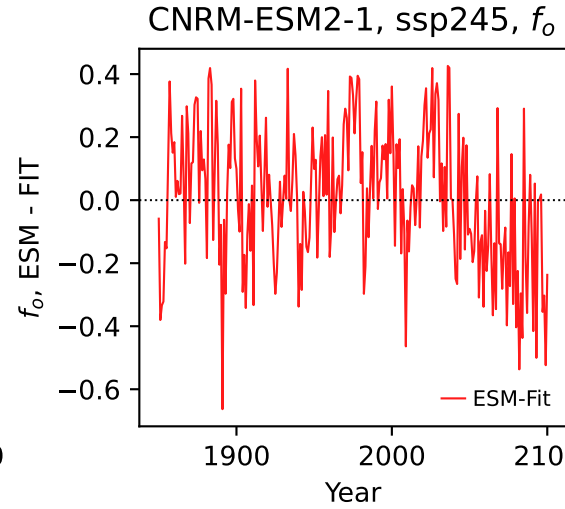

CNRM-ESM2-1, ssp245, npp, ln(MSE/SIGMA)
020, -0.3977, 720.1731, 0.1328, 0.0059, 0.0744, 0.9915, 0.9133, 0
npp_t_e
npp_t_l
CNRM-ESM2-1
22.05
21.60
21.15
20.70
20.25
19.80
19.35
18.90
18.45

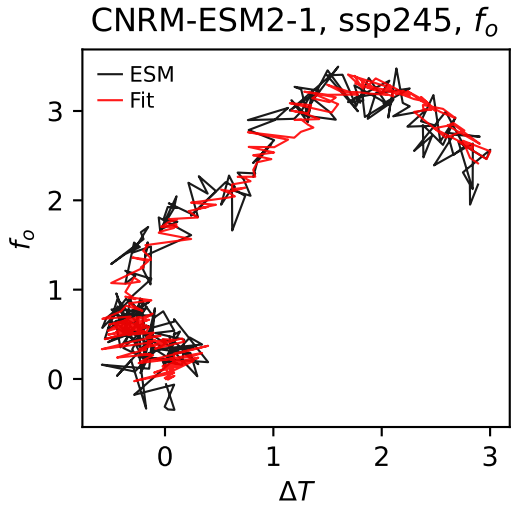

CNRM-ESM2-1, ssp245, npp, ln(MSE/SIGMA)
020, -0.3977, 720.1731, 0.1328, 0.0059, 0.0744, 0.9915, 0.9133, 0
2000
1750
1500
1250
1000
750
500
250
0
npp_c_half
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
npp_c_l
CNRM-ESM2
20.20
20.08
19.96
19.84
19.72
19.60
19.48
19.36
19.24

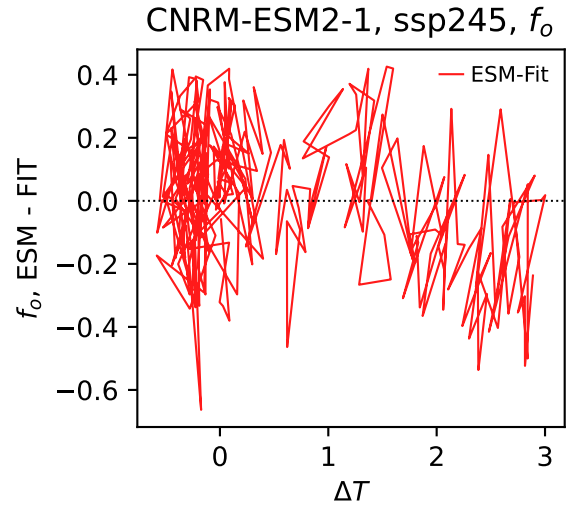

CNRM-ESM2-1, ssp245, npp, ln(MSE/SIGMA)
020, -0.3977, 720.1731, 0.1328, 0.0059, 0.0744, 0.9915, 0.9133, 0
CNRM-ESM2-1
npp_hyst
npp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
22.05
21.45
20.85
20.25
19.65
19.05
18.45
17.85

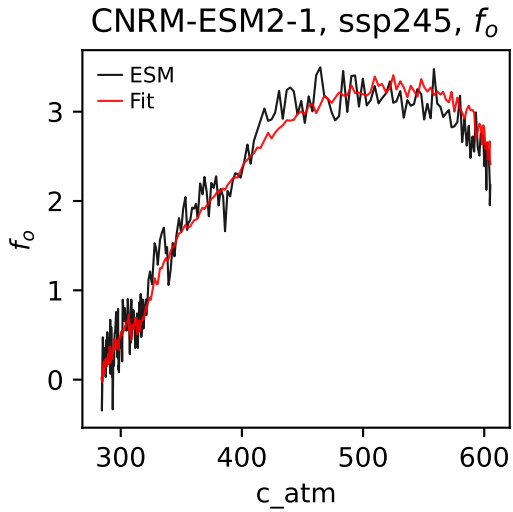

CNRM-ESM2-1, ssp245, npp, ln(MSE/SIGMA)
020, -0.3977, 720.1731, 0.1328, 0.0059, 0.0744, 0.9915, 0.9133, 0
CNRM-ES 1
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
npp_slow
0.90
0.92
0.94
0.96
0.98
1.00
npp_fast
20.080
20.065
20.050
20.035
20.020
20.005
19.990
19.975
19.960
19.945

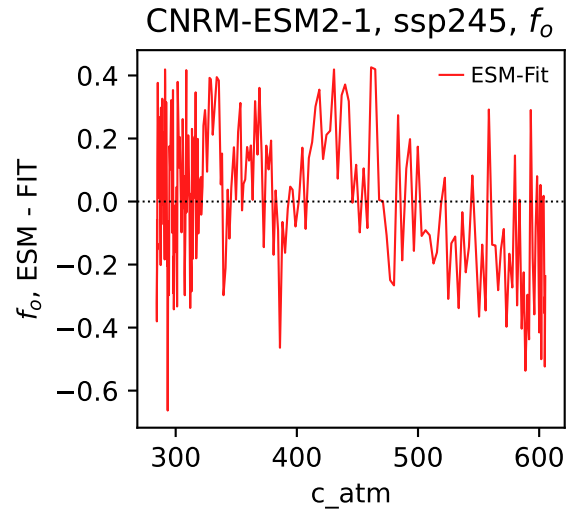

CNRM-ESM2-1, ssp245, f_o
ESM
Fit
f_o
Year

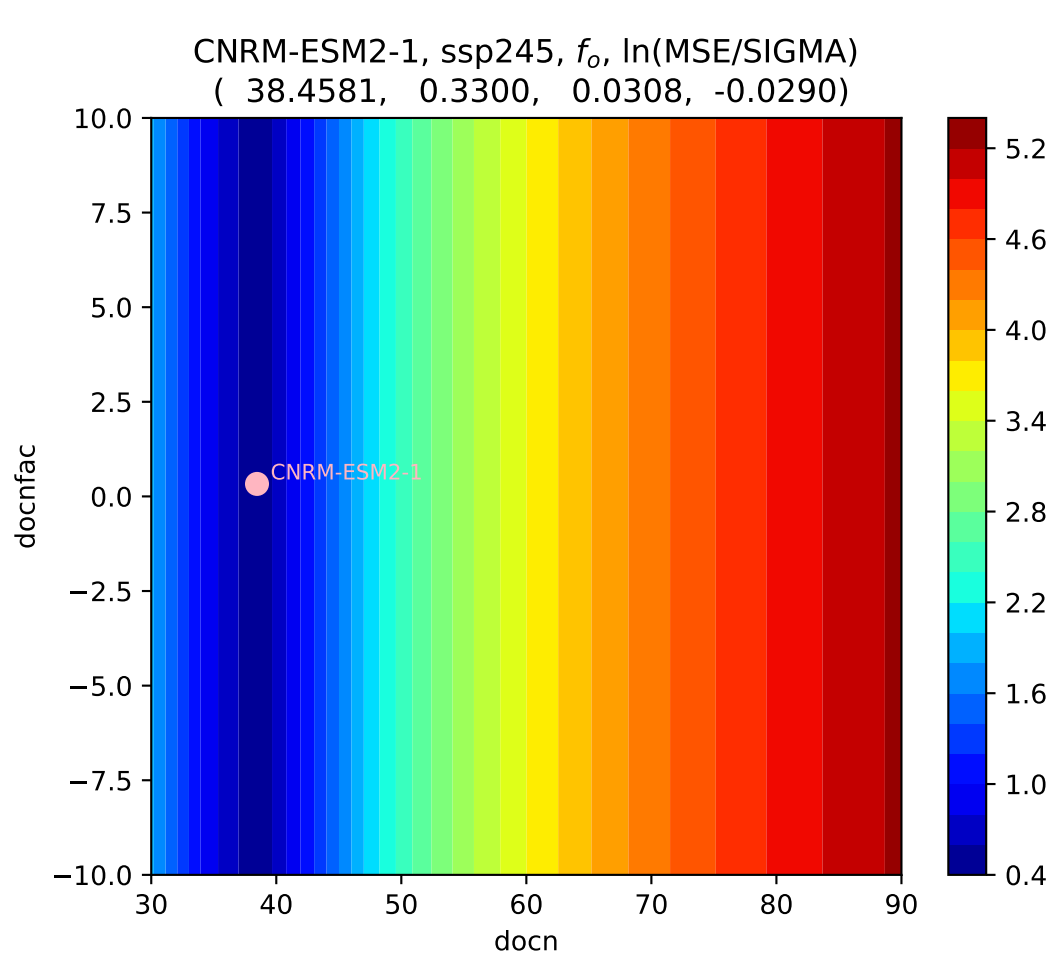

CNRM-ESM2-1, ssp245, f_o
f_o, ESM - FIT
ESM-Fit
Year

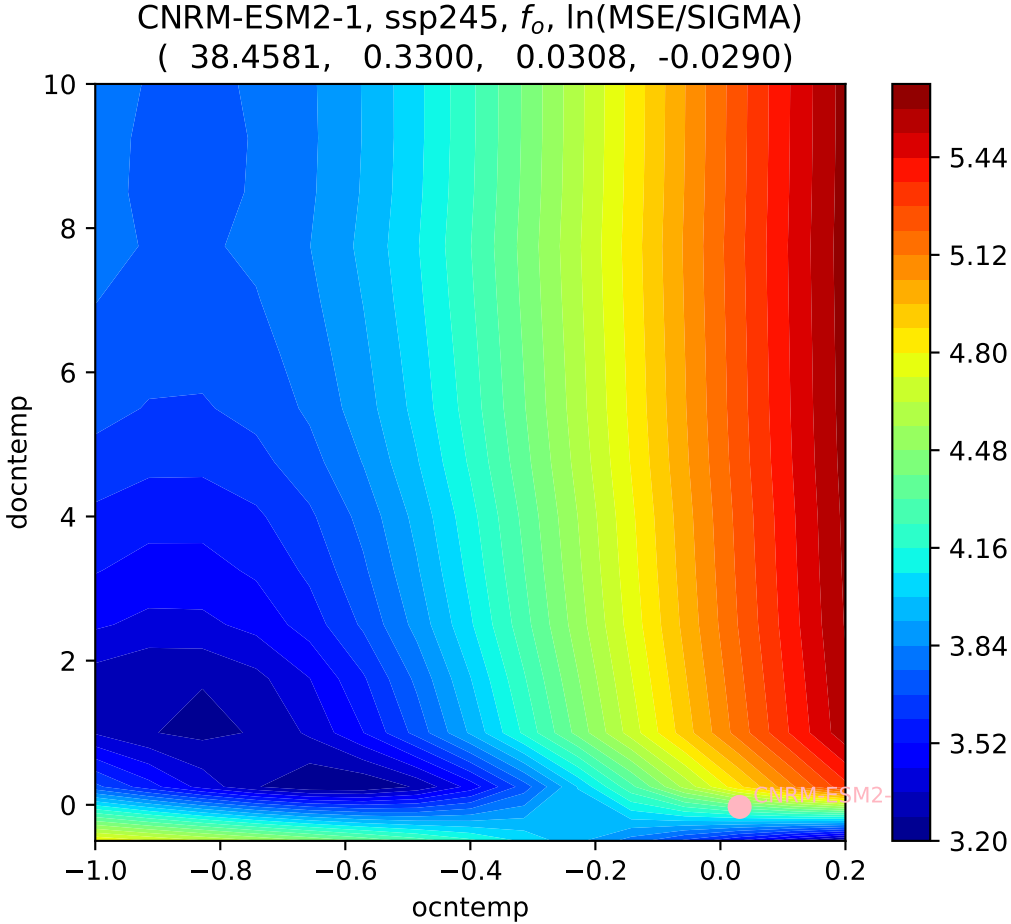

CNRM-ESM2-1, ssp245, f_o
ESM
Fit
f_o
ΔT


CNRM-ESM2-1, ssp245, f_o
f_o, ESM - FIT
ESM-Fit
ΔT


CNRM-ESM2-1, ssp245, f_o
ESM
Fit
f_o
c_atm


CNRM-ESM2-1, ssp245, f_o
f_o, ESM - FIT
ESM-Fit
c_atm


CNRM-ESM2-1, ssp245, f_o, ln(MSE/SIGMA)
(38.4581, 0.3300, 0.0308, -0.0290)
CNRM-ESM2-1
docnfac
docn
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
30
40
50
60
70
80
90
5.2
4.6
4.0
3.4
2.8
2.2
1.6
1.0
0.4


CNRM-ESM2-1, ssp245, f_o, ln(MSE/SIGMA)
(38.4581, 0.3300, 0.0308, -0.0290)
docntemp
ocntemp
10
8
6
4
2
0
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
5.44
5.12
4.80
4.48
4.16
3.84
3.52
3.20
CNRM-ESM2-