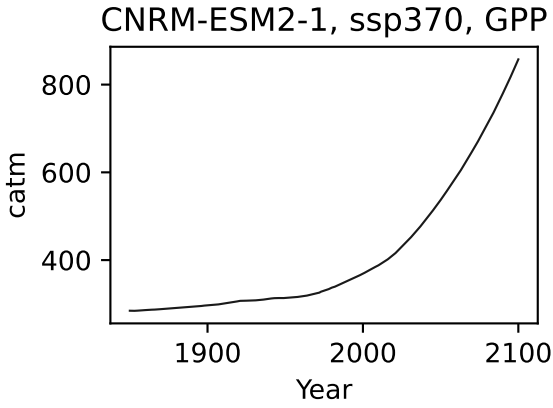
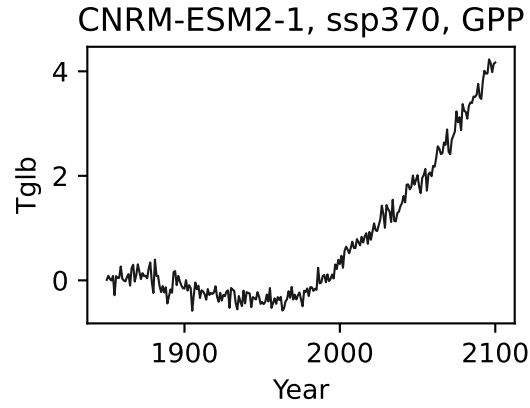
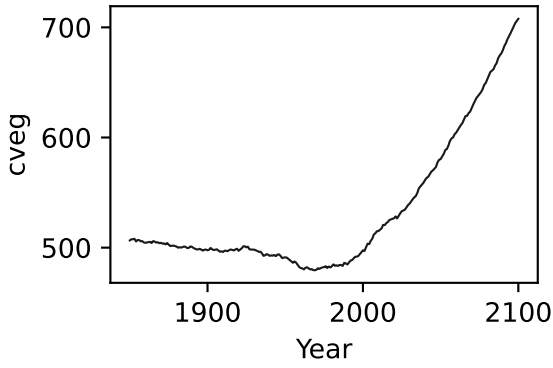
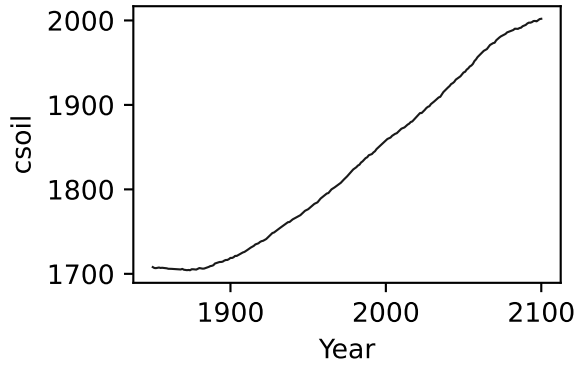
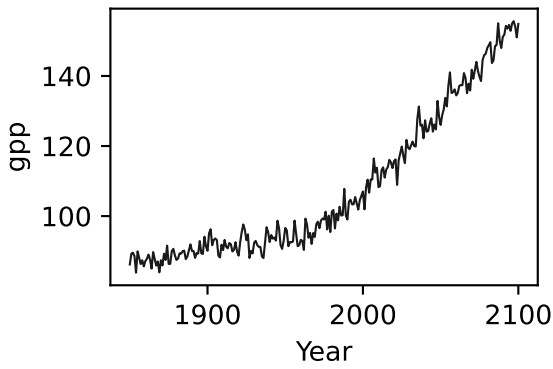
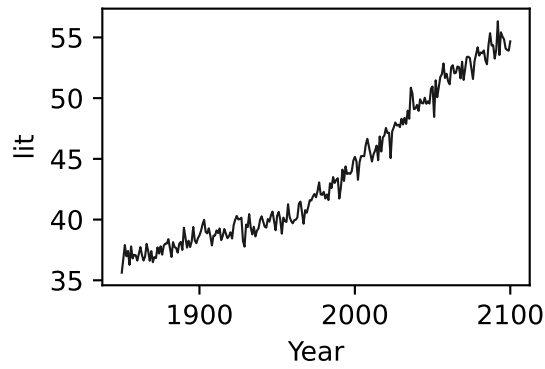

CNRM-ESM2-1, ssp370, GPP
catm
800
600
400
1900
2000
2100
Year

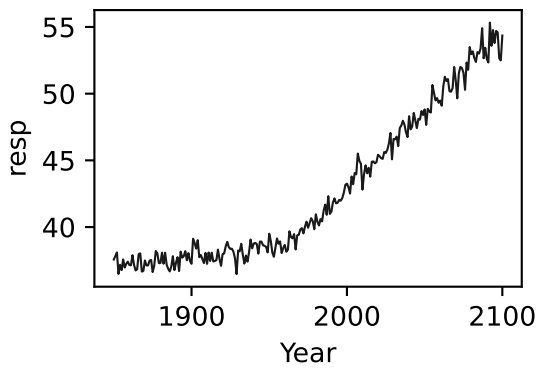

CNRM-ESM2-1, ssp370, GPP
Tglb
4
2
0
1900
2000
2100
Year

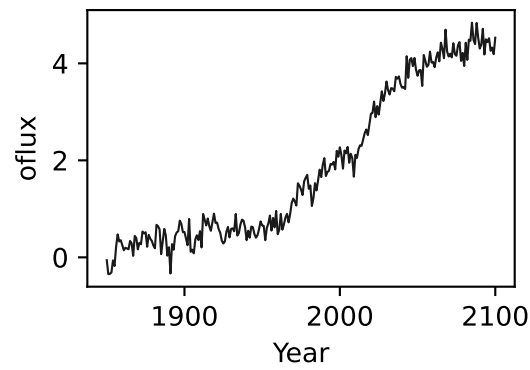

cveg
700
600
500
1900
2000
2100
Year

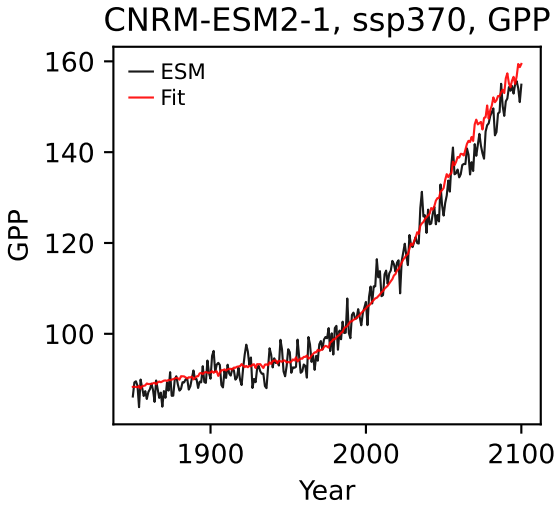

csoil
2000
1900
1800
1700
1900
2000
2100
Year

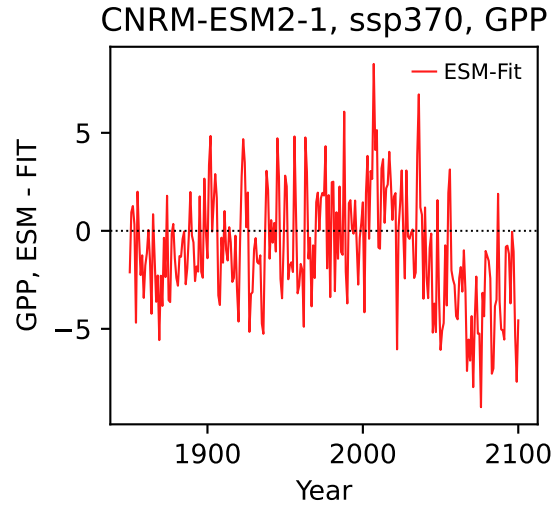

gpp
140
120
100
1900
2000
2100
Year

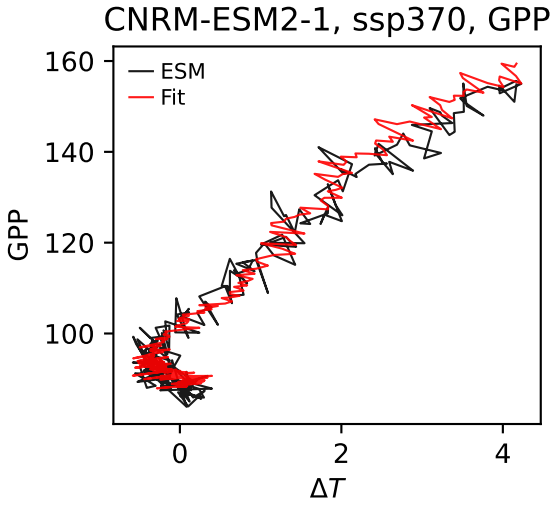

lit
55
50
45
40
35
1900
2000
2100
Year

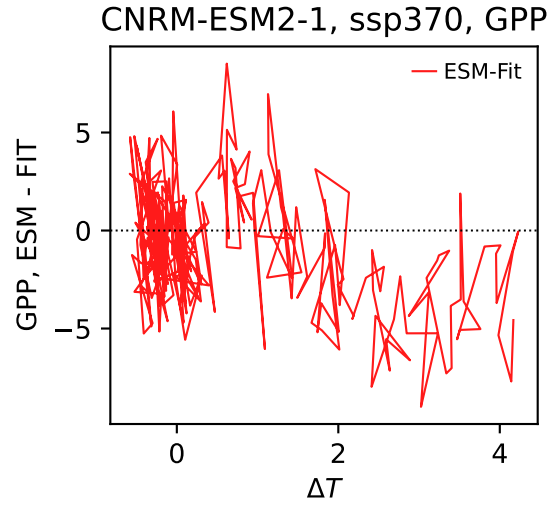

resp
55
50
45
40
1900
2000
2100
Year

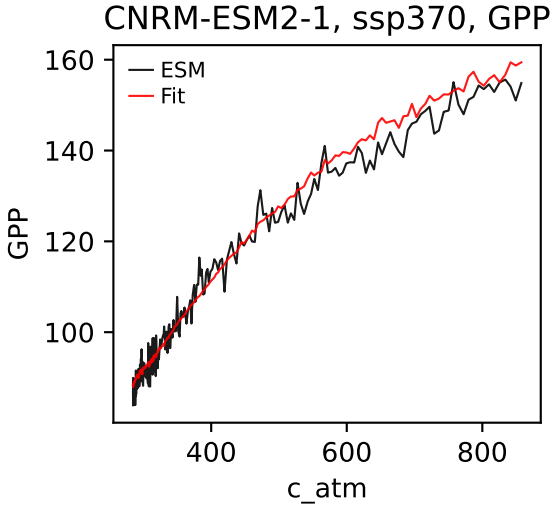

oflux
4
2
0
1900
2000
2100
Year

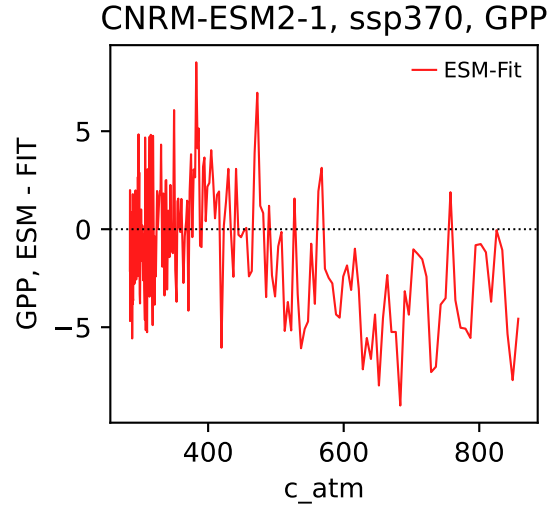

CNRM-ESM2-1, ssp370, GPP
ESM
Fit
GPP
Year

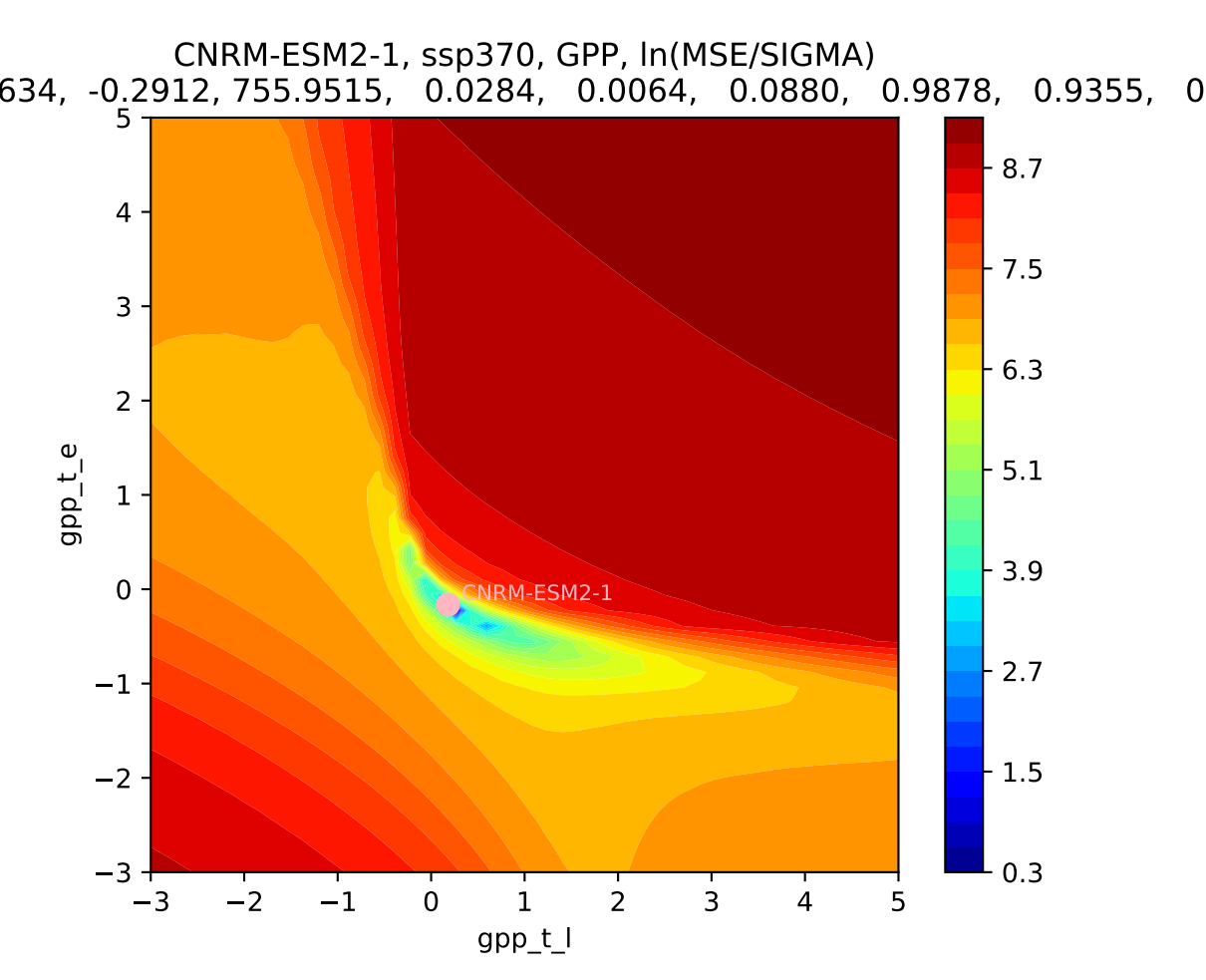

CNRM-ESM2-1, ssp370, GPP
ESM-Fit
GPP, ESM - FIT
Year

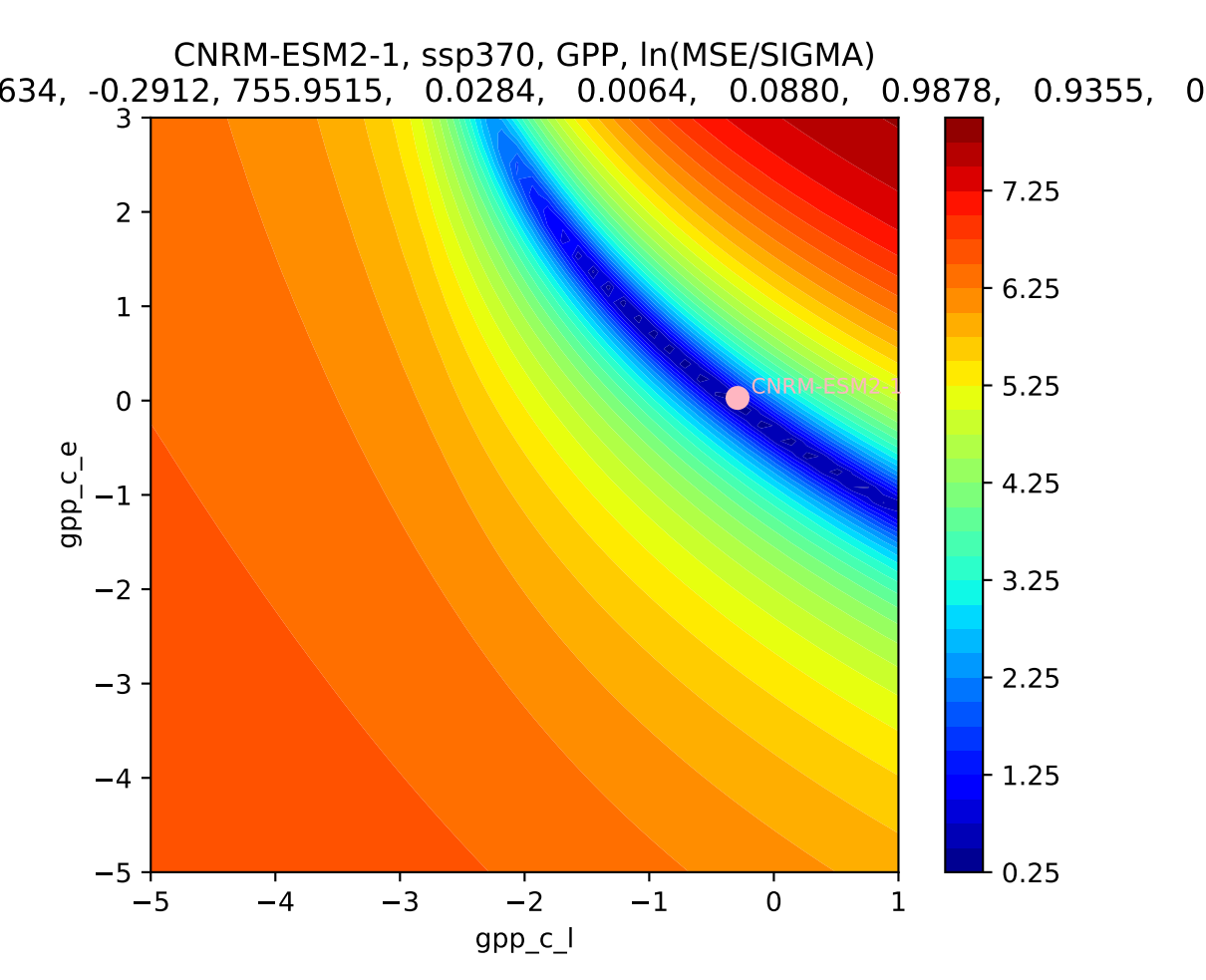

CNRM-ESM2-1, ssp370, GPP
ESM
Fit
GPP
ΔT

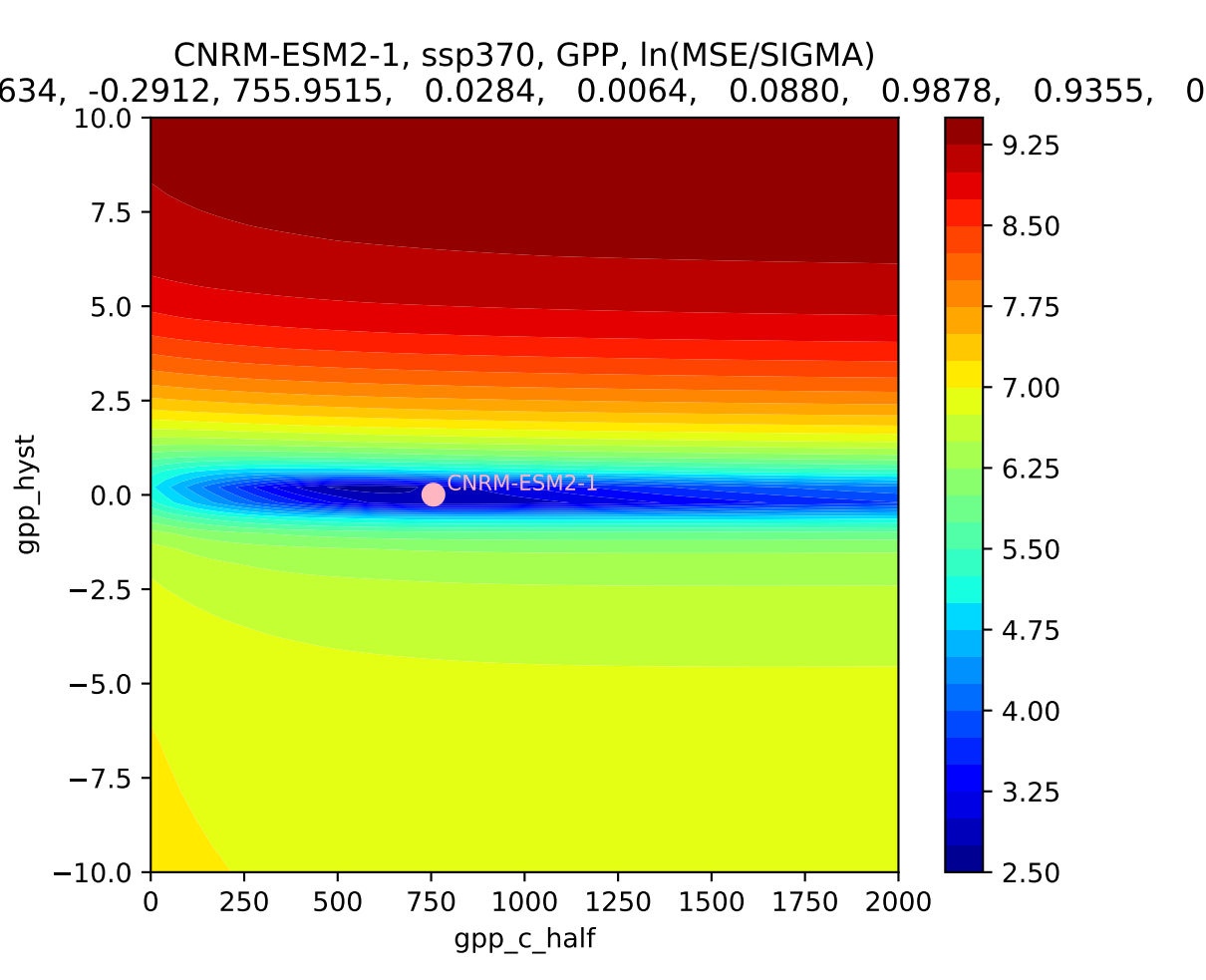

CNRM-ESM2-1, ssp370, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

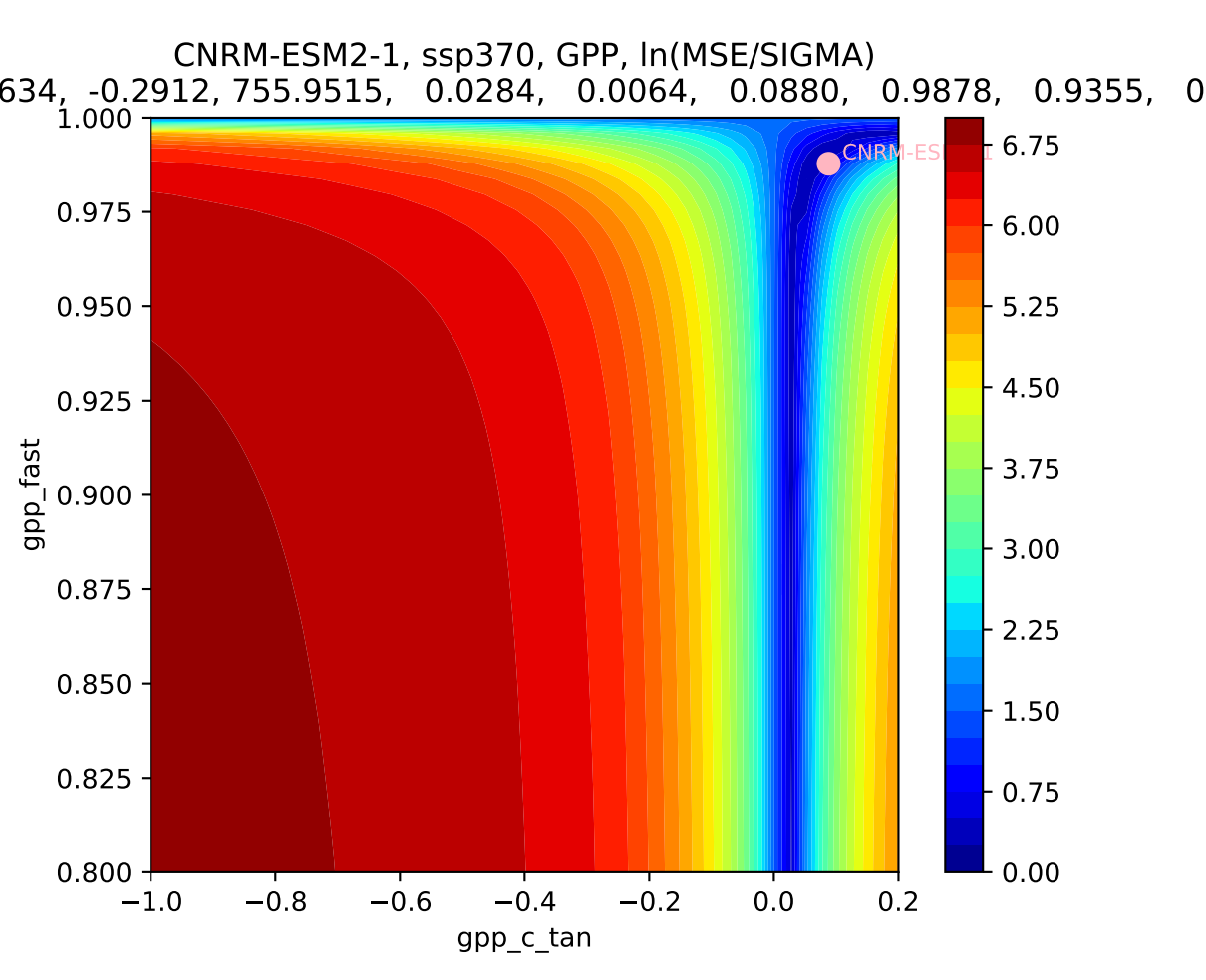

CNRM-ESM2-1, ssp370, GPP
ESM
Fit
GPP
c_atm

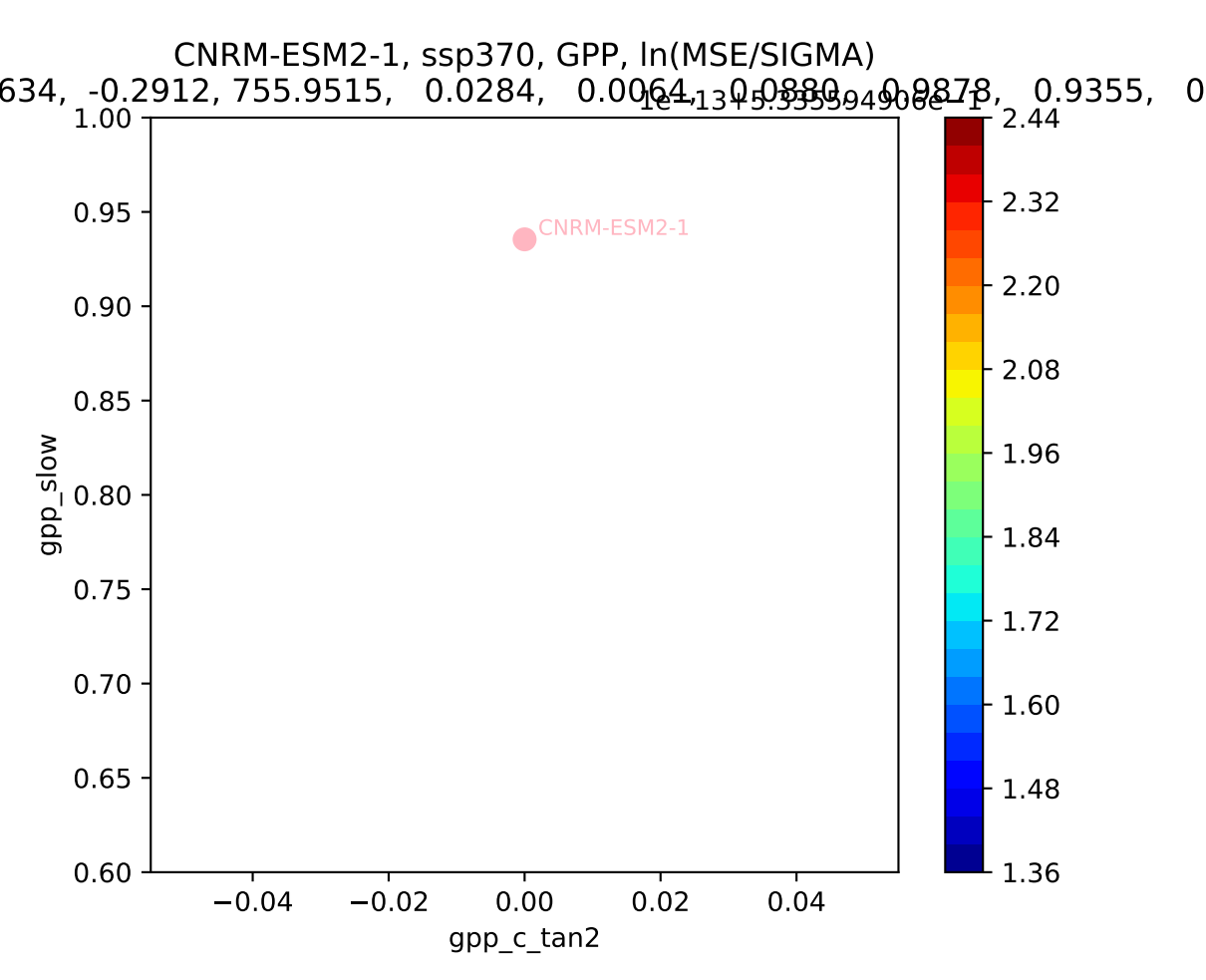

CNRM-ESM2-1, ssp370, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

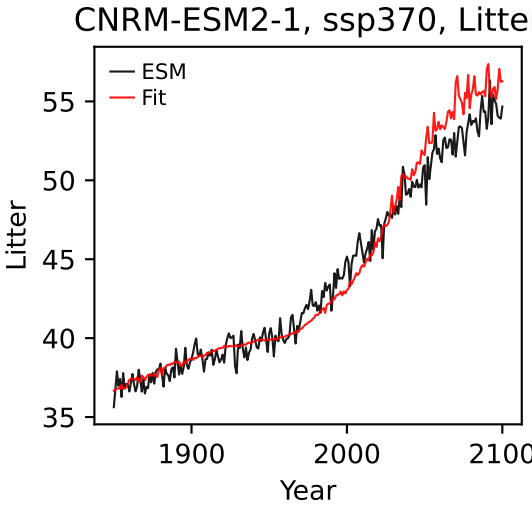

CNRM-ESM2-1, ssp370, GPP, ln(MSE/SIGMA)
634, -0.2912, 755.9515, 0.0284, 0.0064, 0.0880, 0.9878, 0.9355, 0
CNRM-ESM2-1
gpp_t_e
gpp_t_l
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3

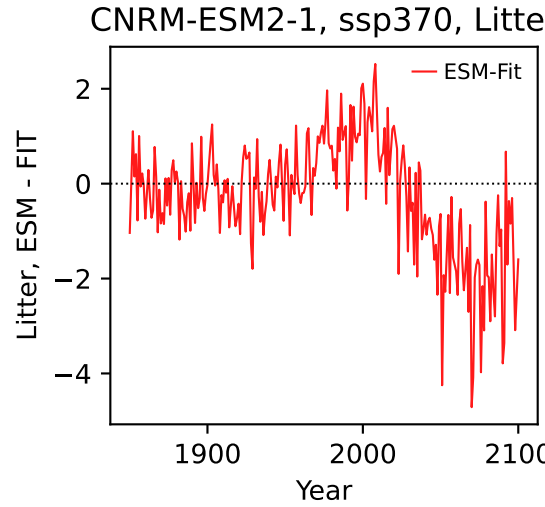

CNRM-ESM2-1, ssp370, GPP, ln(MSE/SIGMA)
634, -0.2912, 755.9515, 0.0284, 0.0064, 0.0880, 0.9878, 0.9355, 0
gpp_c_e
gpp_c_l
3
2
1
0
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
0
1
7.25
6.25
5.25
4.25
3.25
2.25
1.25
0.25

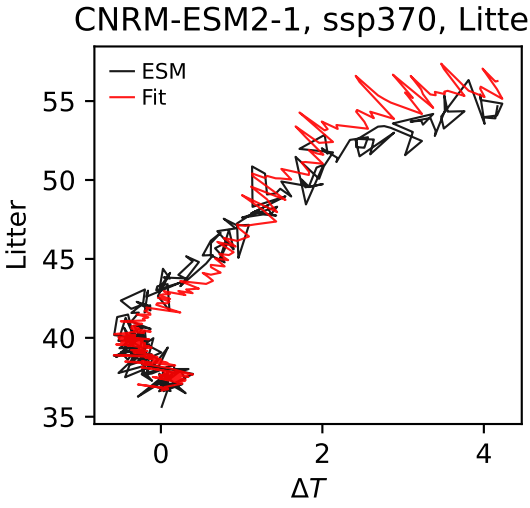

CNRM-ESM2-1, ssp370, GPP, ln(MSE/SIGMA)
634, -0.2912, 755.9515, 0.0284, 0.0064, 0.0880, 0.9878, 0.9355, 0
CNRM-ESM2-1
gpp_hyst
gpp_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
9.25
8.50
7.75
7.00
6.25
5.50
4.75
4.00
3.25
2.50

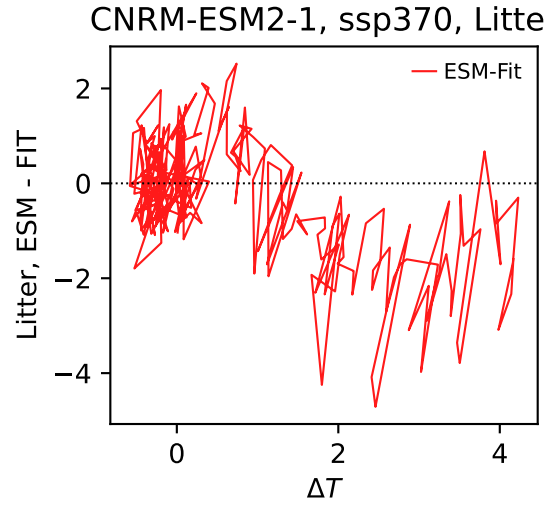

CNRM-ESM2-1, ssp370, GPP, ln(MSE/SIGMA)
634, -0.2912, 755.9515, 0.0284, 0.0064, 0.0880, 0.9878, 0.9355, 0
CNRM-ES
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
gpp_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
gpp_c_tan
6.75
6.00
5.25
4.50
3.75
3.00
2.25
1.50
0.75
0.00

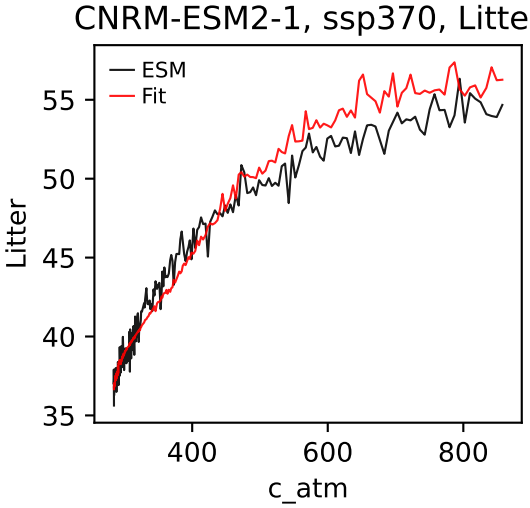

CNRM-ESM2-1, ssp370, GPP, ln(MSE/SIGMA)
634, -0.2912, 755.9515, 0.0284, 0.0064, 0.0880, 0.9878, 0.9355, 0
1e−13+5.3359490de−1
CNRM-ESM2-1
gpp_slow
gpp_c_tan2
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
−0.04
−0.02
0.00
0.02
0.04
2.44
2.32
2.20
2.08
1.96
1.84
1.72
1.60
1.48
1.36

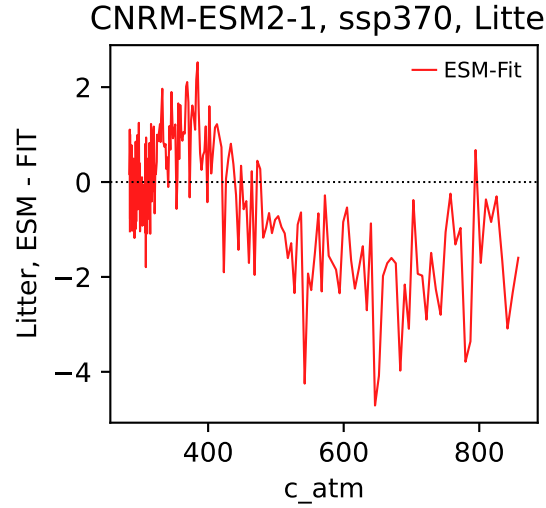

CNRM-ESM2-1, ssp370, Litter
ESM
Fit
Litter
Year

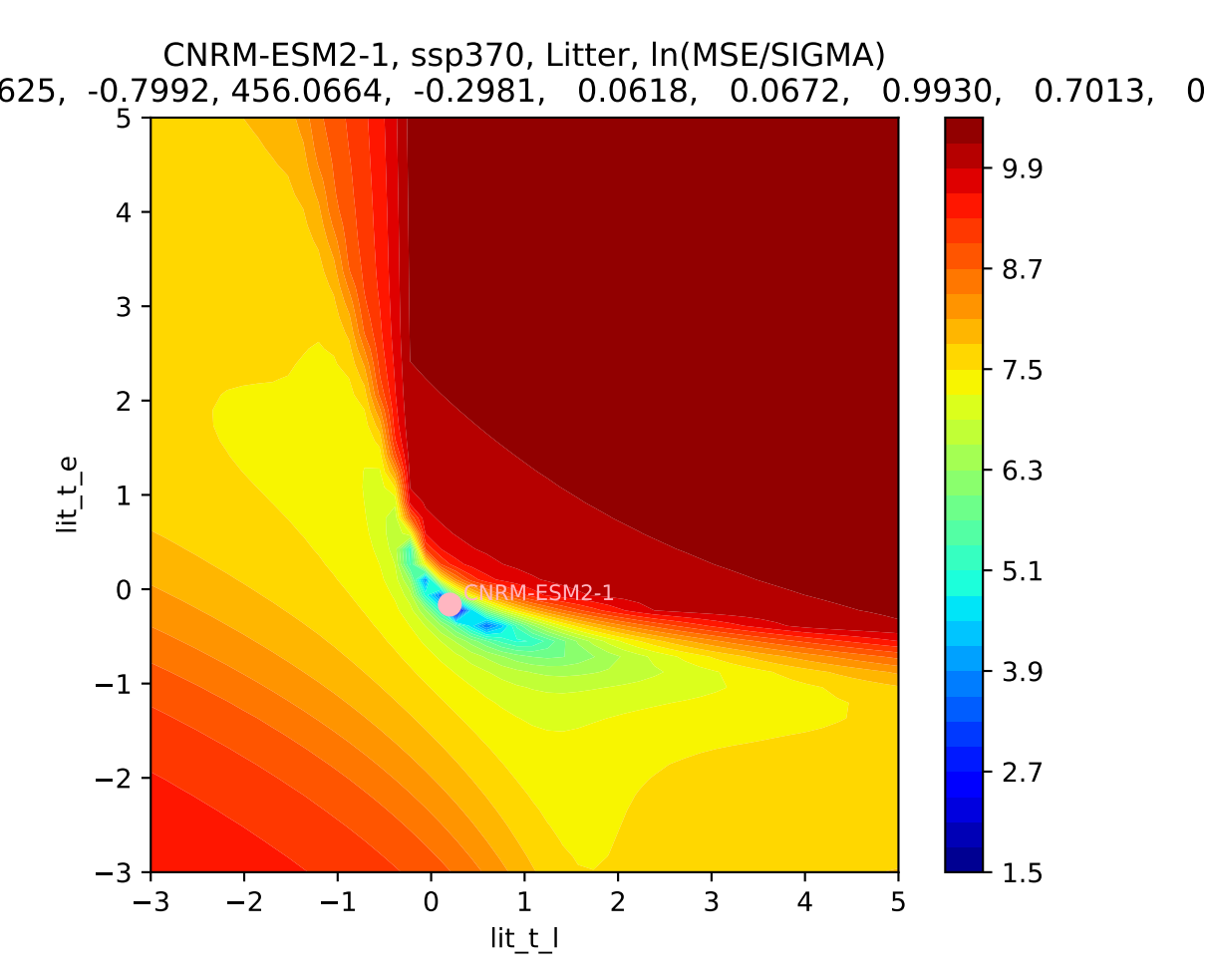

CNRM-ESM2-1, ssp370, Litter
ESM-Fit
Litter, ESM - FIT
Year

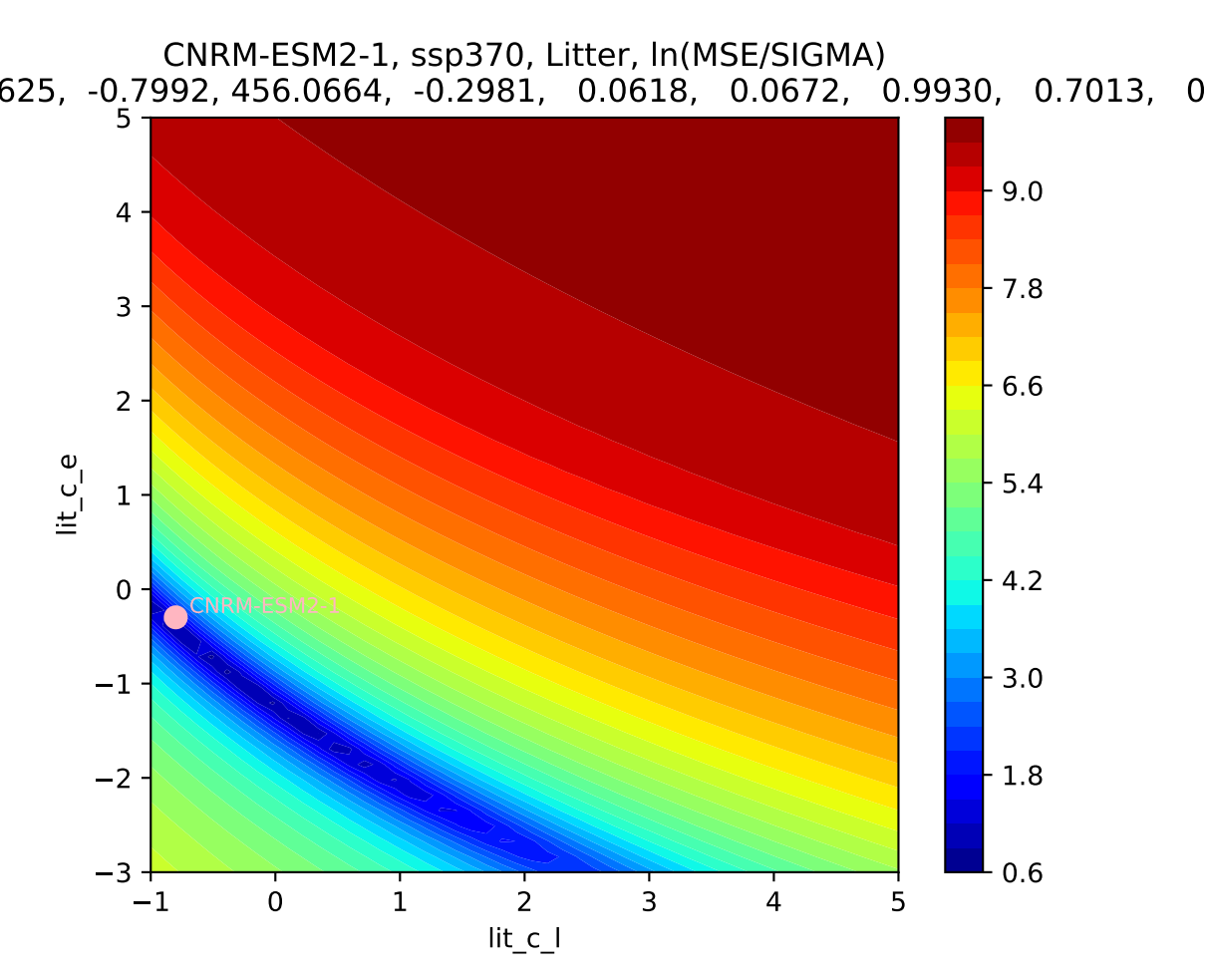

CNRM-ESM2-1, ssp370, Litter
ESM
Fit
Litter
ΔT

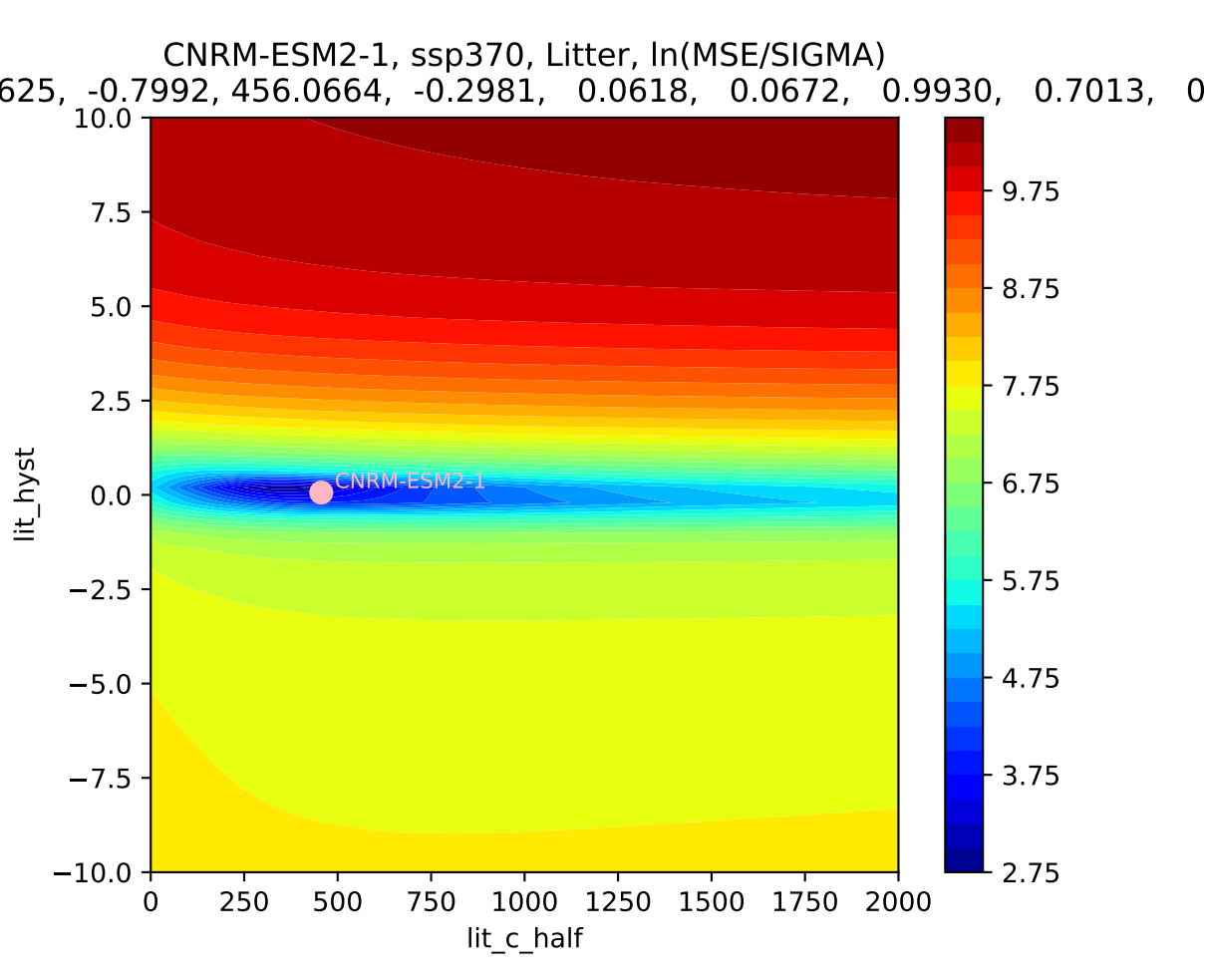

CNRM-ESM2-1, ssp370, Litter
ESM-Fit
Litter, ESM - FIT
ΔT


CNRM-ESM2-1, ssp370, Litter
ESM
Fit
Litter
c_atm


CNRM-ESM2-1, ssp370, Litter
ESM-Fit
Litter, ESM - FIT
c_atm


CNRM-ESM2-1, ssp370, Litter, ln(MSE/SIGMA)
625, -0.7992, 456.0664, -0.2981, 0.0618, 0.0672, 0.9930, 0.7013, 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
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5


CNRM-ESM2-1, ssp370, Litter, ln(MSE/SIGMA)
625, -0.7992, 456.0664, -0.2981, 0.0618, 0.0672, 0.9930, 0.7013, 0
CNRM-ESM2-1
lit_c_e
lit_c_l
5
4
3
2
1
0
−1
−2
−3
−1
0
1
2
3
4
5
9.0
7.8
6.6
5.4
4.2
3.0
1.8
0.6


CNRM-ESM2-1, ssp370, Litter, ln(MSE/SIGMA)
625, -0.7992, 456.0664, -0.2981, 0.0618, 0.0672, 0.9930, 0.7013, 0
CNRM-ESM2-1
lit_hyst
lit_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
9.75
8.75
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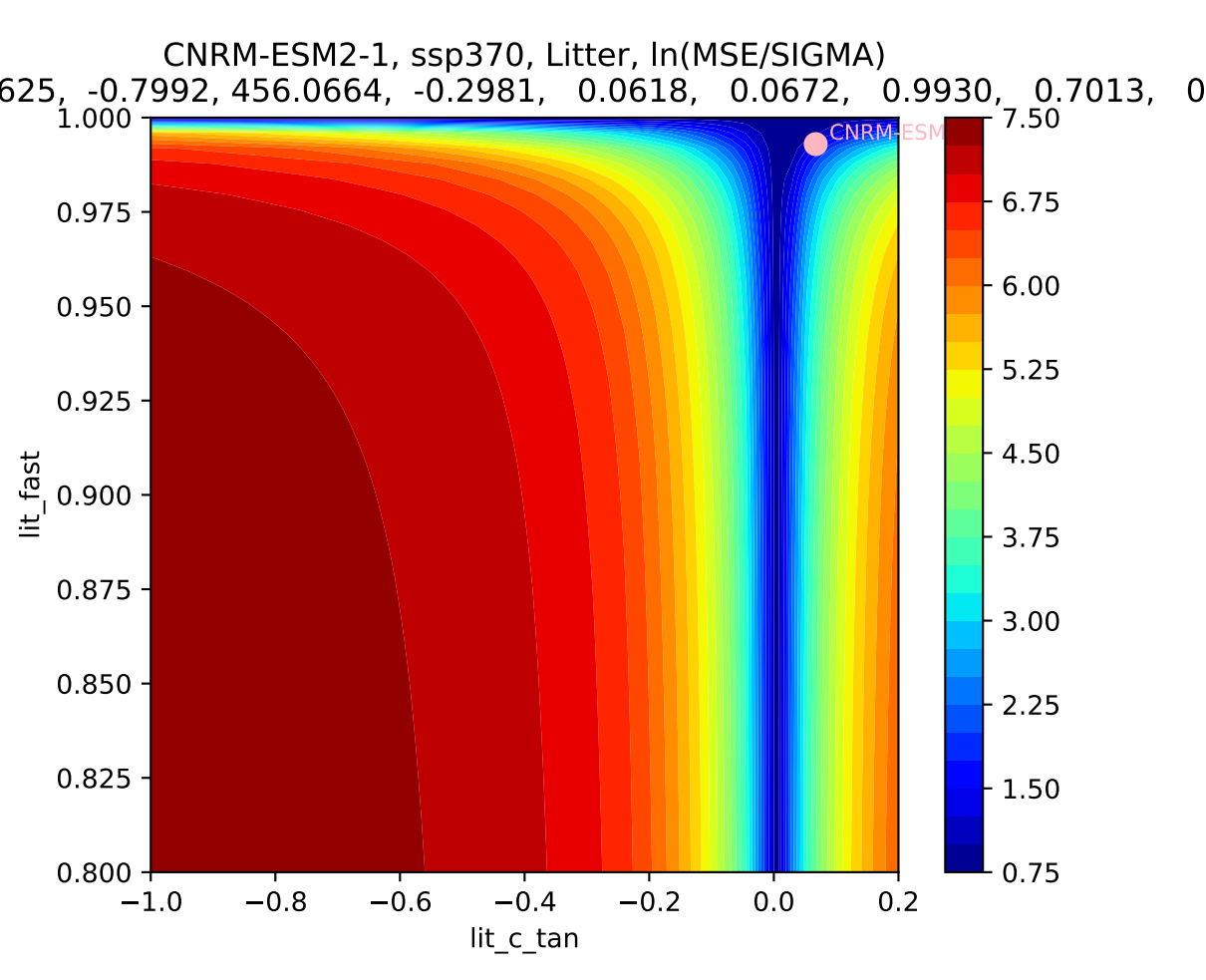
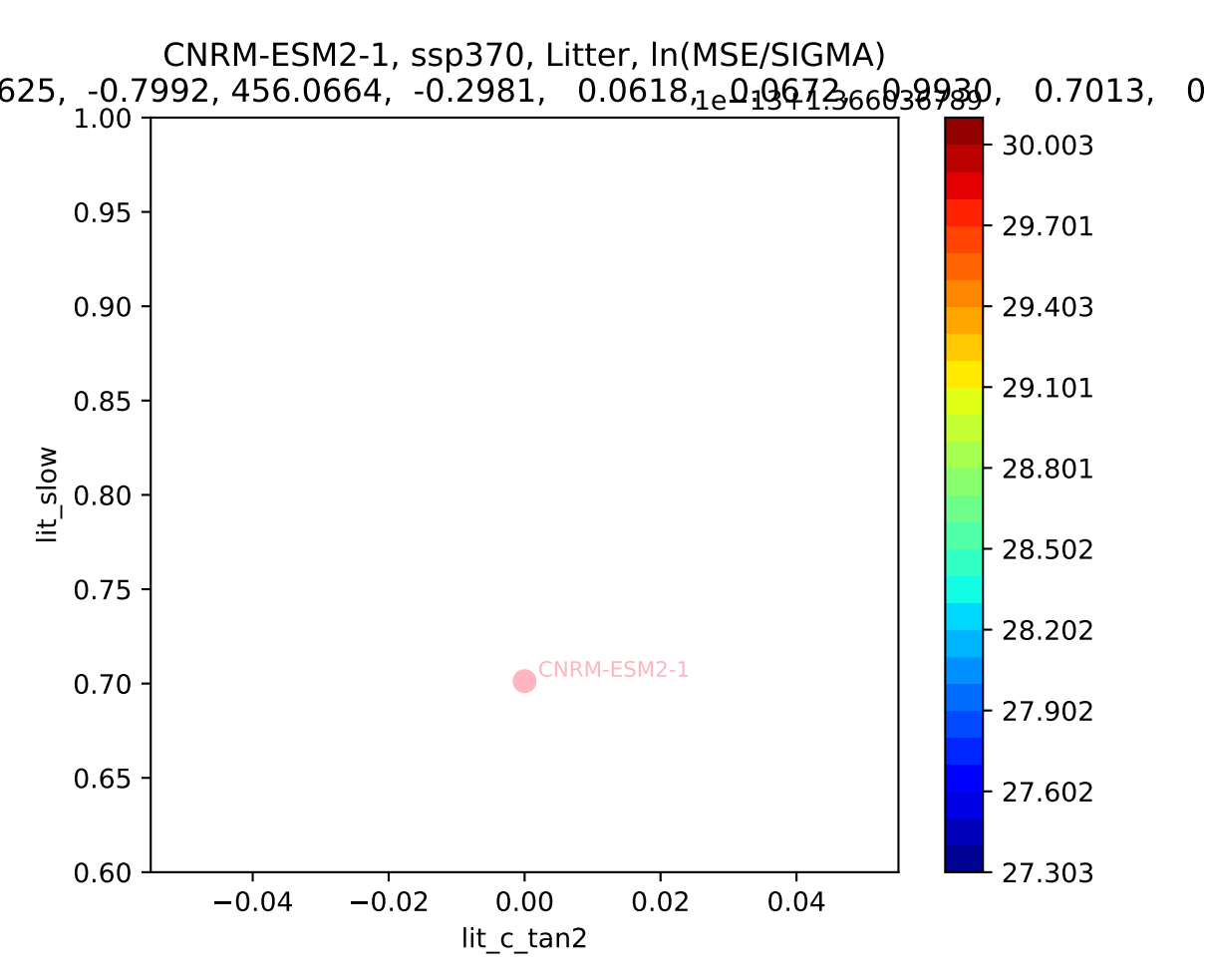
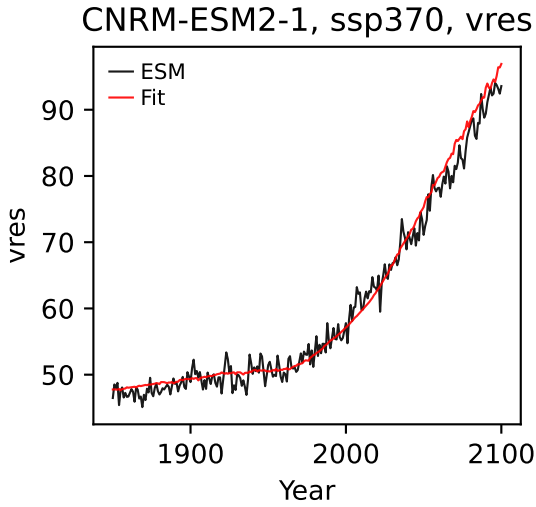
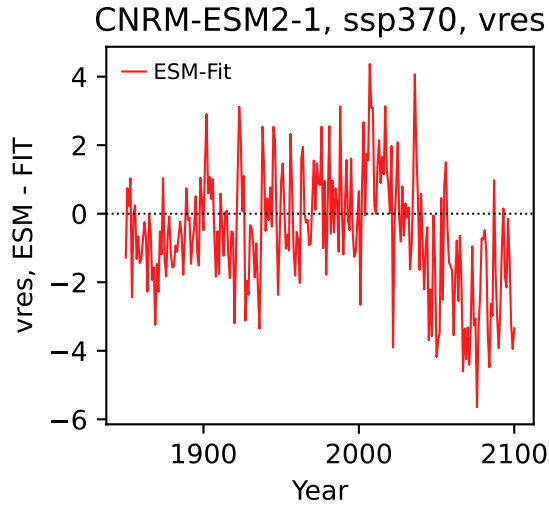
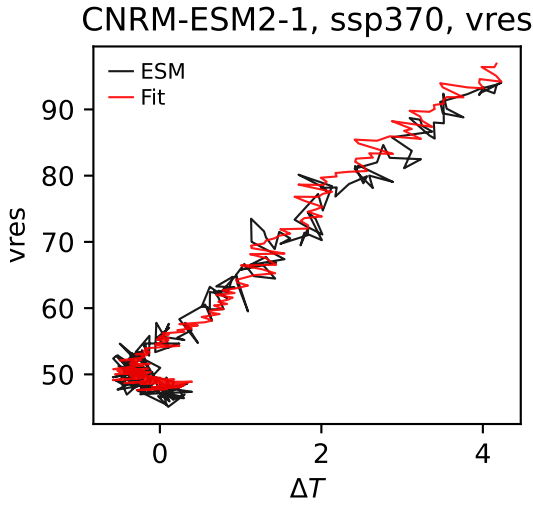
3.75
2.75

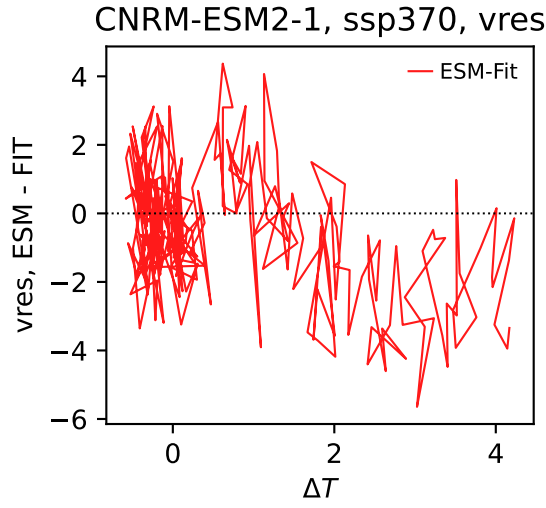

CNRM-ESM2-1, ssp370, Litter, ln(MSE/SIGMA)
625, -0.7992, 456.0664, -0.2981, 0.0618, 0.0672, 0.9930, 0.7013, 0
CNRM-ESM
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
lit_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
lit_c_tan
7.50
6.75
6.00
5.25
4.50
3.75
3.00
2.25
1.50
0.75

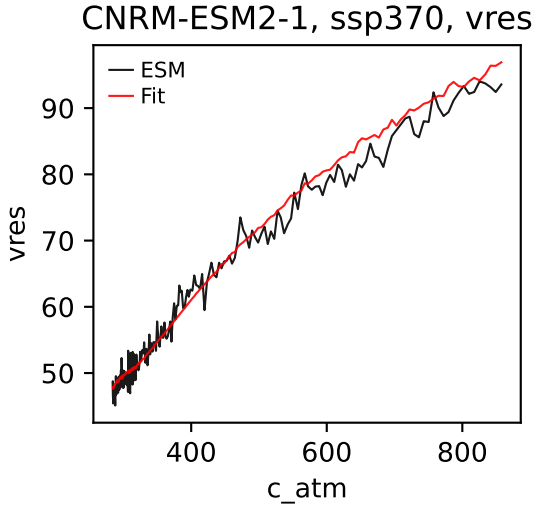

CNRM-ESM2-1, ssp370, Litter, ln(MSE/SIGMA)
625, -0.7992, 456.0664, -0.2981, 0.0618, 0.0672, 0.9930, 0.7013, 0
1e−13+1.366036789
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
lit_slow
CNRM-ESM2-1
−0.04
−0.02
0.00
0.02
0.04
lit_c_tan2
30.003
29.701
29.403
29.101
28.801
28.502
28.202
27.902
27.602
27.303

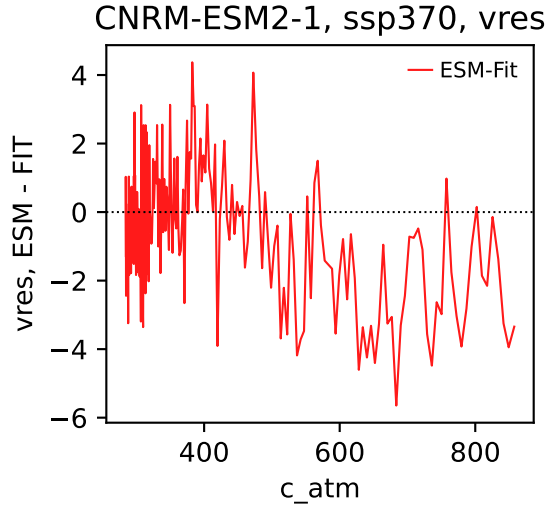

CNRM-ESM2-1, ssp370, vres
ESM
Fit
vres
Year

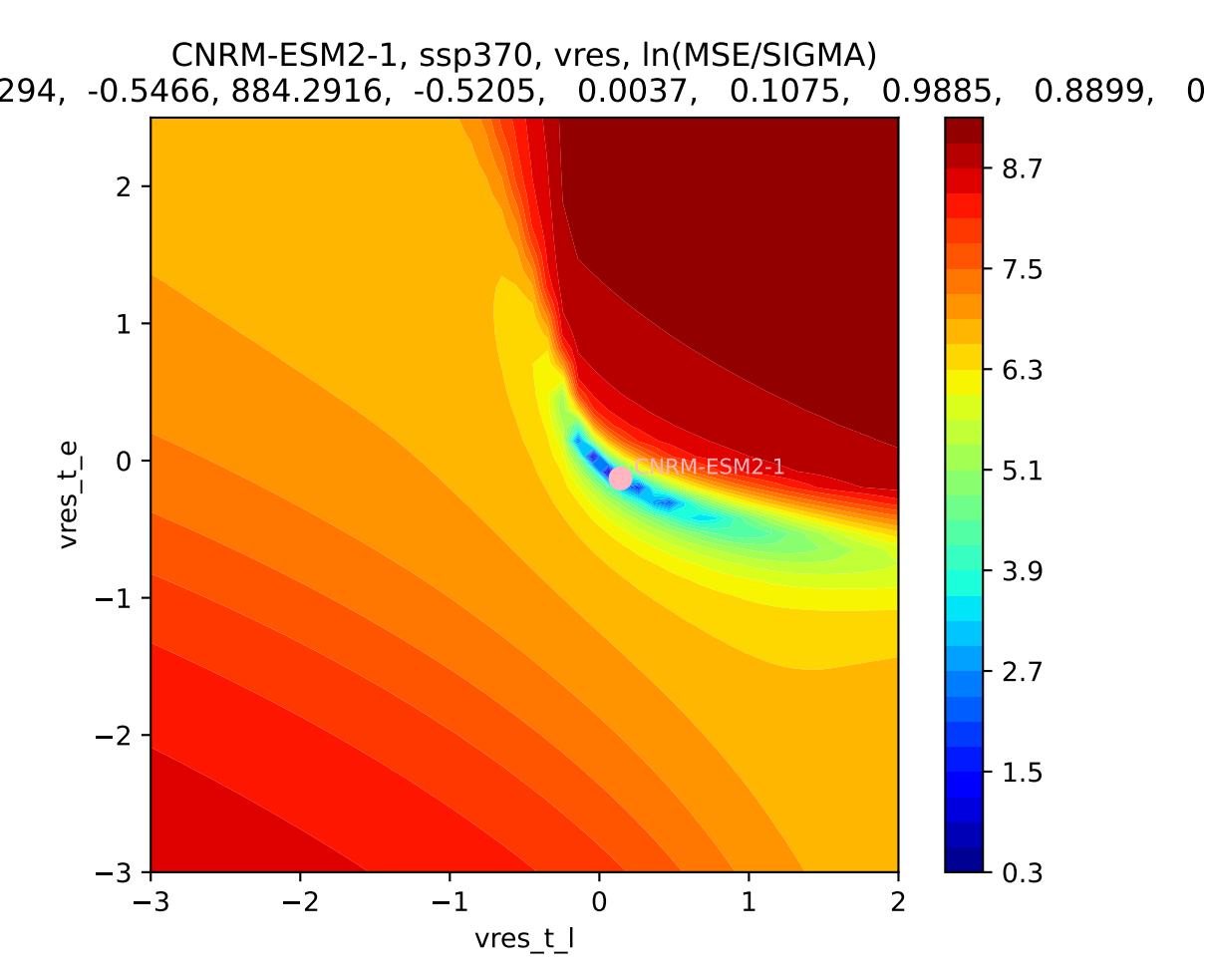

CNRM-ESM2-1, ssp370, vres
ESM-Fit
vres, ESM - FIT
Year

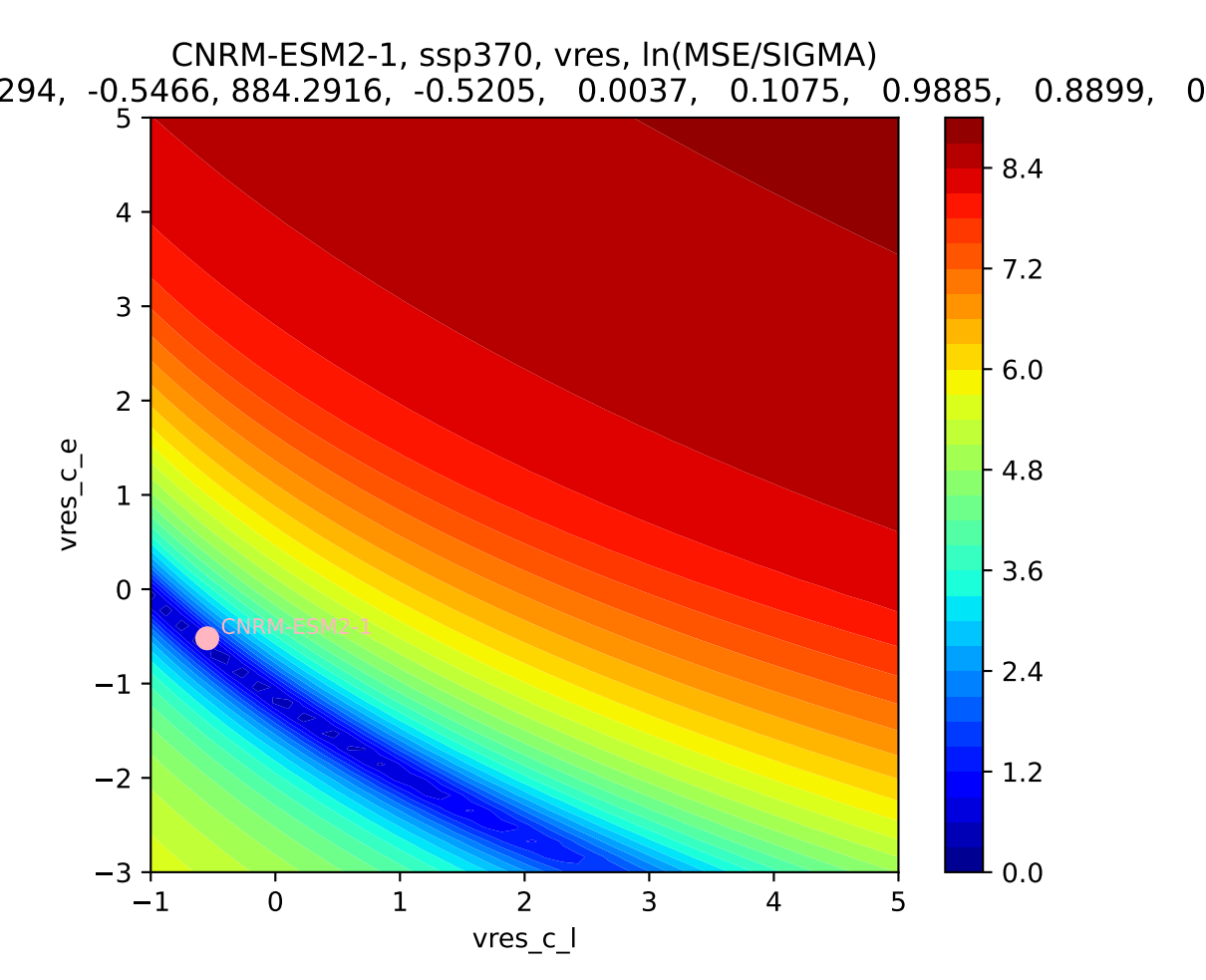

CNRM-ESM2-1, ssp370, vres
ESM
Fit
vres
ΔT

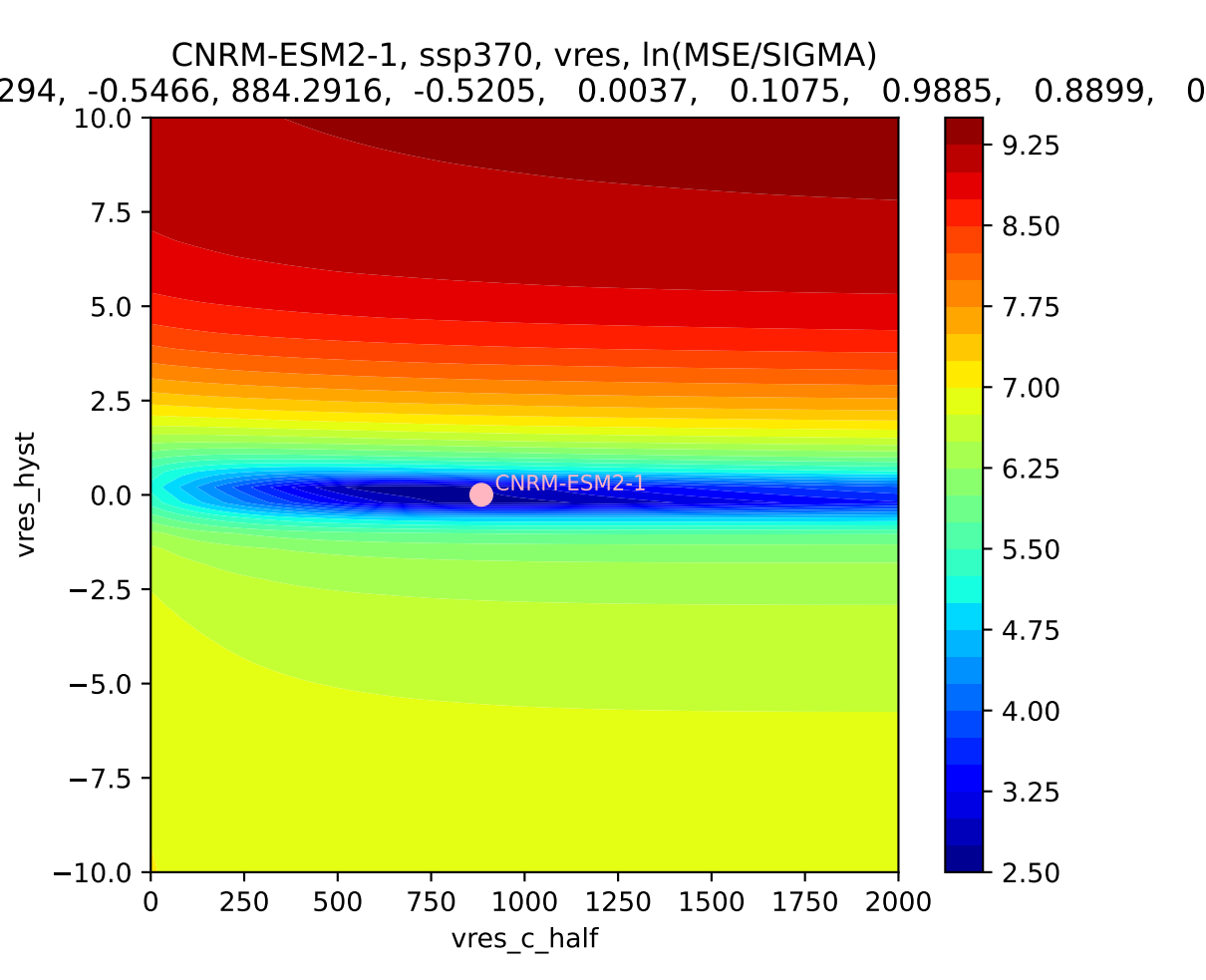

CNRM-ESM2-1, ssp370, vres
ESM-Fit
vres, ESM - FIT
ΔT

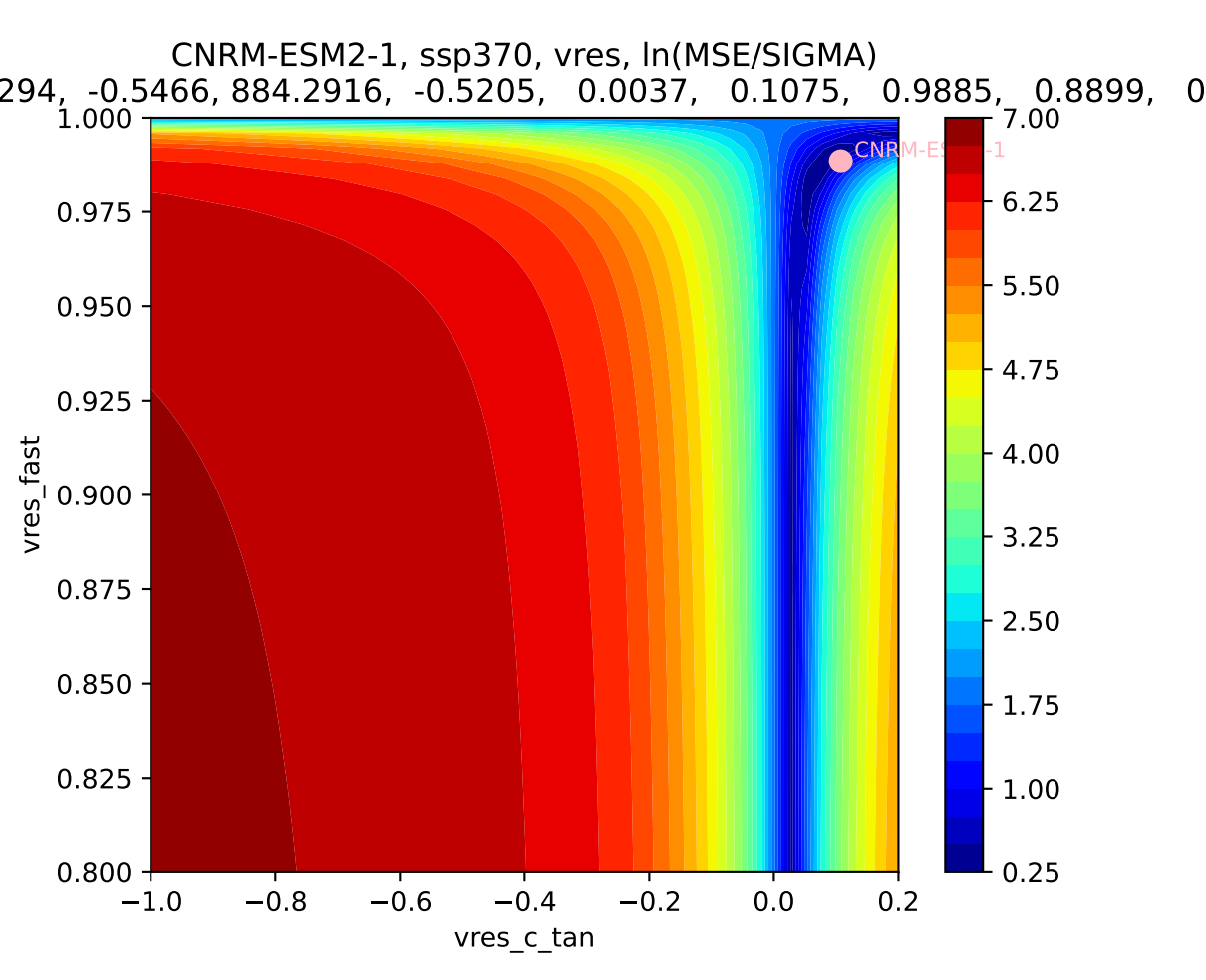

CNRM-ESM2-1, ssp370, vres
ESM
Fit
vres
c_atm

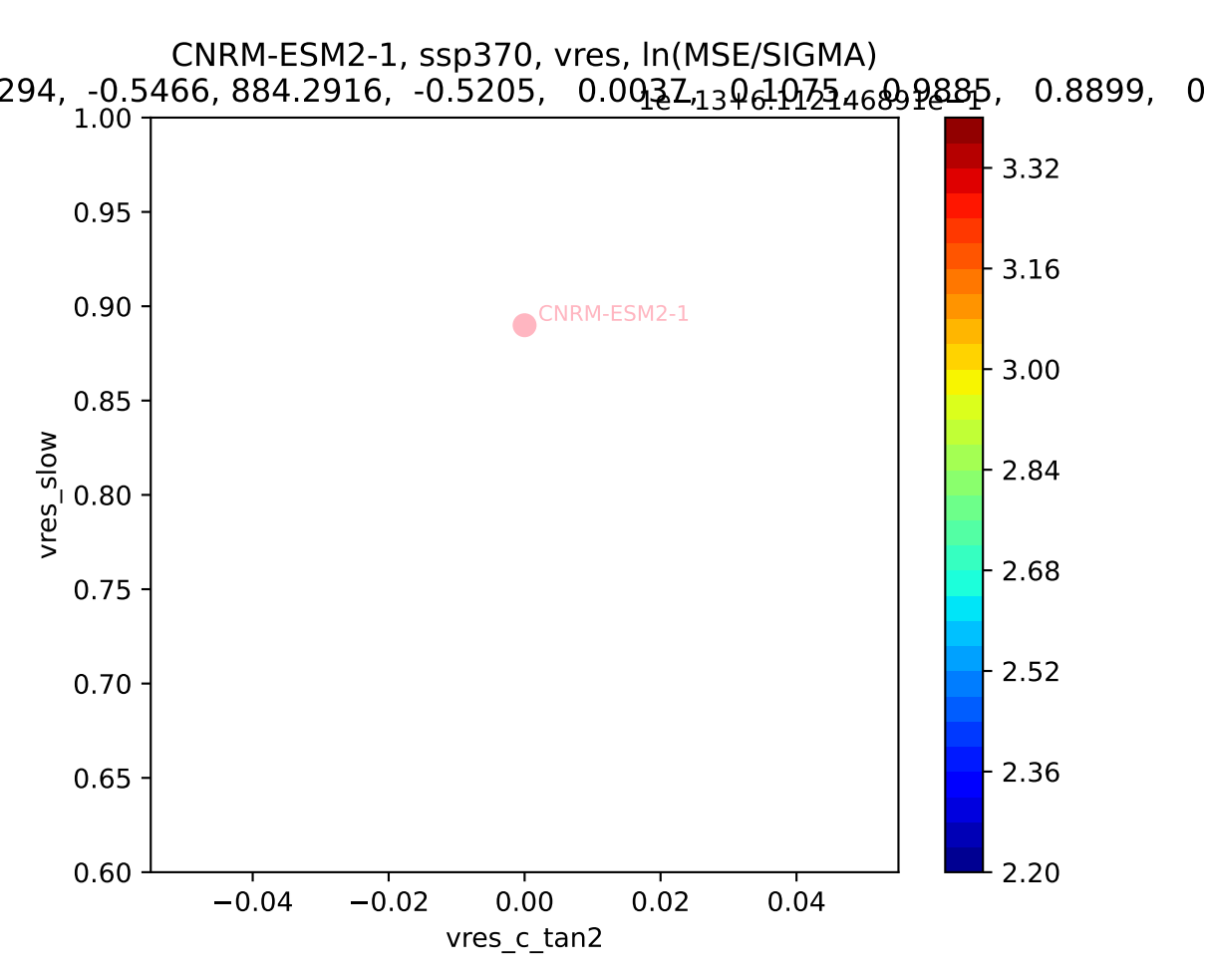

CNRM-ESM2-1, ssp370, vres
ESM-Fit
vres, ESM - FIT
c_atm

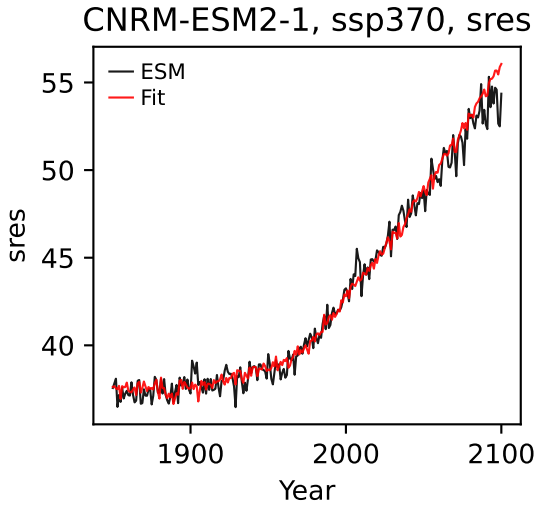

CNRM-ESM2-1, ssp370, vres, ln(MSE/SIGMA)
294, -0.5466, 884.2916, -0.5205, 0.0037, 0.1075, 0.9885, 0.8899, 0
CNRM-ESM2-1
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3

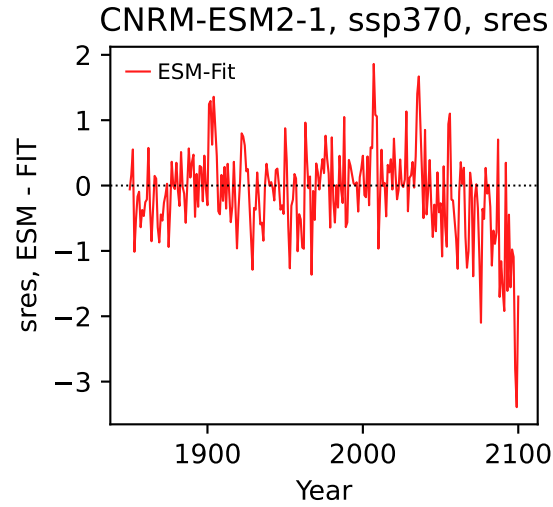

CNRM-ESM2-1, ssp370, vres, ln(MSE/SIGMA)
294, -0.5466, 884.2916, -0.5205, 0.0037, 0.1075, 0.9885, 0.8899, 0
CNRM-ESM2-1
vres_c_e
vres_c_l
5
4
3
2
1
0
−1
−2
−3
−1
0
1
2
3
4
5
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

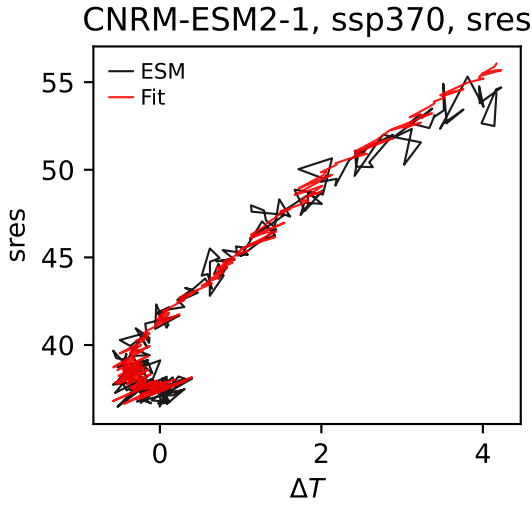

CNRM-ESM2-1, ssp370, vres, ln(MSE/SIGMA)
294, -0.5466, 884.2916, -0.5205, 0.0037, 0.1075, 0.9885, 0.8899, 0
CNRM-ESM2-1
vres_hyst
vres_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
9.25
8.50
7.75
7.00
6.25
5.50
4.75
4.00
3.25
2.50

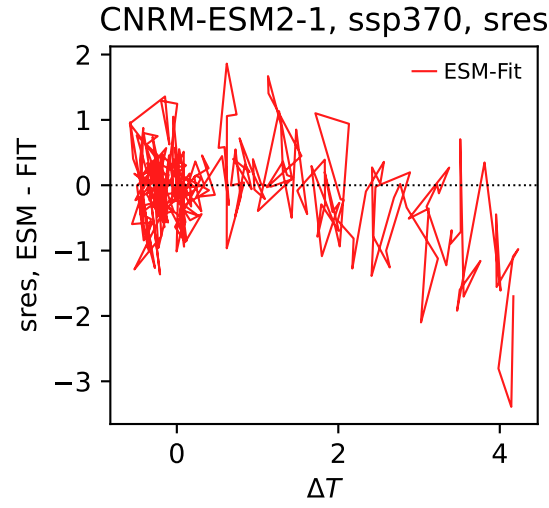

CNRM-ESM2-1, ssp370, vres, ln(MSE/SIGMA)
294, -0.5466, 884.2916, -0.5205, 0.0037, 0.1075, 0.9885, 0.8899, 0
CNRM-ESM2-1
vres_fast
vres_c_tan
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.00
6.25
5.50
4.75
4.00
3.25
2.50
1.75
1.00
0.25

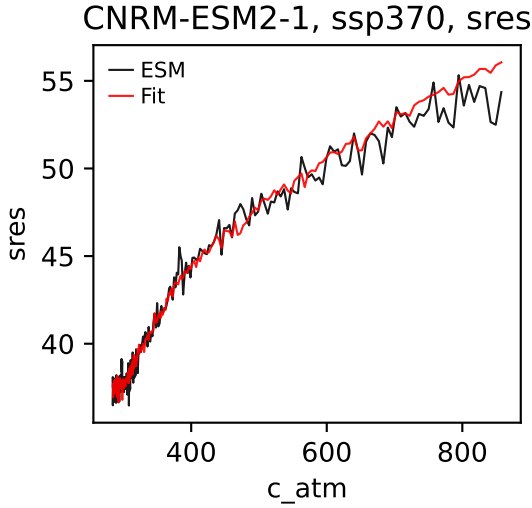

CNRM-ESM2-1, ssp370, vres, ln(MSE/SIGMA)
294, -0.5466, 884.2916, -0.5205, 0.0037, 0.1075, 0.9885, 0.8899, 0
1e−13+6.112146891e−1
CNRM-ESM2-1
vres_slow
vres_c_tan2
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
−0.04
−0.02
0.00
0.02
0.04
3.32
3.16
3.00
2.84
2.68
2.52
2.36
2.20

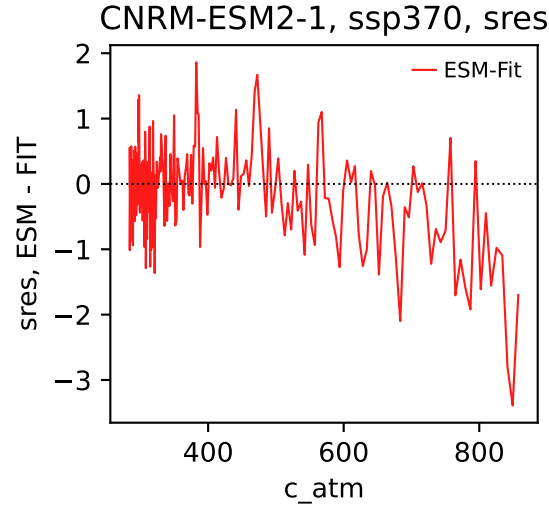

CNRM-ESM2-1, ssp370, sres
ESM
Fit
sres
Year

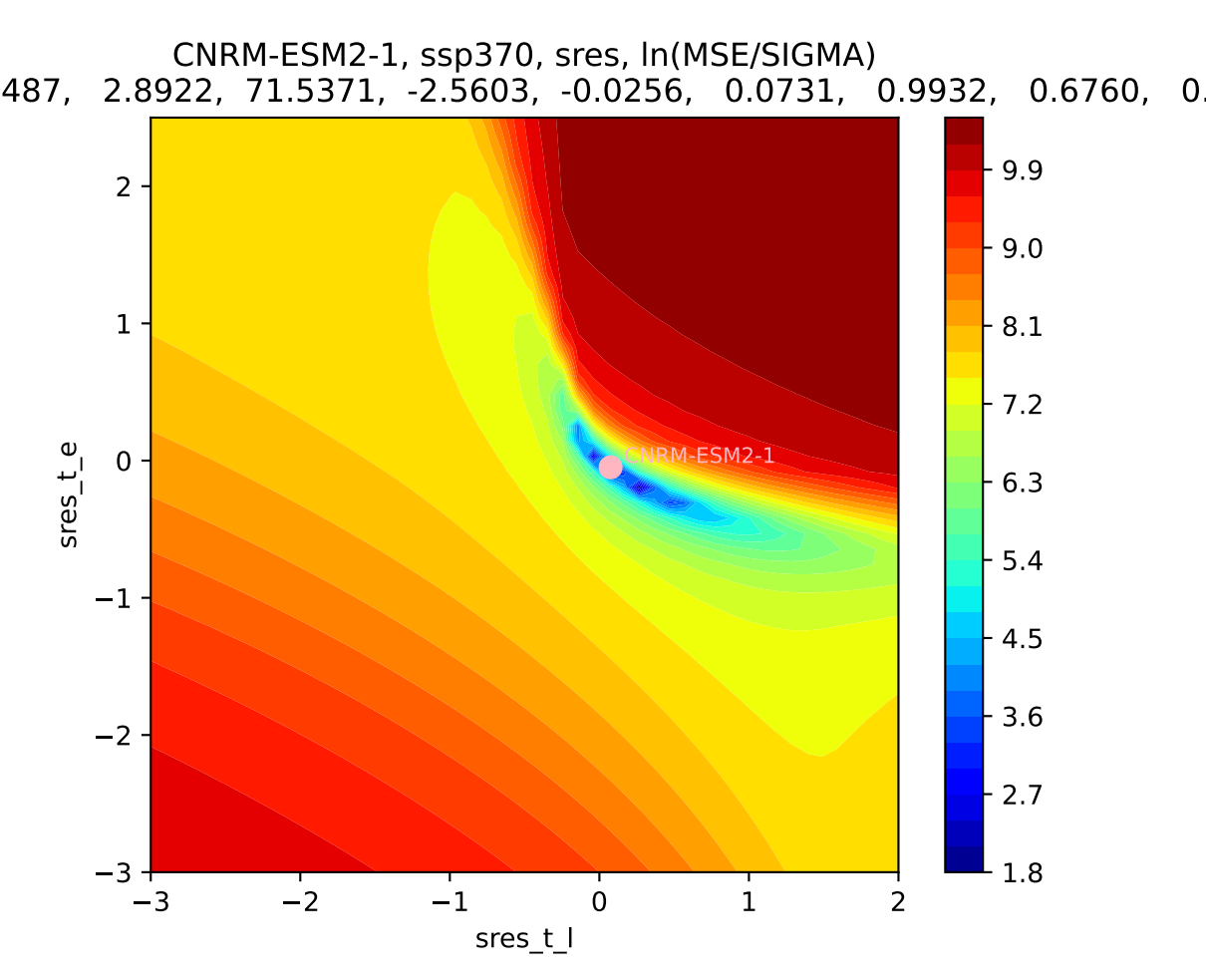

CNRM-ESM2-1, ssp370, sres
ESM-Fit
sres, ESM - FIT
Year

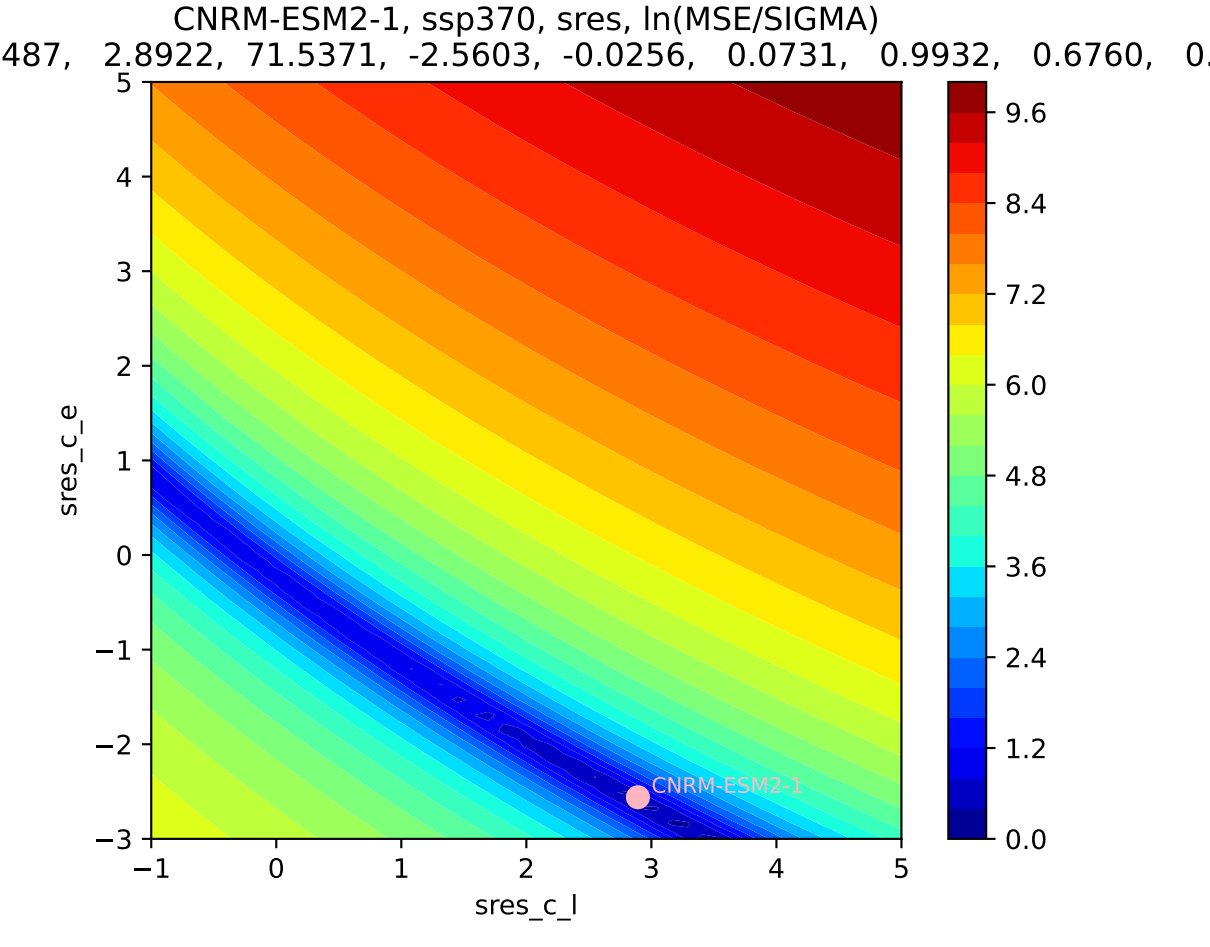

CNRM-ESM2-1, ssp370, sres
ESM
Fit
sres
ΔT

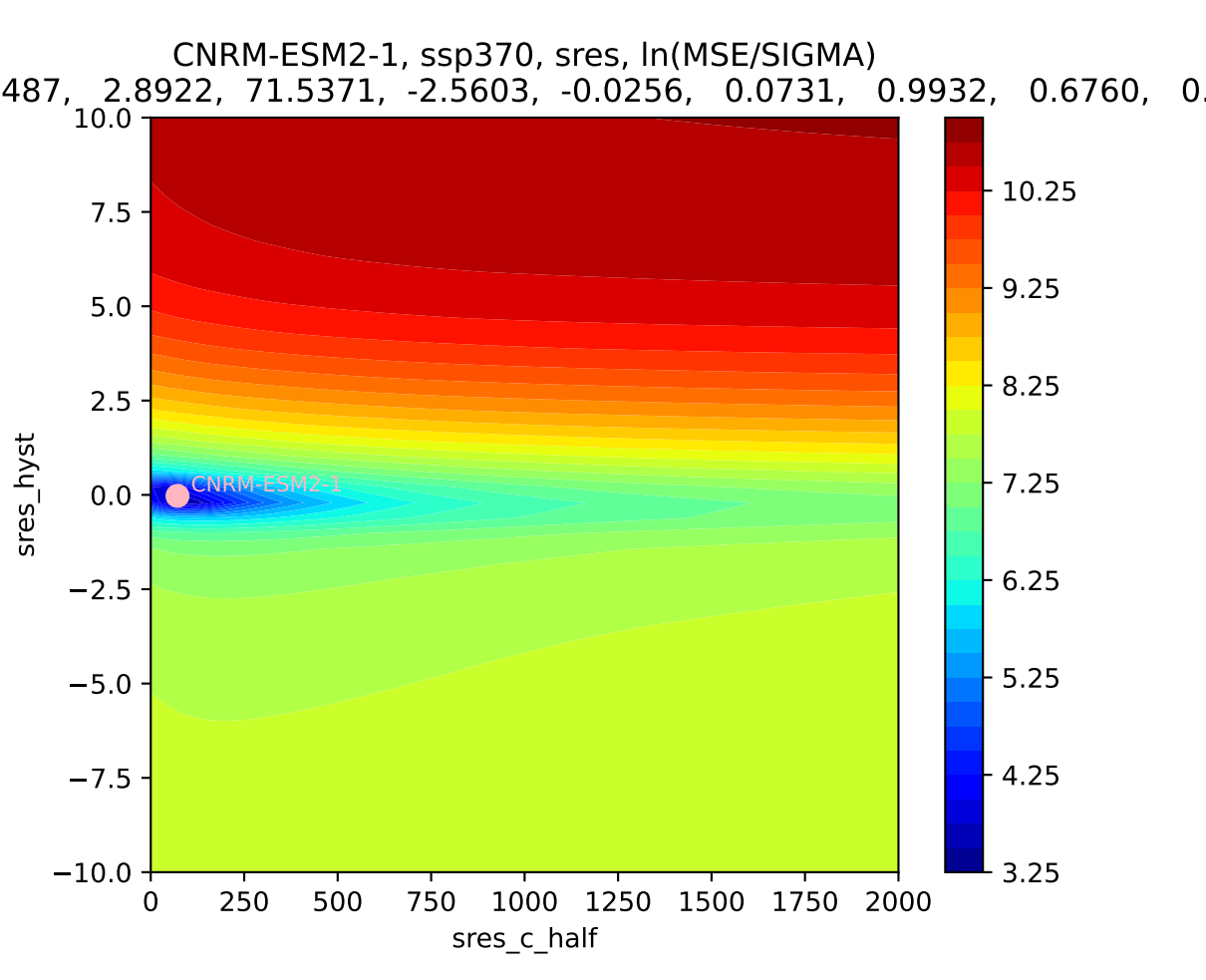

CNRM-ESM2-1, ssp370, sres
ESM-Fit
sres, ESM - FIT
ΔT

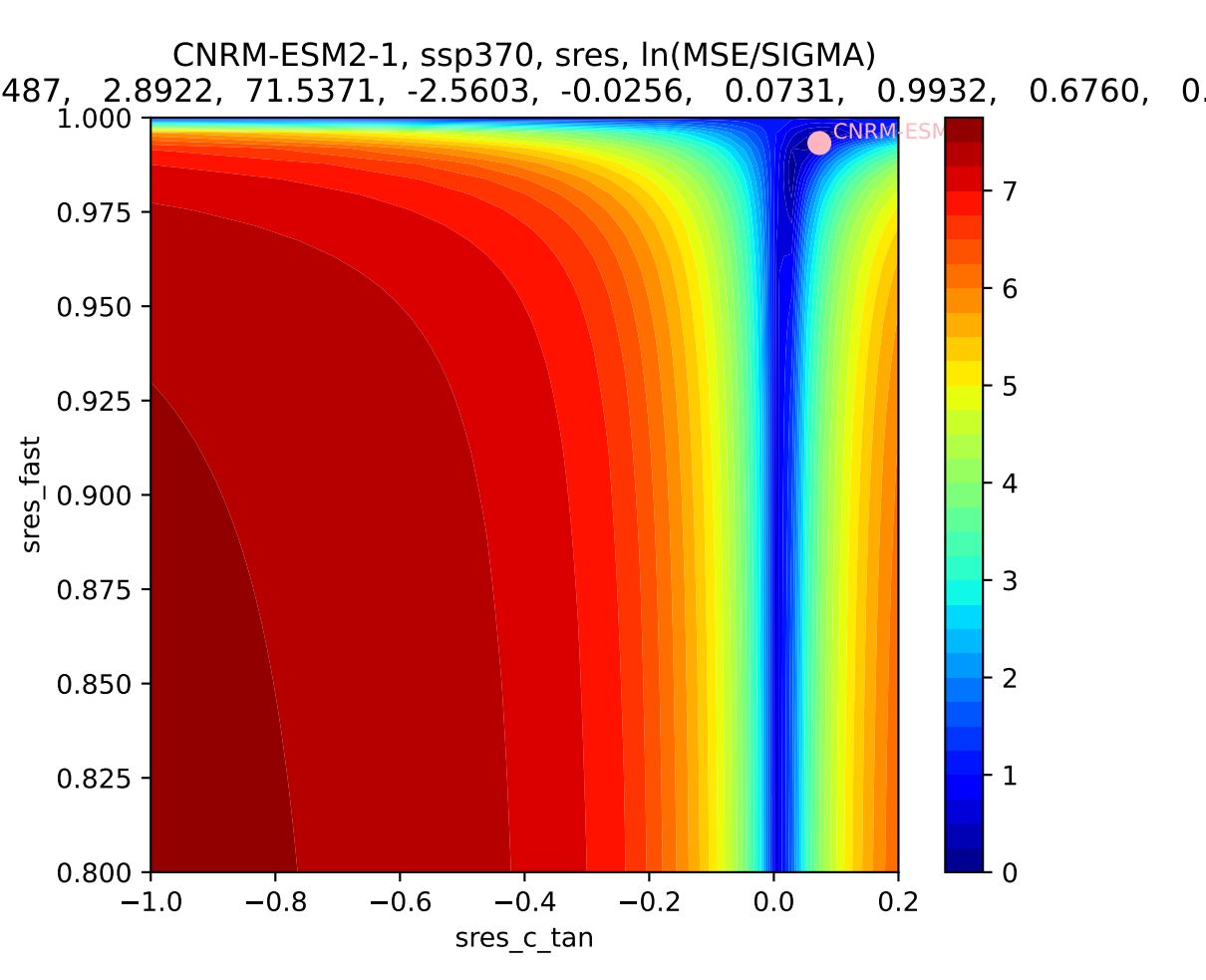

CNRM-ESM2-1, ssp370, sres
ESM
Fit
sres
c_atm

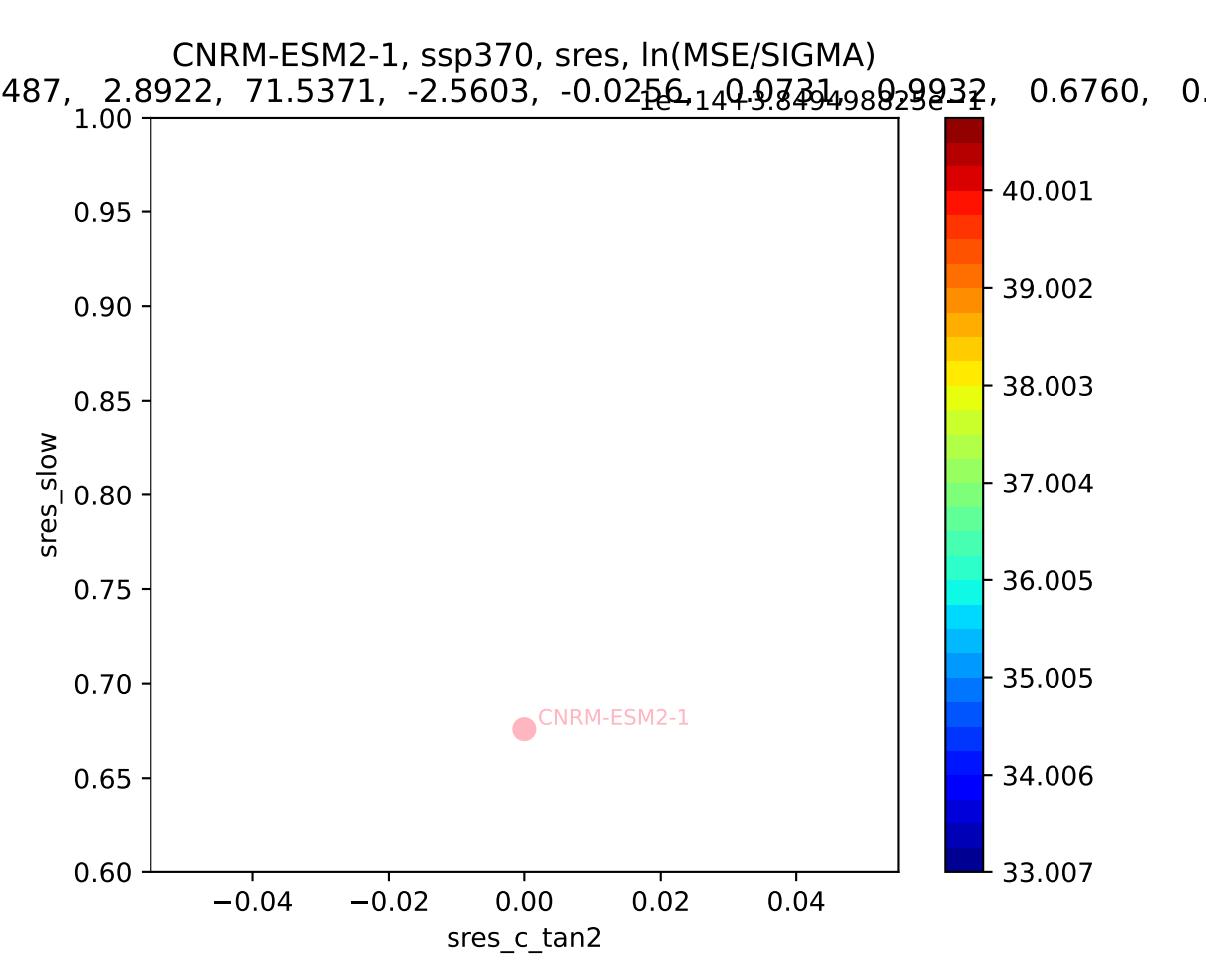

CNRM-ESM2-1, ssp370, sres
ESM-Fit
sres, ESM - FIT
c_atm

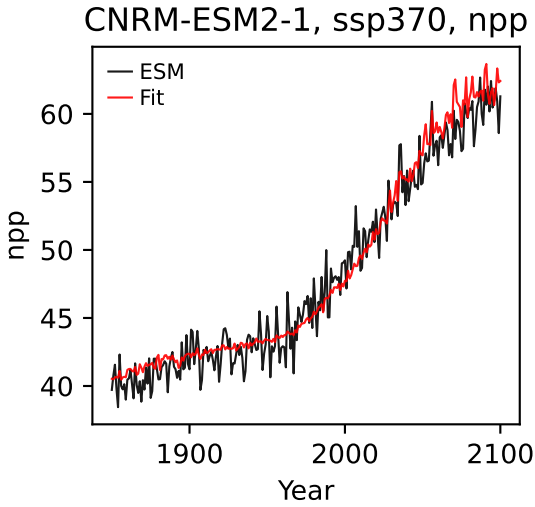

CNRM-ESM2-1, ssp370, sres, ln(MSE/SIGMA)
487, 2.8922, 71.5371, -2.5603, -0.0256, 0.0731, 0.9932, 0.6760, 0.
CNRM-ESM2-1
sres_t_e
sres_t_l
2
1
0
−1
−2
−3
9.9
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8

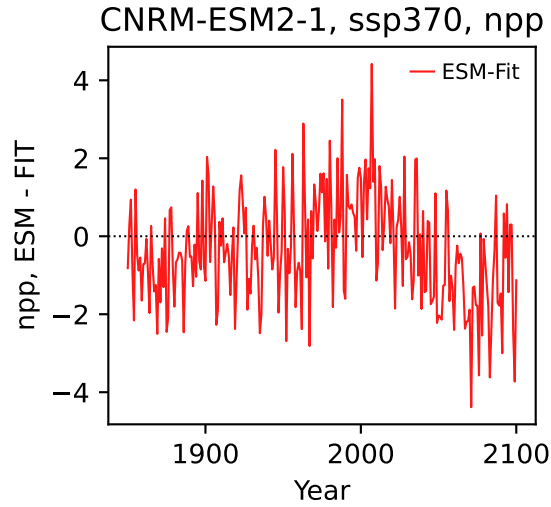

CNRM-ESM2-1, ssp370, sres, ln(MSE/SIGMA)
487, 2.8922, 71.5371, -2.5603, -0.0256, 0.0731, 0.9932, 0.6760, 0.
sres_c_e
sres_c_l
CNRM-ESM2-1
5
4
3
2
1
0
−1
−2
−3
−1
0
1
2
3
4
5
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

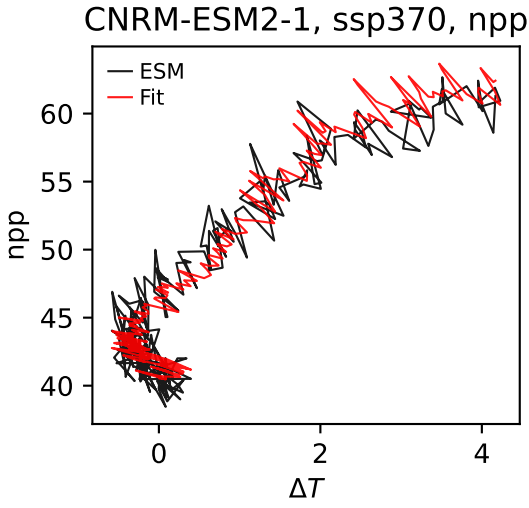

CNRM-ESM2-1, ssp370, sres, ln(MSE/SIGMA)
487, 2.8922, 71.5371, -2.5603, -0.0256, 0.0731, 0.9932, 0.6760, 0.
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
sres_hyst
CNRM-ESM2-1
0
250
500
750
1000
1250
1500
1750
2000
sres_c_half
10.25
9.25
8.25
7.25
6.25
5.25
4.25
3.25

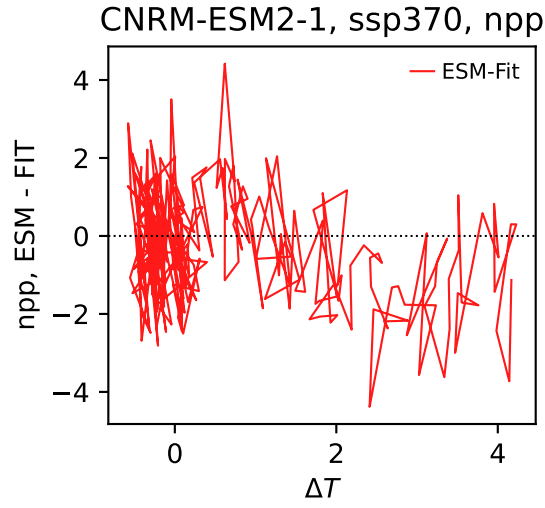

CNRM-ESM2-1, ssp370, sres, ln(MSE/SIGMA)
487, 2.8922, 71.5371, -2.5603, -0.0256, 0.0731, 0.9932, 0.6760, 0.
CNRM-ESM
sres_fast
sres_c_tan
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7
6
5
4
3
2
1
0

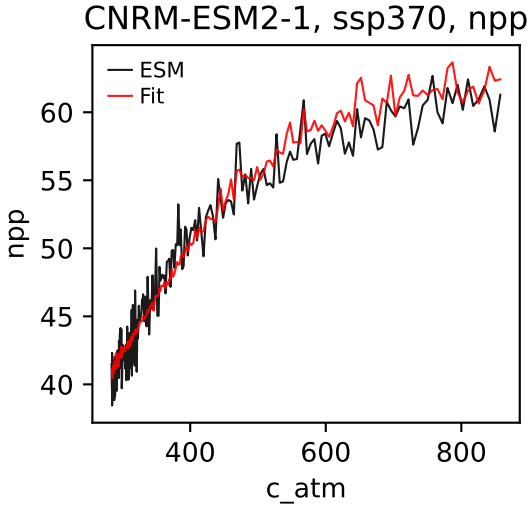

CNRM-ESM2-1, ssp370, sres, ln(MSE/SIGMA)
487, 2.8922, 71.5371, -2.5603, -0.0256, 0.0731, 0.9932, 0.6760, 0.
1e-14+3.849488823e-1
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
sres_slow
CNRM-ESM2-1
−0.04
−0.02
0.00
0.02
0.04
sres_c_tan2
40.001
39.002
38.003
37.004
36.005
35.005
34.006
33.007

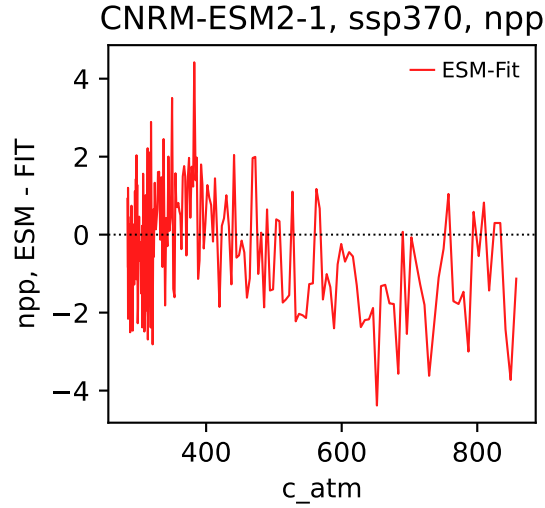

CNRM-ESM2-1, ssp370, npp
ESM
Fit
npp
Year

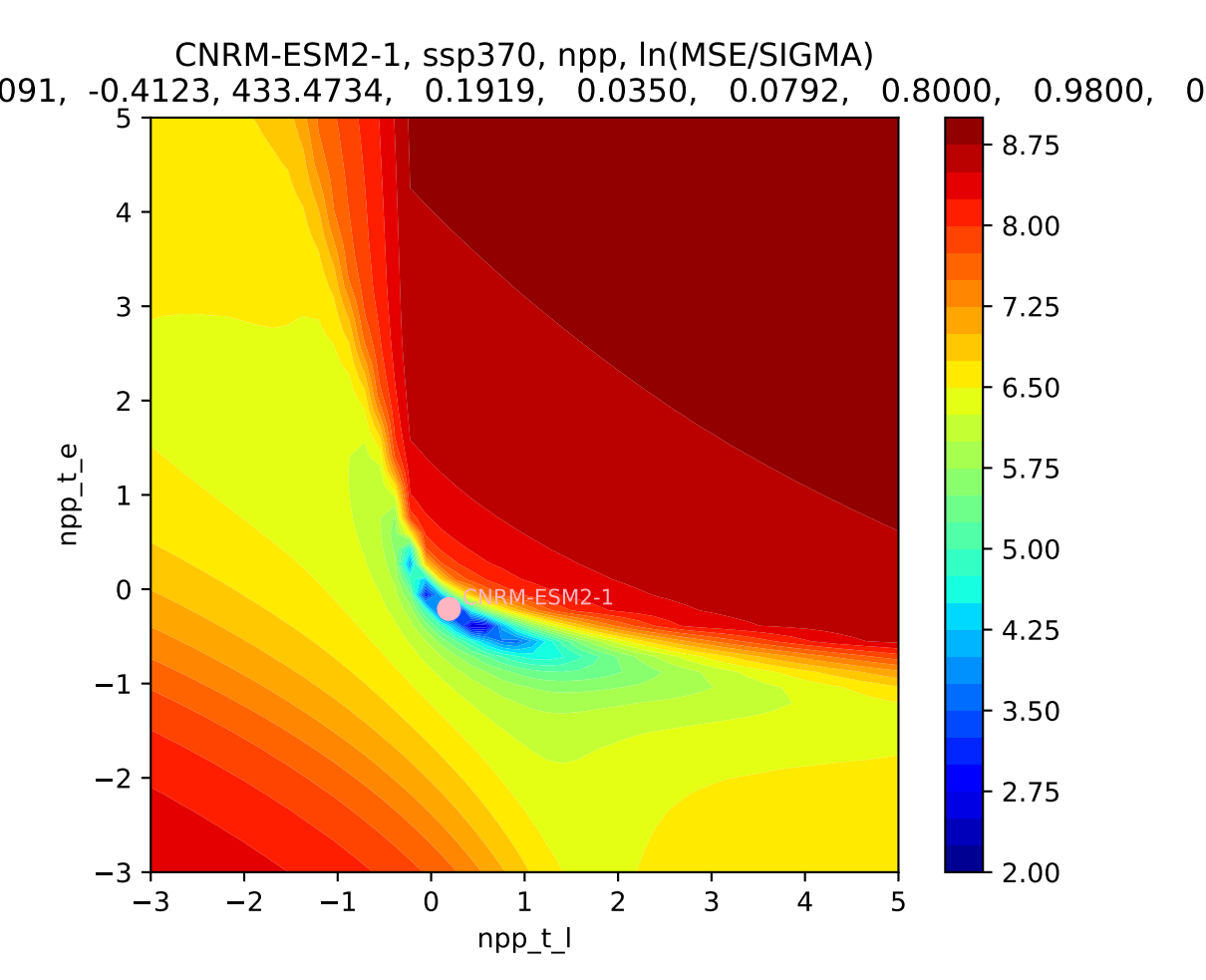

CNRM-ESM2-1, ssp370, npp
ESM-Fit
npp, ESM - FIT
Year


CNRM-ESM2-1, ssp370, npp
ESM
Fit
npp
ΔT


CNRM-ESM2-1, ssp370, npp
ESM-Fit
npp, ESM - FIT
ΔT


CNRM-ESM2-1, ssp370, npp
ESM
Fit
npp
c_atm


CNRM-ESM2-1, ssp370, npp
ESM-Fit
npp, ESM - FIT
c_atm


CNRM-ESM2-1, ssp370, npp, ln(MSE/SIGMA)
091, -0.4123, 433.4734, 0.1919, 0.0350, 0.0792, 0.8000, 0.9800, 0
CNRM-ESM2-1
npp_t_e
npp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
8.75
8.00
7.25
6.50
5.75
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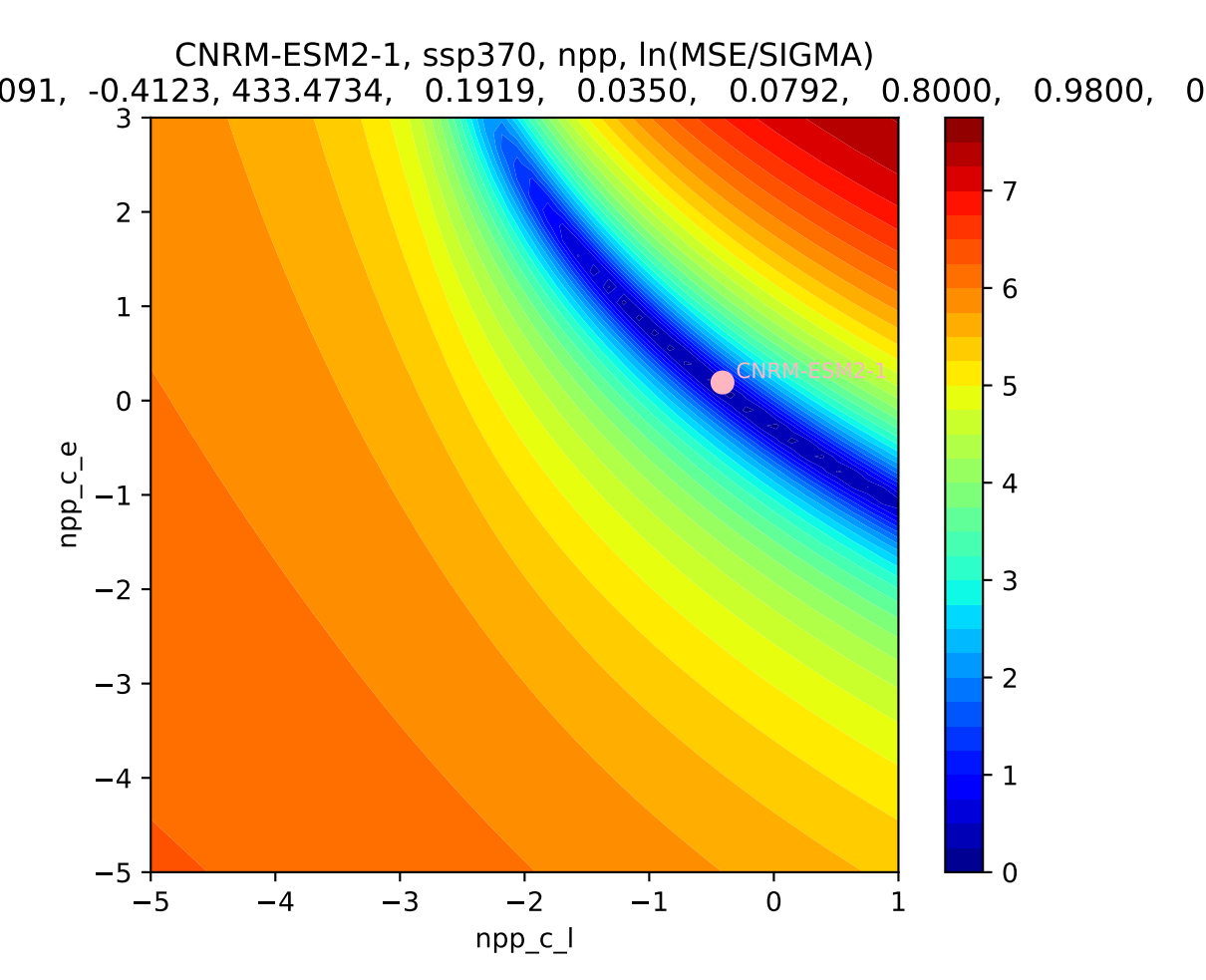
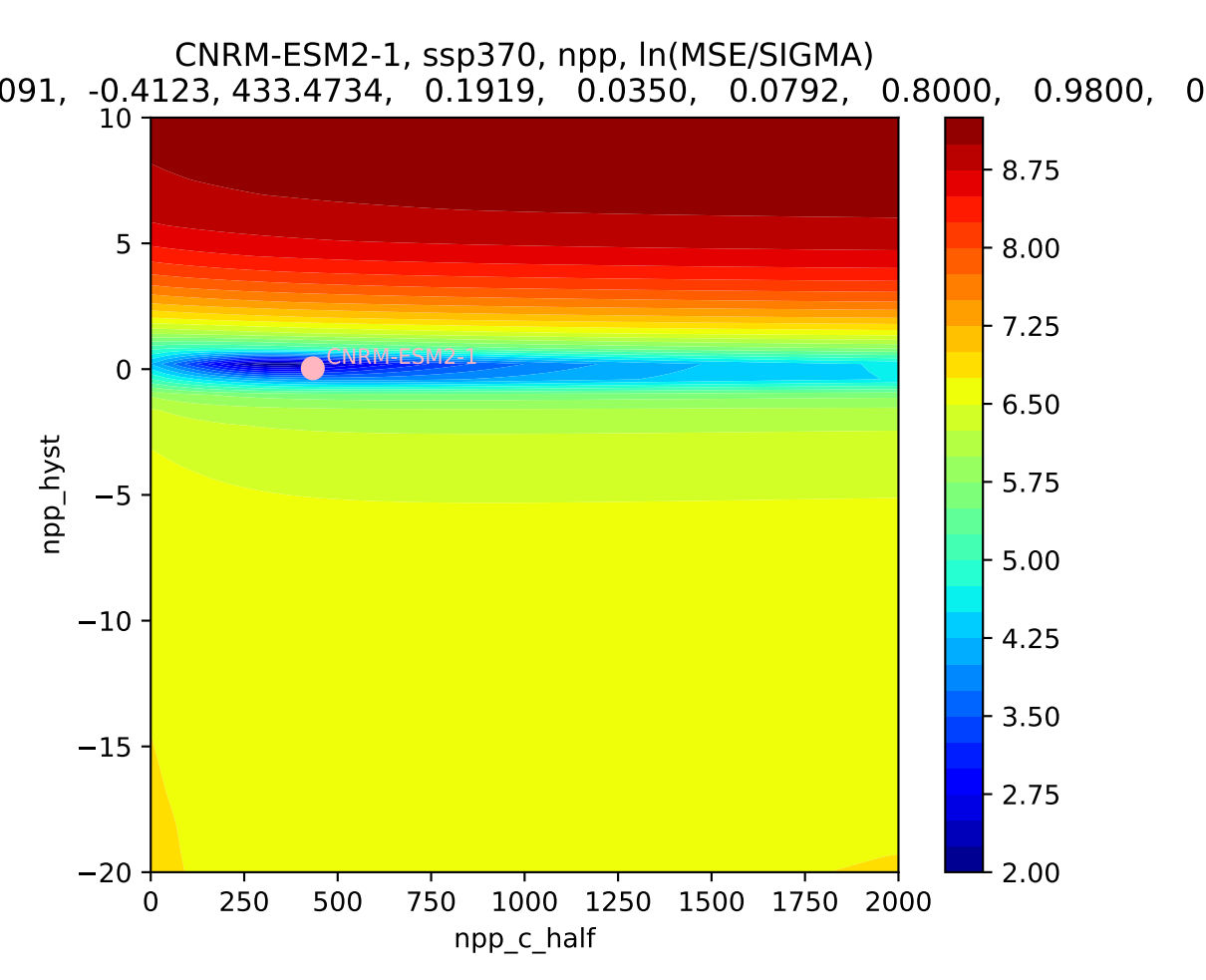
3.50
2.75
2.00


CNRM-ESM2-1, ssp370, npp, ln(MSE/SIGMA)
091, -0.4123, 433.4734, 0.1919, 0.0350, 0.0792, 0.8000, 0.9800, 0
CNRM-ESM2-1
npp_c_e
npp_c_l
3
2
1
0
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
0
1
7
6
5
4
3
2
1
0


CNRM-ESM2-1, ssp370, npp, ln(MSE/SIGMA)
091, -0.4123, 433.4734, 0.1919, 0.0350, 0.0792, 0.8000, 0.9800, 0
CNRM-ESM2-1
npp_hyst
npp_c_half
10
5
0
−5
−10
−15
−20
0
250
500
750
1000
1250
1500
1750
2000
8.75
8.00
7.25
6.50
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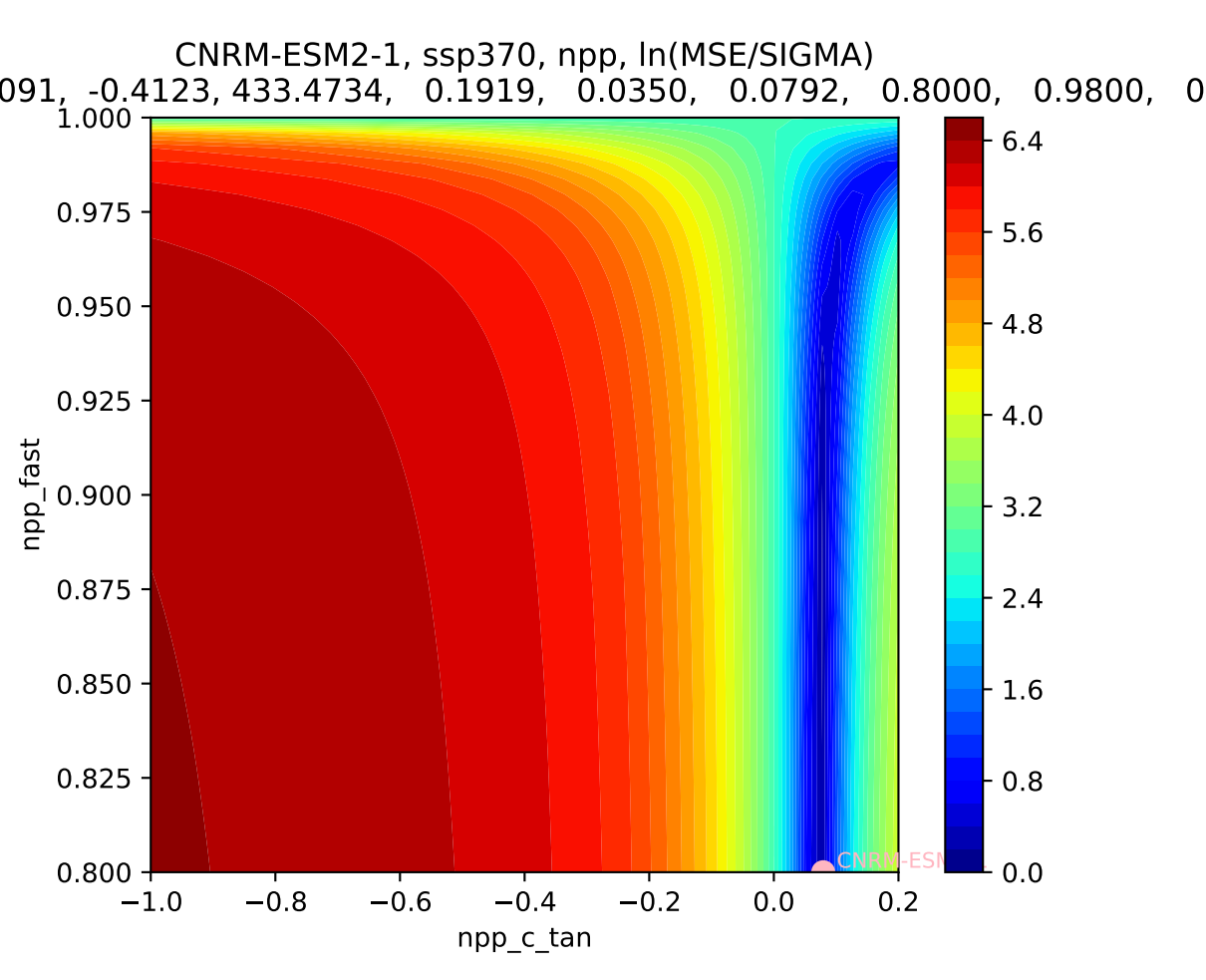
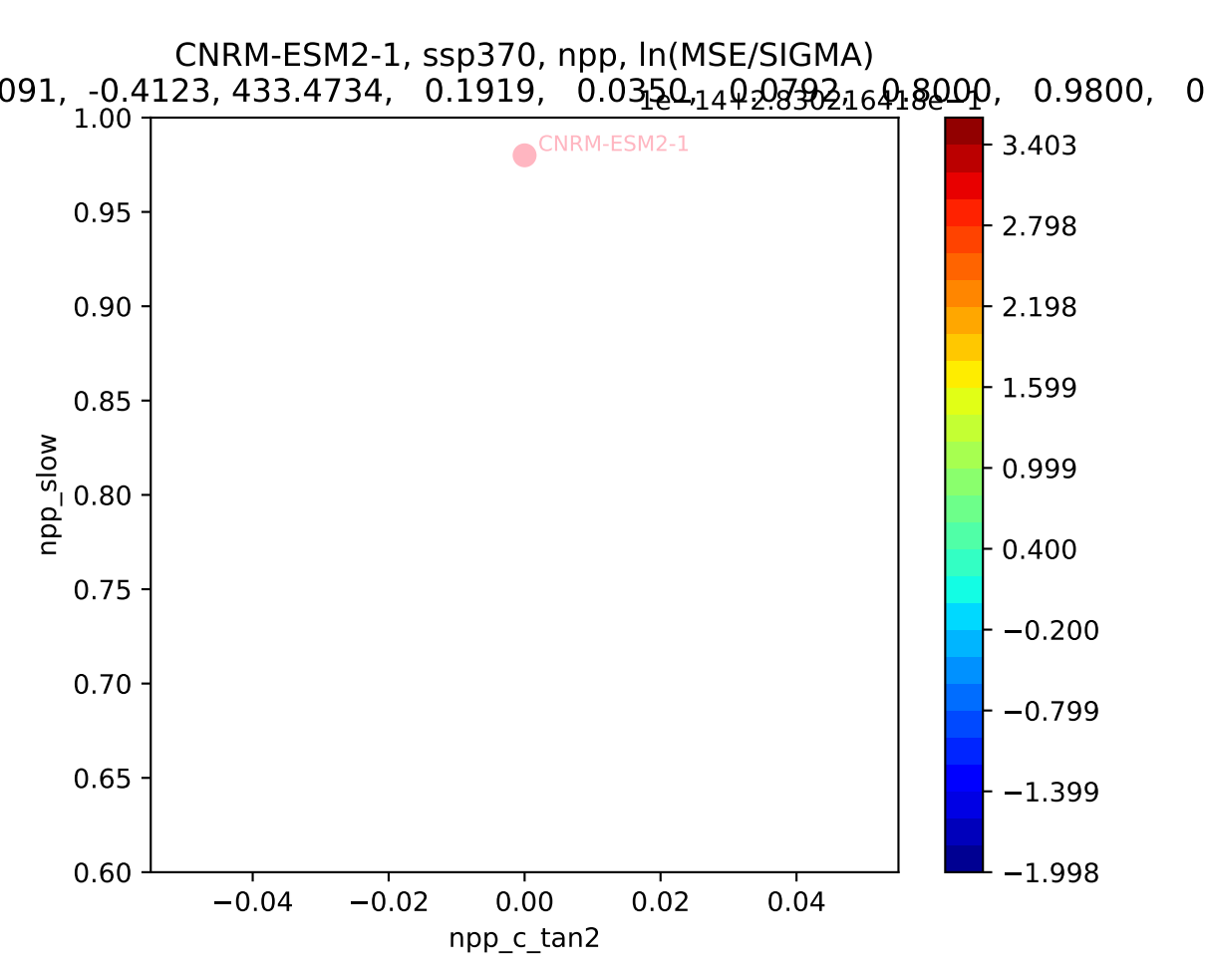
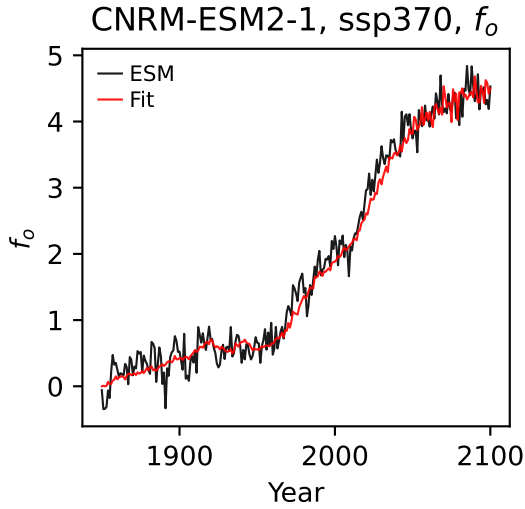
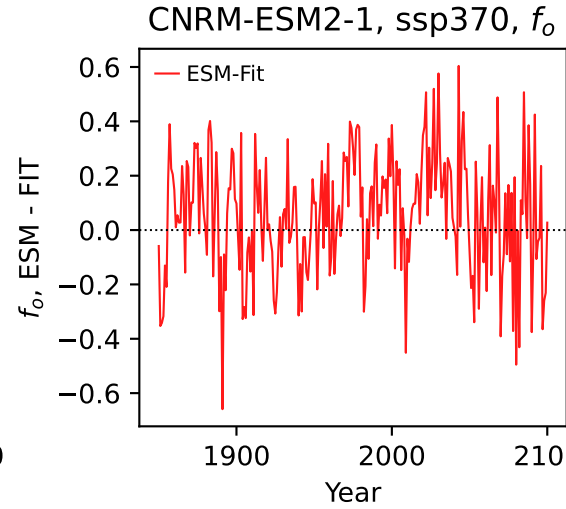
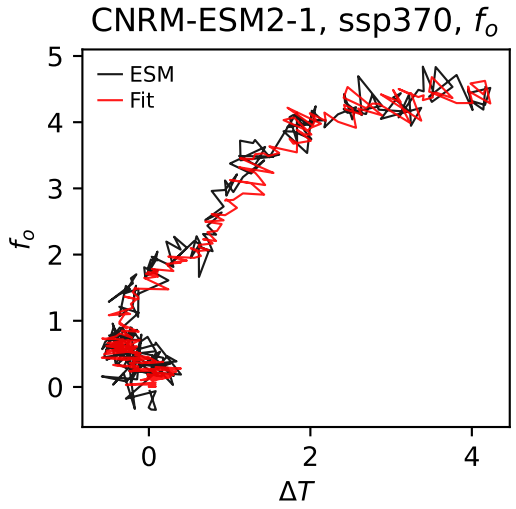
2.75
2.00

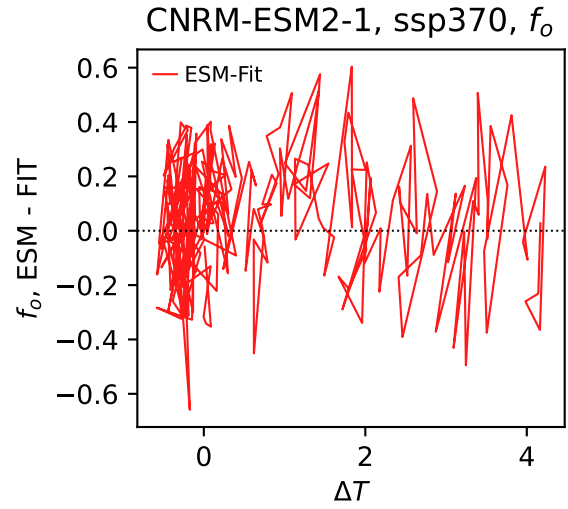

CNRM-ESM2-1, ssp370, npp, ln(MSE/SIGMA)
091, -0.4123, 433.4734, 0.1919, 0.0350, 0.0792, 0.8000, 0.9800, 0
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
npp_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
npp_c_tan
6.4
5.6
4.8
4.0
3.2
2.4
1.6
0.8
0.0

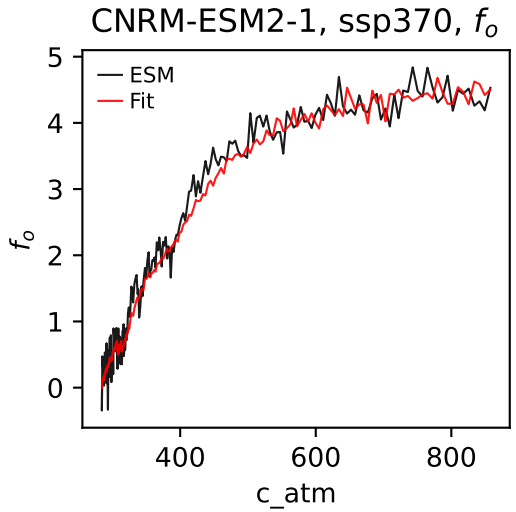

CNRM-ESM2-1, ssp370, npp, ln(MSE/SIGMA)
091, -0.4123, 433.4734, 0.1919, 0.0350, 0.0792, 0.8000, 0.9800, 0
1e−14+2.830216418e−1
CNRM-ESM2-1
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
npp_slow
−0.04
−0.02
0.00
0.02
0.04
npp_c_tan2
3.403
2.798
2.198
1.599
0.999
0.400
−0.200
−0.799
−1.399
−1.998

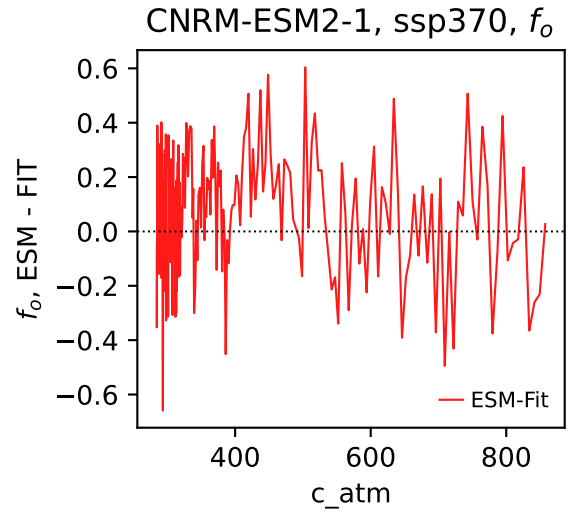

CNRM-ESM2-1, ssp370, f_o
ESM
Fit
f_o
Year

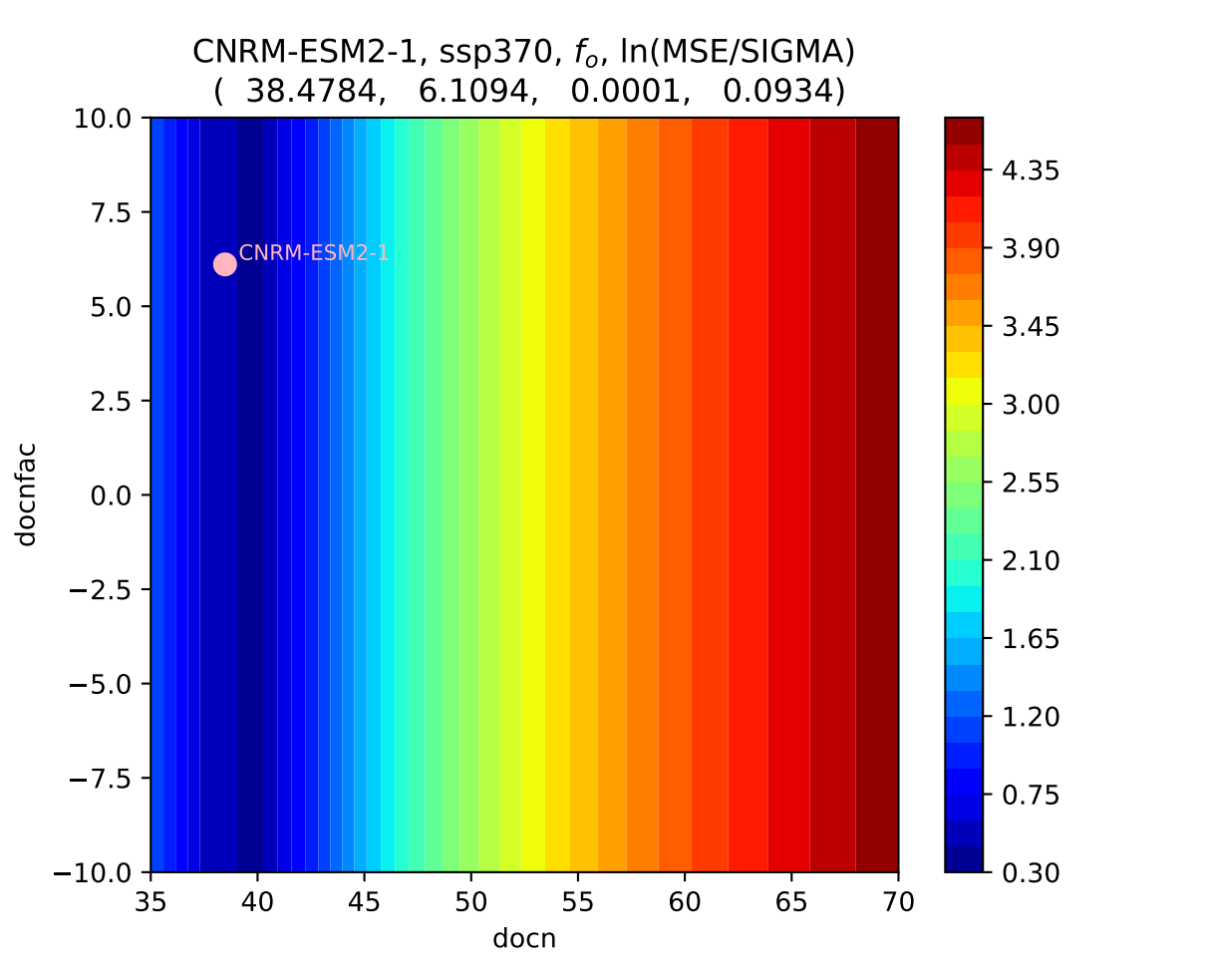

CNRM-ESM2-1, ssp370, f_o
ESM-Fit
f_o, ESM - FIT
Year

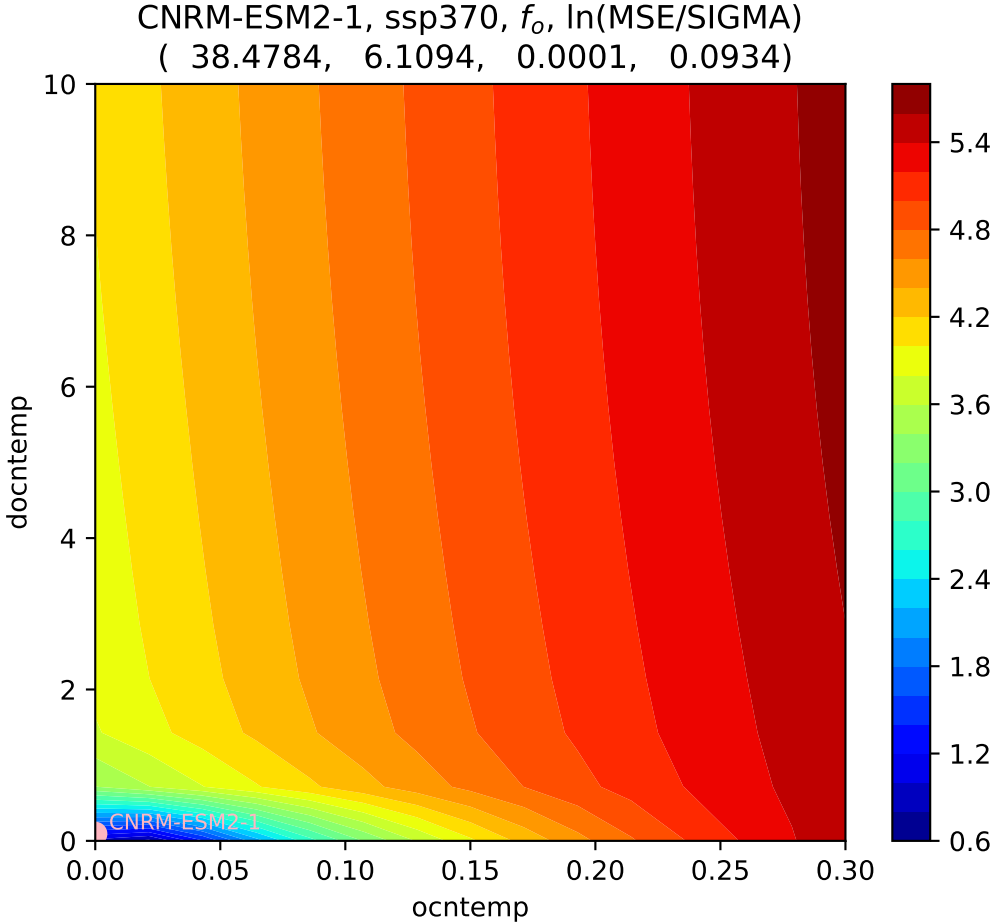

CNRM-ESM2-1, ssp370, f_o
ESM
Fit
f_o
ΔT


CNRM-ESM2-1, ssp370, f_o
ESM-Fit
f_o, ESM - FIT
ΔT


CNRM-ESM2-1, ssp370, f_o
ESM
Fit
f_o
c_atm


CNRM-ESM2-1, ssp370, f_o
ESM-Fit
f_o, ESM - FIT
c_atm


CNRM-ESM2-1, ssp370, f_o, ln(MSE/SIGMA)
(38.4784, 6.1094, 0.0001, 0.0934)
CNRM-ESM2-1
docnfac
docn
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
35
40
45
50
55
60
65
70
4.35
3.90
3.45
3.00
2.55
2.10
1.65
1.20
0.75
0.30


CNRM-ESM2-1, ssp370, f_o, ln(MSE/SIGMA)
(38.4784, 6.1094, 0.0001, 0.0934)
docntemp
ocntemp
CNRM-ESM2-1
0
2
4
6
8
10
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.6
1.2
1.8
2.4
3.0
3.6
4.2
4.8
5.4