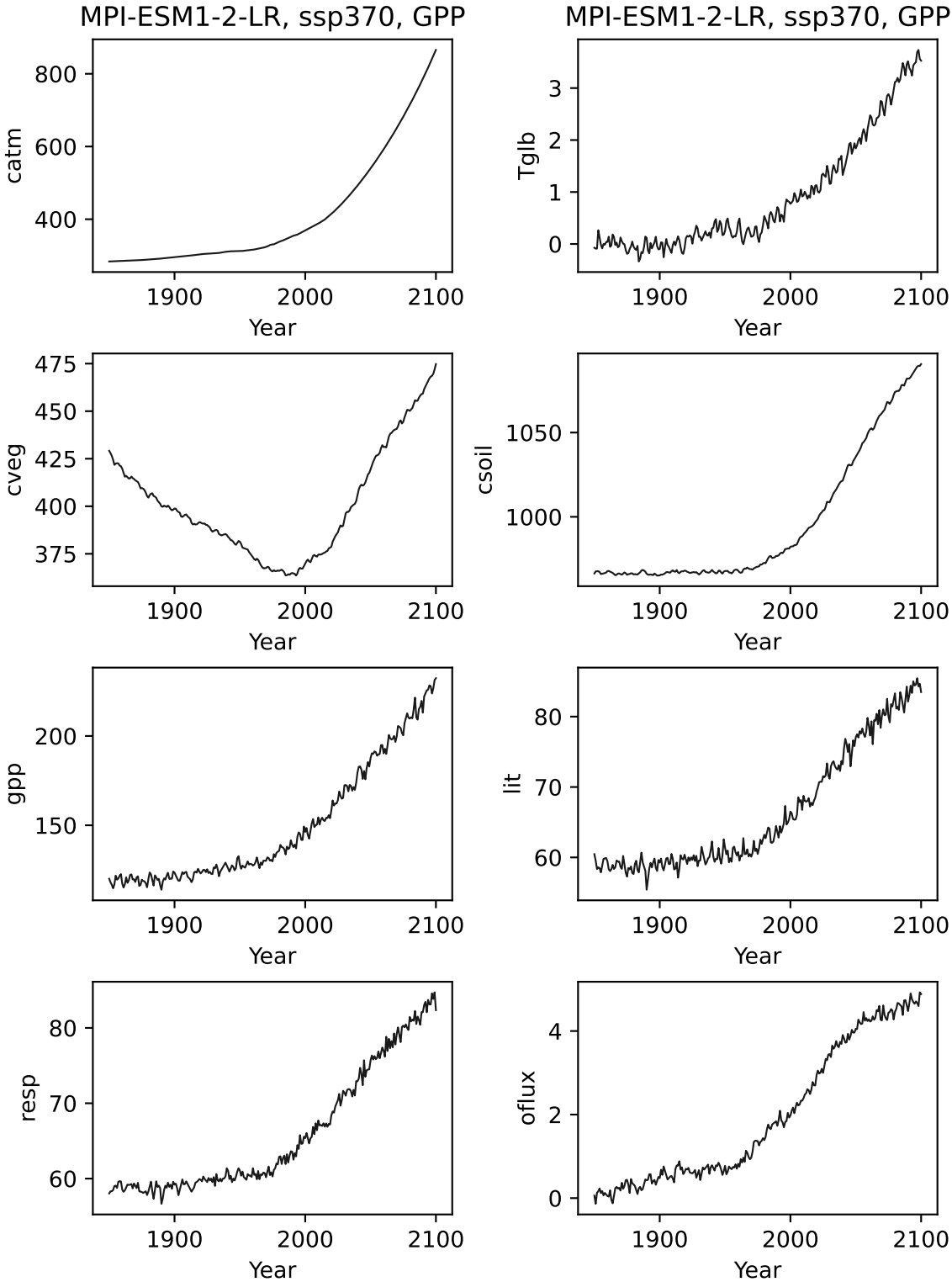
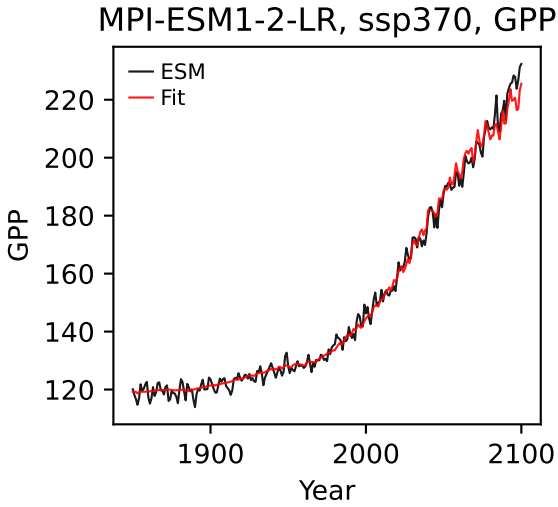
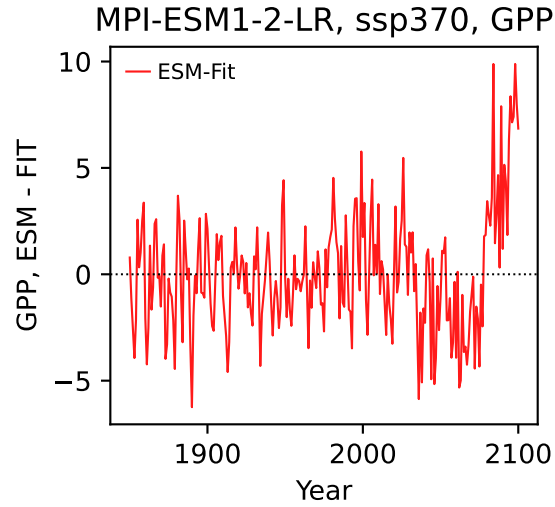
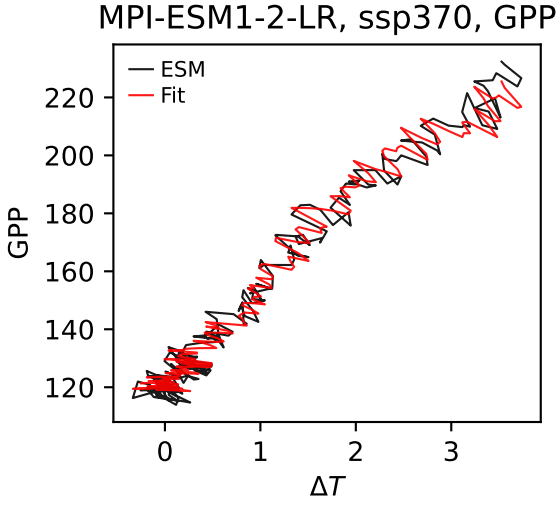
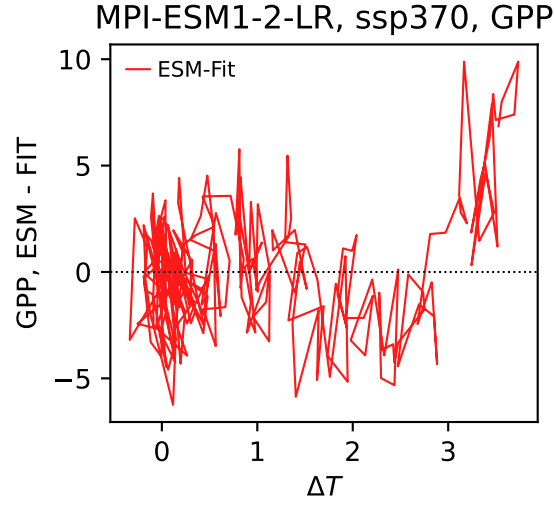
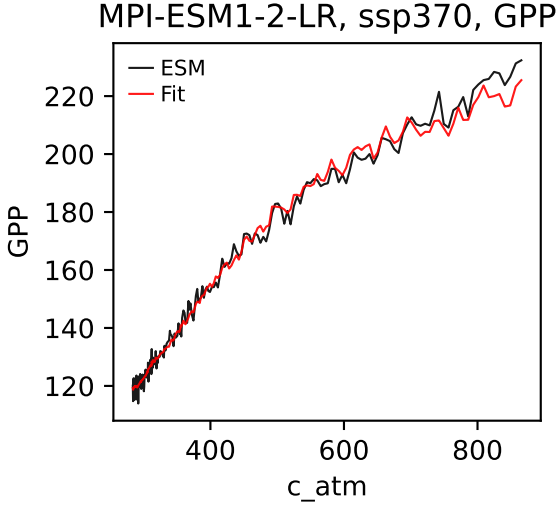

MPI-ESM1-2-LR, ssp370, GPP
catm
Year
MPI-ESM1-2-LR, ssp370, GPP
Tglb
Year
cveg
Year
csoil
Year
gpp
Year
lit
Year
resp
Year
oflux
Year

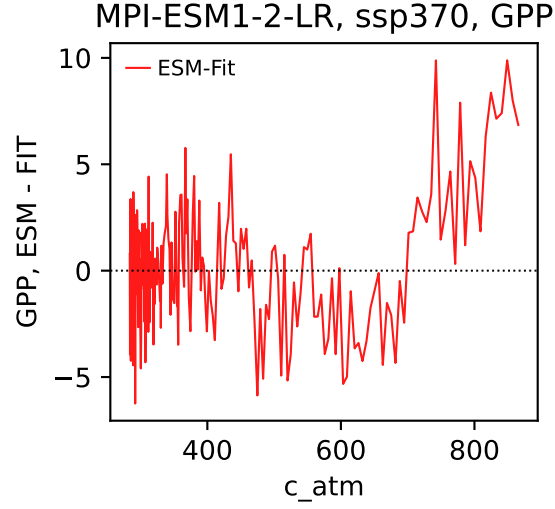

MPI-ESM1-2-LR, ssp370, GPP
ESM
Fit
GPP
Year

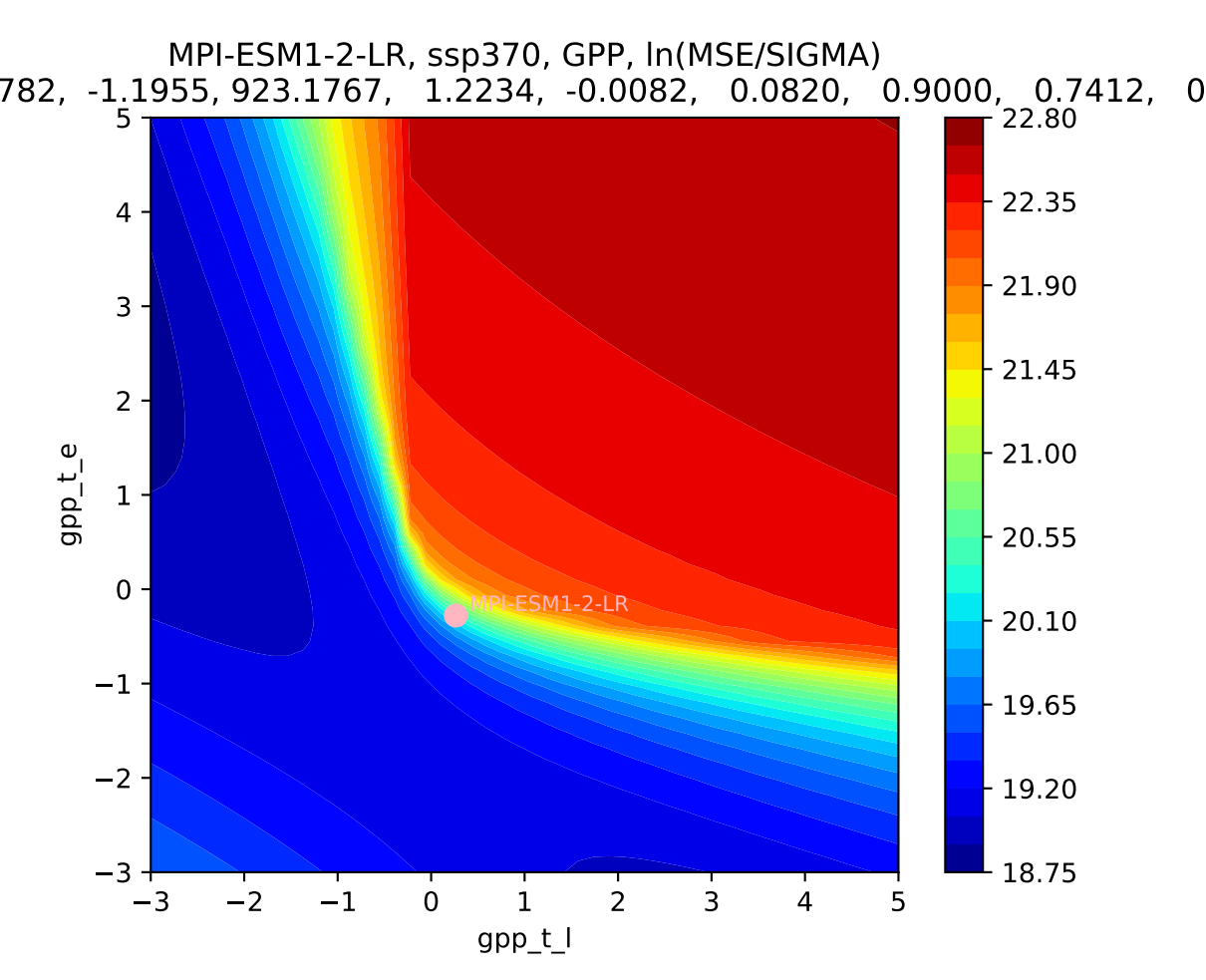

MPI-ESM1-2-LR, ssp370, GPP
ESM-Fit
GPP, ESM - FIT
Year

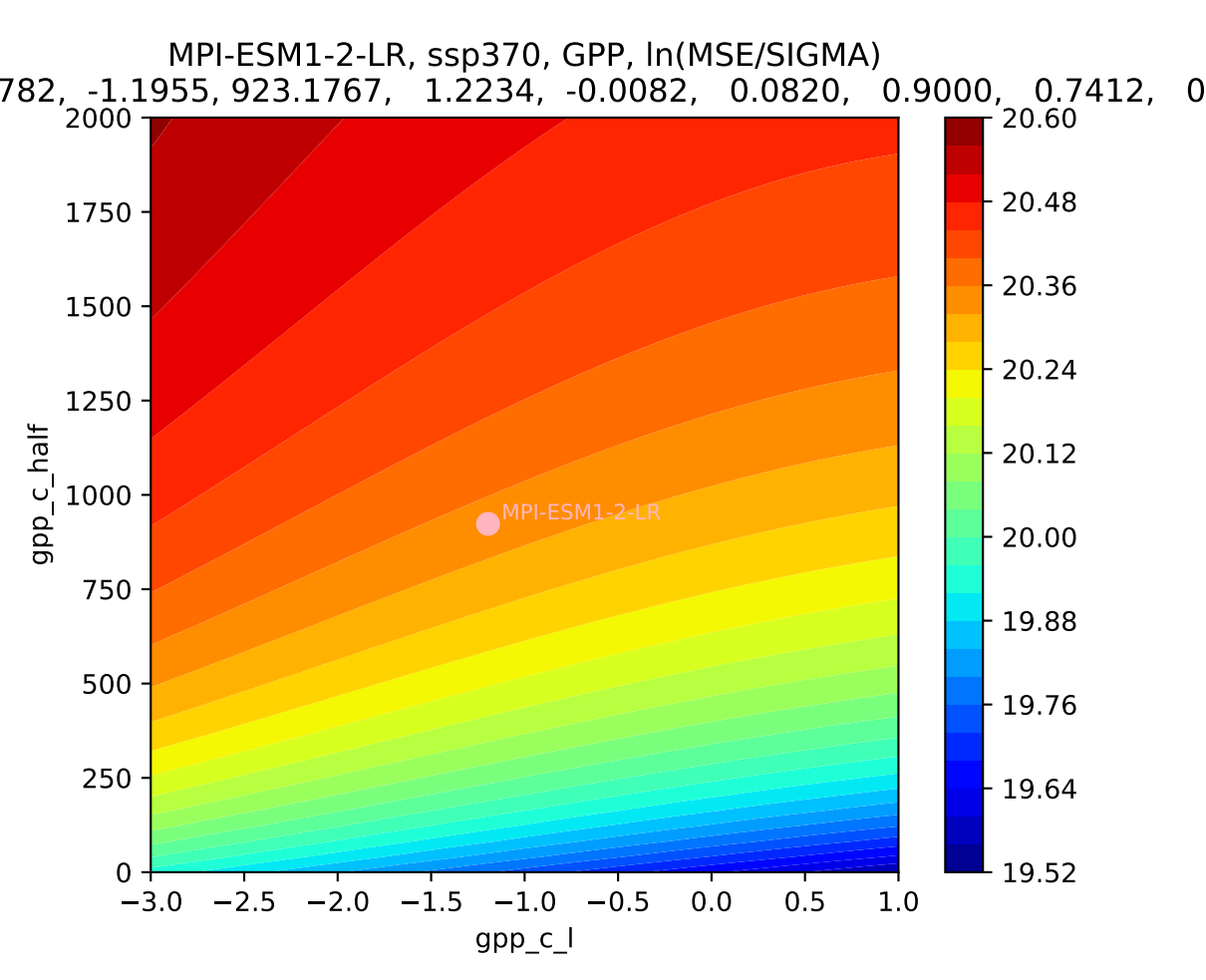

MPI-ESM1-2-LR, ssp370, GPP
ESM
Fit
GPP
ΔT

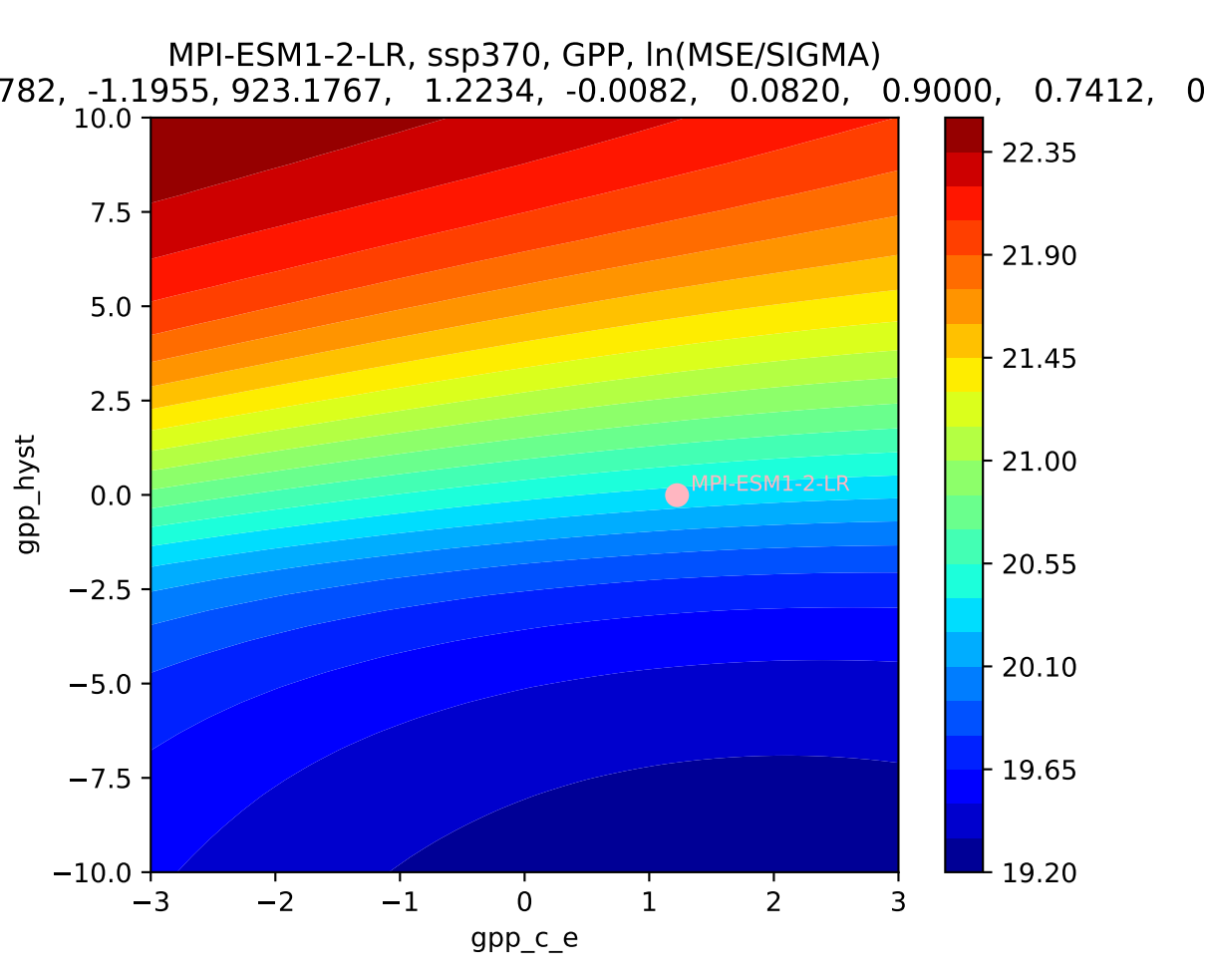

MPI-ESM1-2-LR, ssp370, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

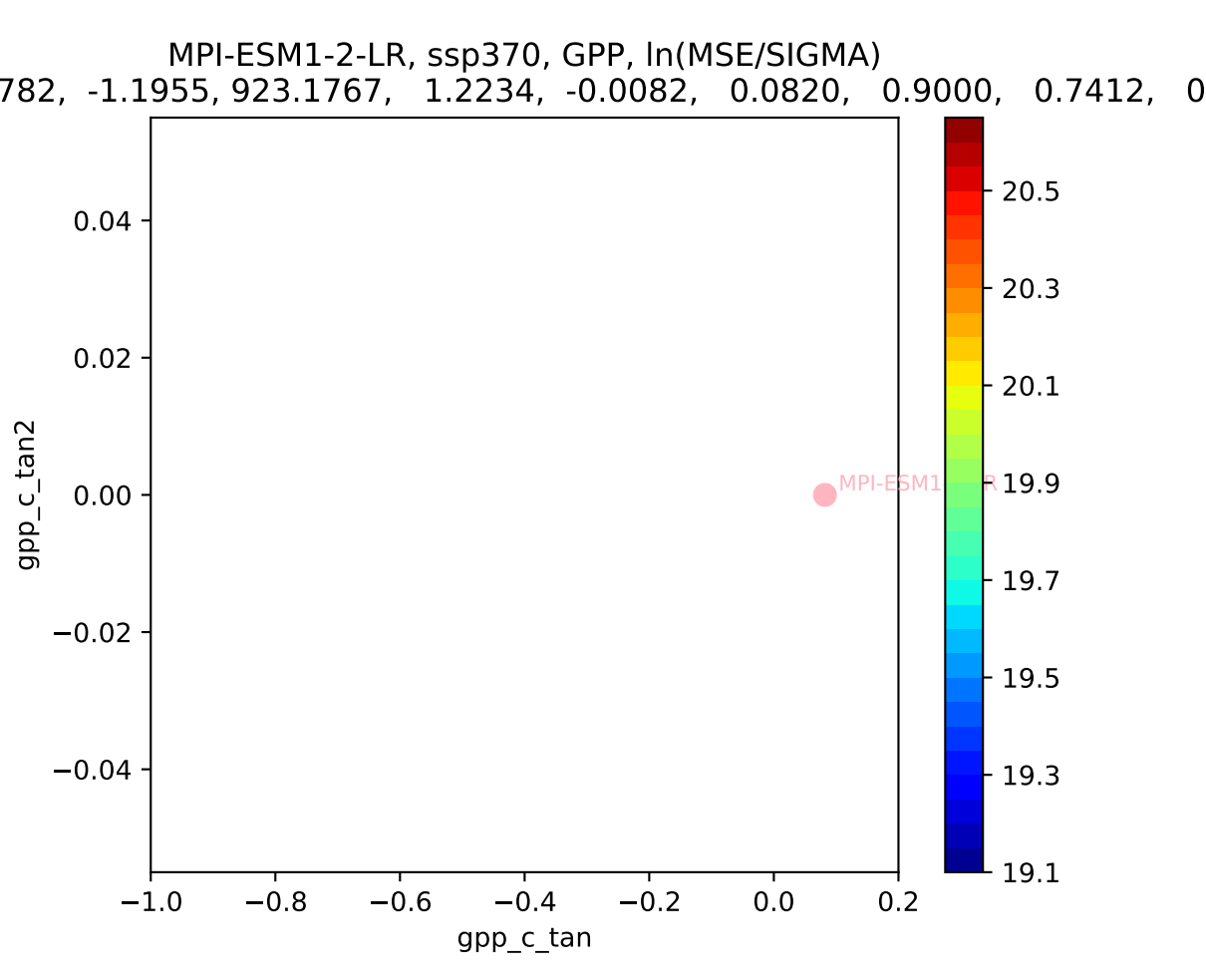

MPI-ESM1-2-LR, ssp370, GPP
ESM
Fit
GPP
c_atm

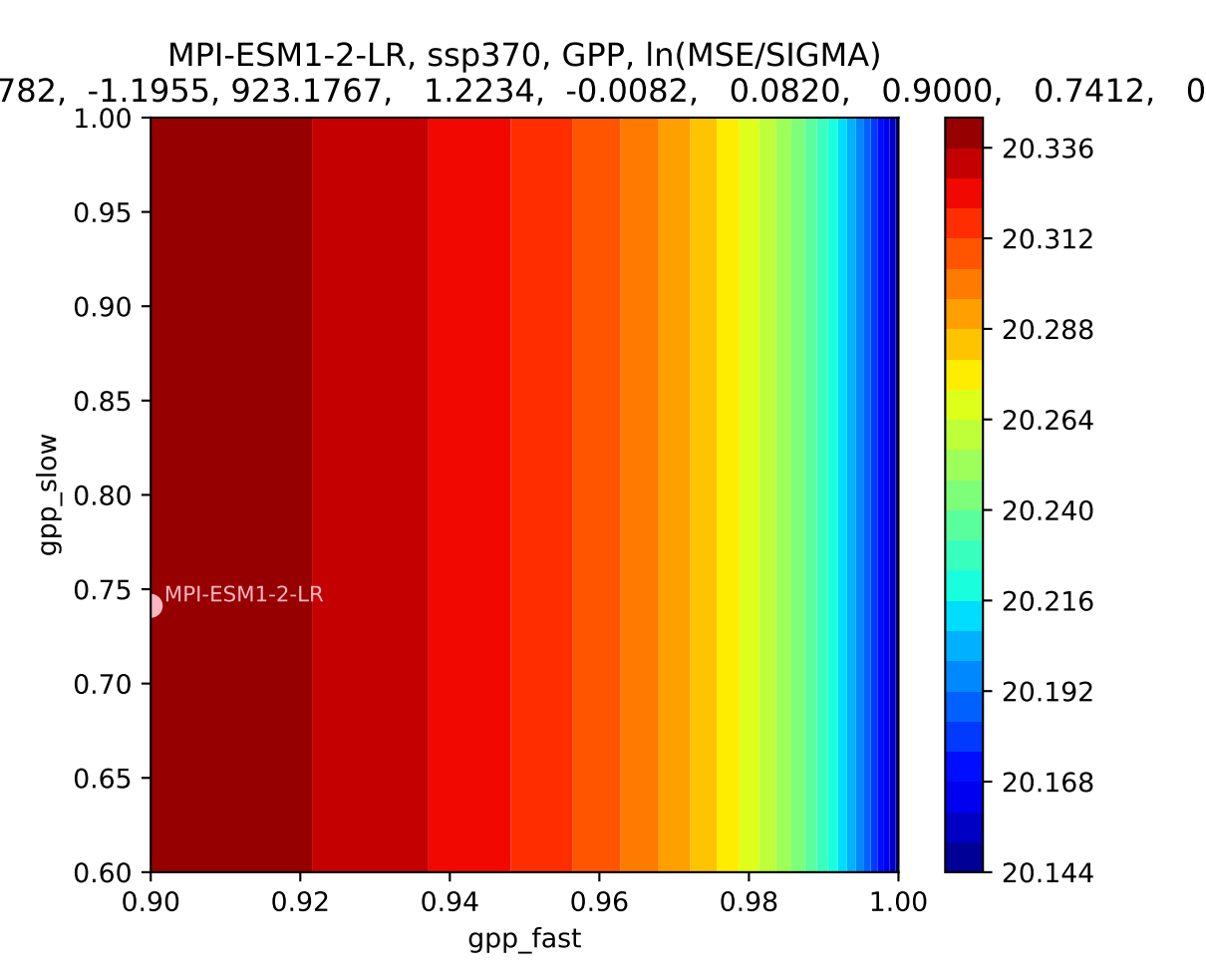

MPI-ESM1-2-LR, ssp370, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

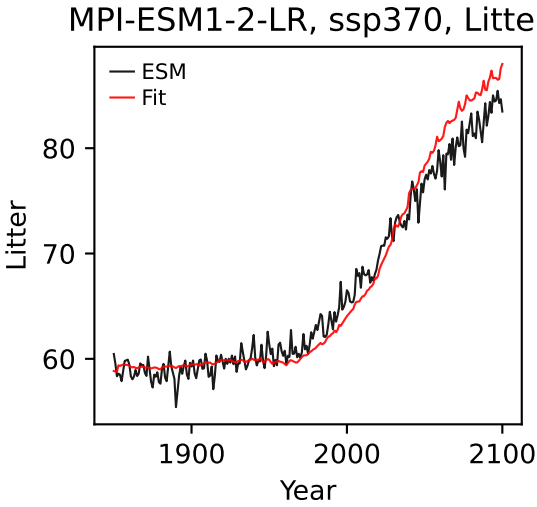

MPI-ESM1-2-LR, ssp370, GPP, ln(MSE/SIGMA)
782, -1.1955, 923.1767, 1.2234, -0.0082, 0.0820, 0.9000, 0.7412, 0
MPI-ESM1-2-LR
gpp_t_e
gpp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
22.80
22.35
21.90
21.45
21.00
20.55
20.10
19.65
19.20
18.75

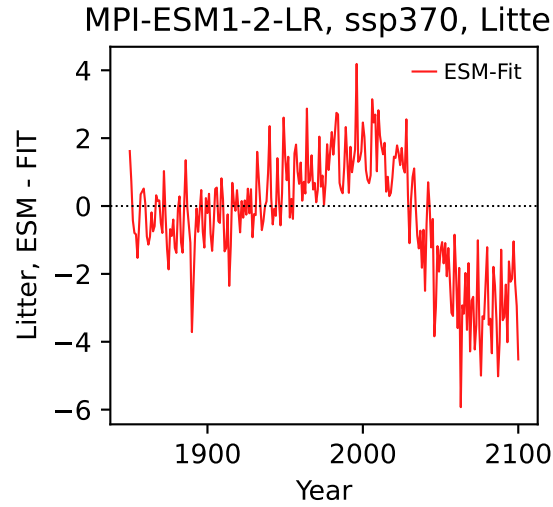

MPI-ESM1-2-LR, ssp370, GPP, ln(MSE/SIGMA)
782, -1.1955, 923.1767, 1.2234, -0.0082, 0.0820, 0.9000, 0.7412, 0
MPI-ESM1-2-LR
gpp_c_half
gpp_c_l
2000
1750
1500
1250
1000
750
500
250
0
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
20.60
20.48
20.36
20.24
20.12
20.00
19.88
19.76
19.64
19.52

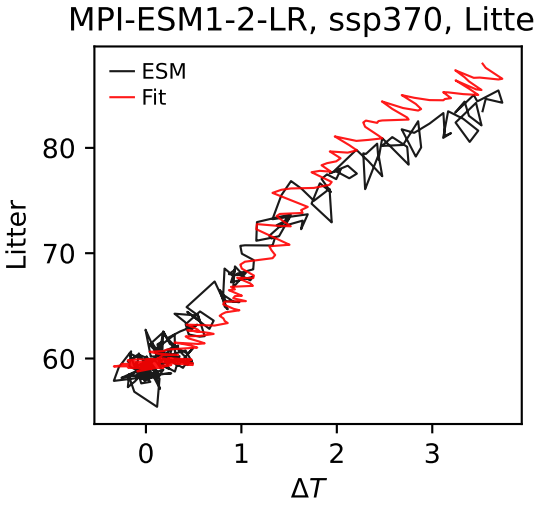

MPI-ESM1-2-LR, ssp370, GPP, ln(MSE/SIGMA)
782, -1.1955, 923.1767, 1.2234, -0.0082, 0.0820, 0.9000, 0.7412, 0
MPI-ESM1-2-LR
gpp_hyst
gpp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
22.35
21.90
21.45
21.00
20.55
20.10
19.65
19.20

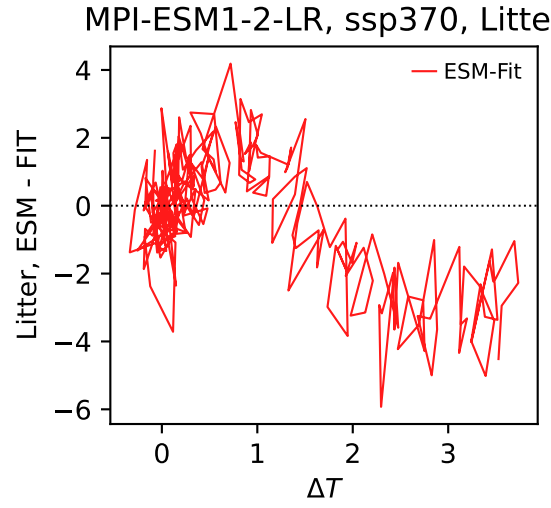

MPI-ESM1-2-LR, ssp370, GPP, ln(MSE/SIGMA)
782, -1.1955, 923.1767, 1.2234, -0.0082, 0.0820, 0.9000, 0.7412, 0
MPI-ESM1
R
gpp_c_tan2
gpp_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
20.5
20.3
20.1
19.9
19.7
19.5
19.3
19.1

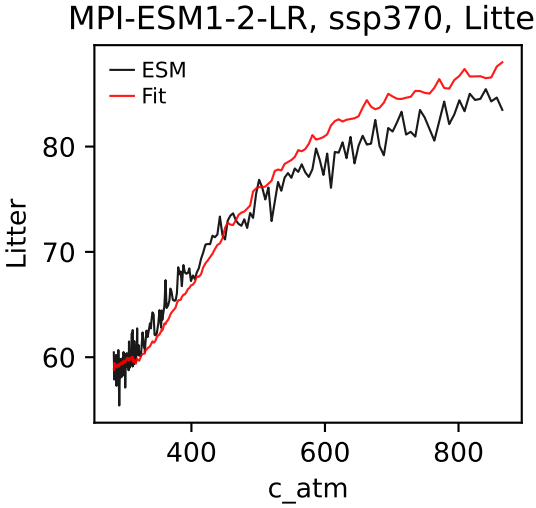

MPI-ESM1-2-LR, ssp370, GPP, ln(MSE/SIGMA)
782, -1.1955, 923.1767, 1.2234, -0.0082, 0.0820, 0.9000, 0.7412, 0
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
gpp_slow
MPI-ESM1-2-LR
0.90
0.92
0.94
0.96
0.98
1.00
gpp_fast
20.336
20.312
20.288
20.264
20.240
20.216
20.192
20.168
20.144

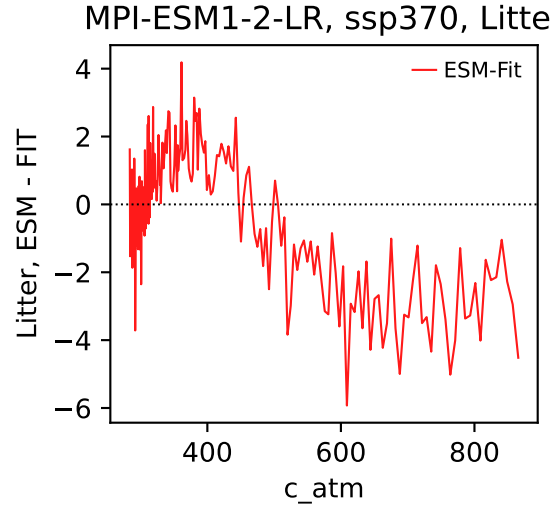

MPI-ESM1-2-LR, ssp370, Litter
ESM
Fit
Litter
Year

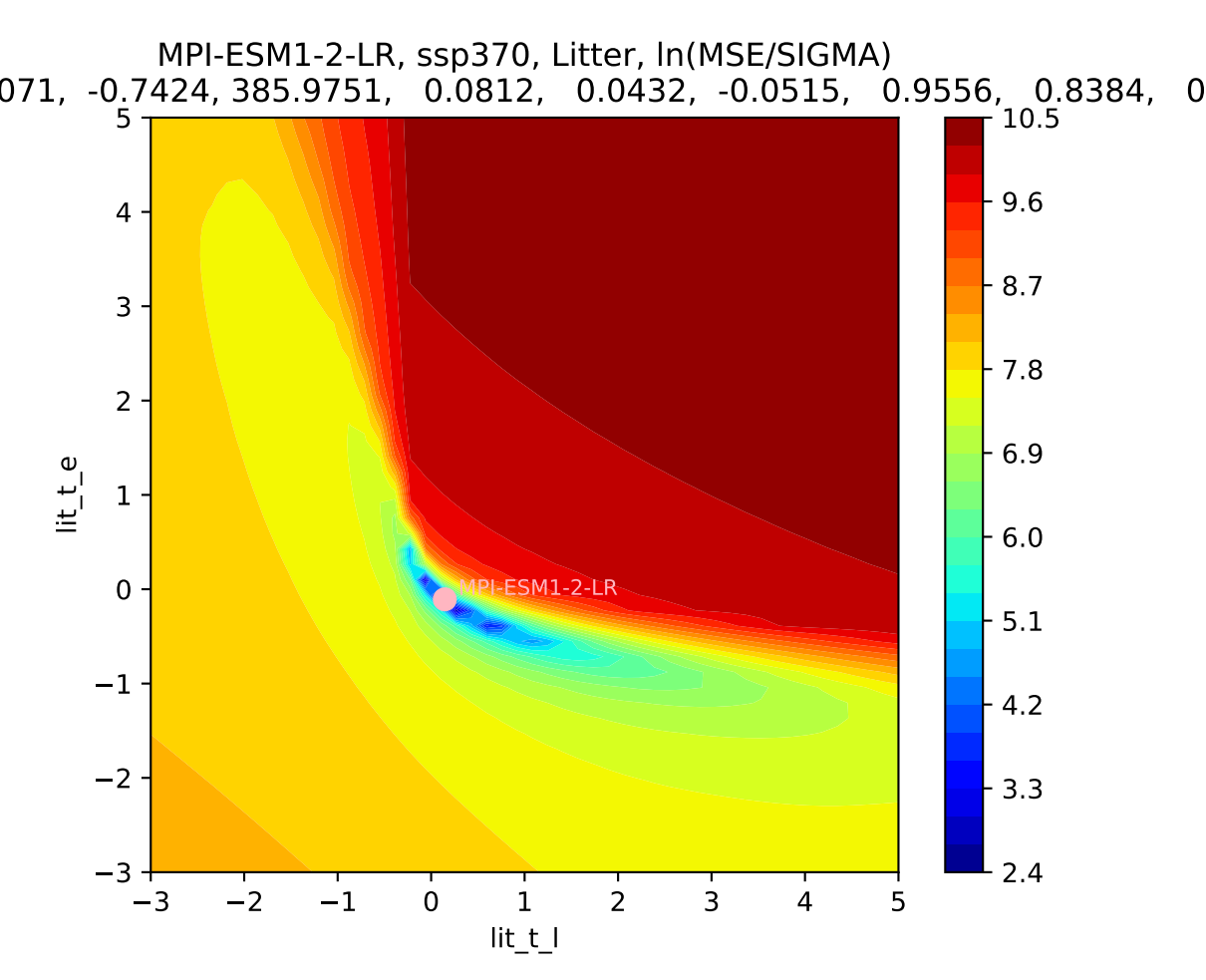

MPI-ESM1-2-LR, ssp370, Litter
ESM-Fit
Litter, ESM - FIT
Year

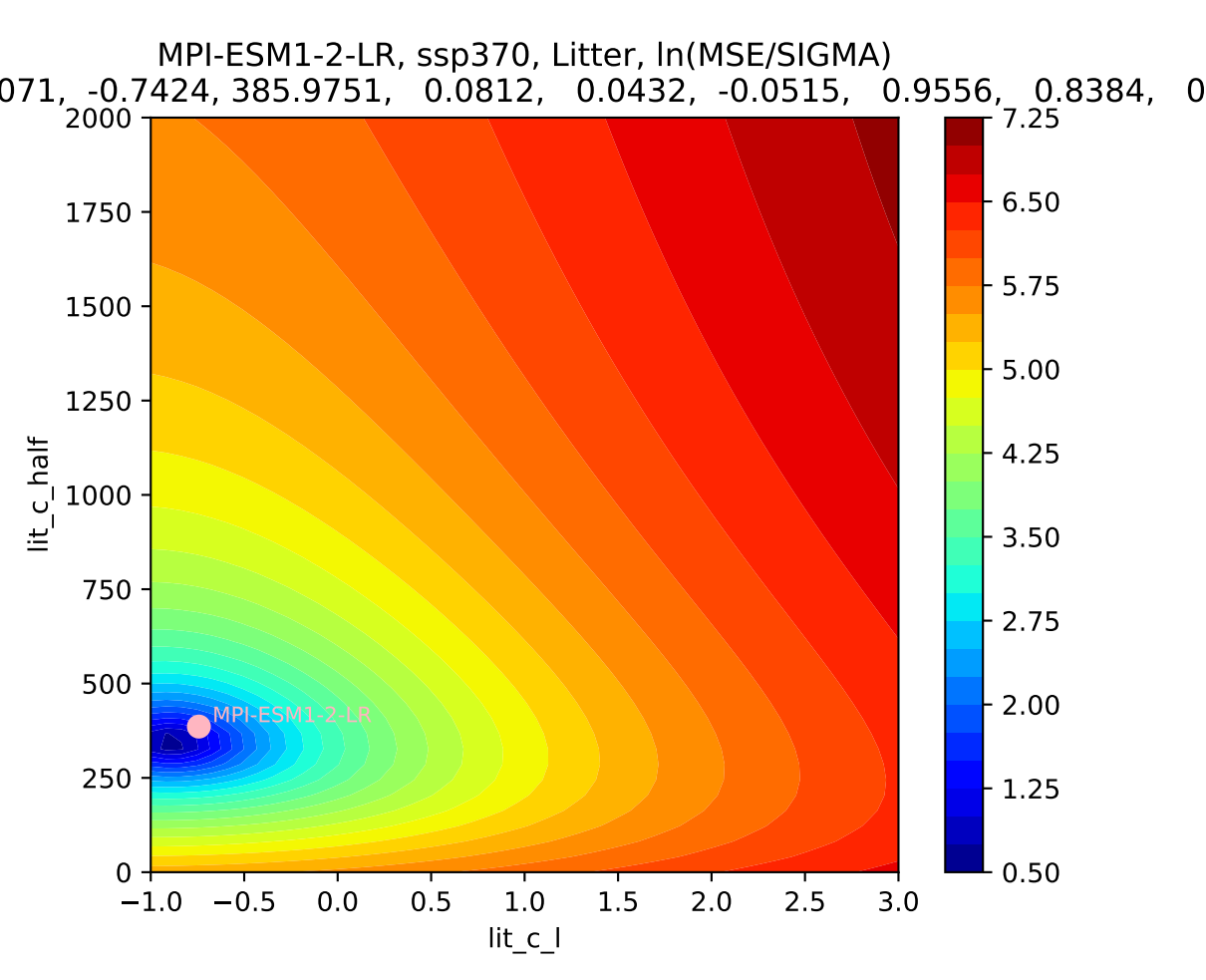

MPI-ESM1-2-LR, ssp370, Litter
ESM
Fit
Litter
ΔT

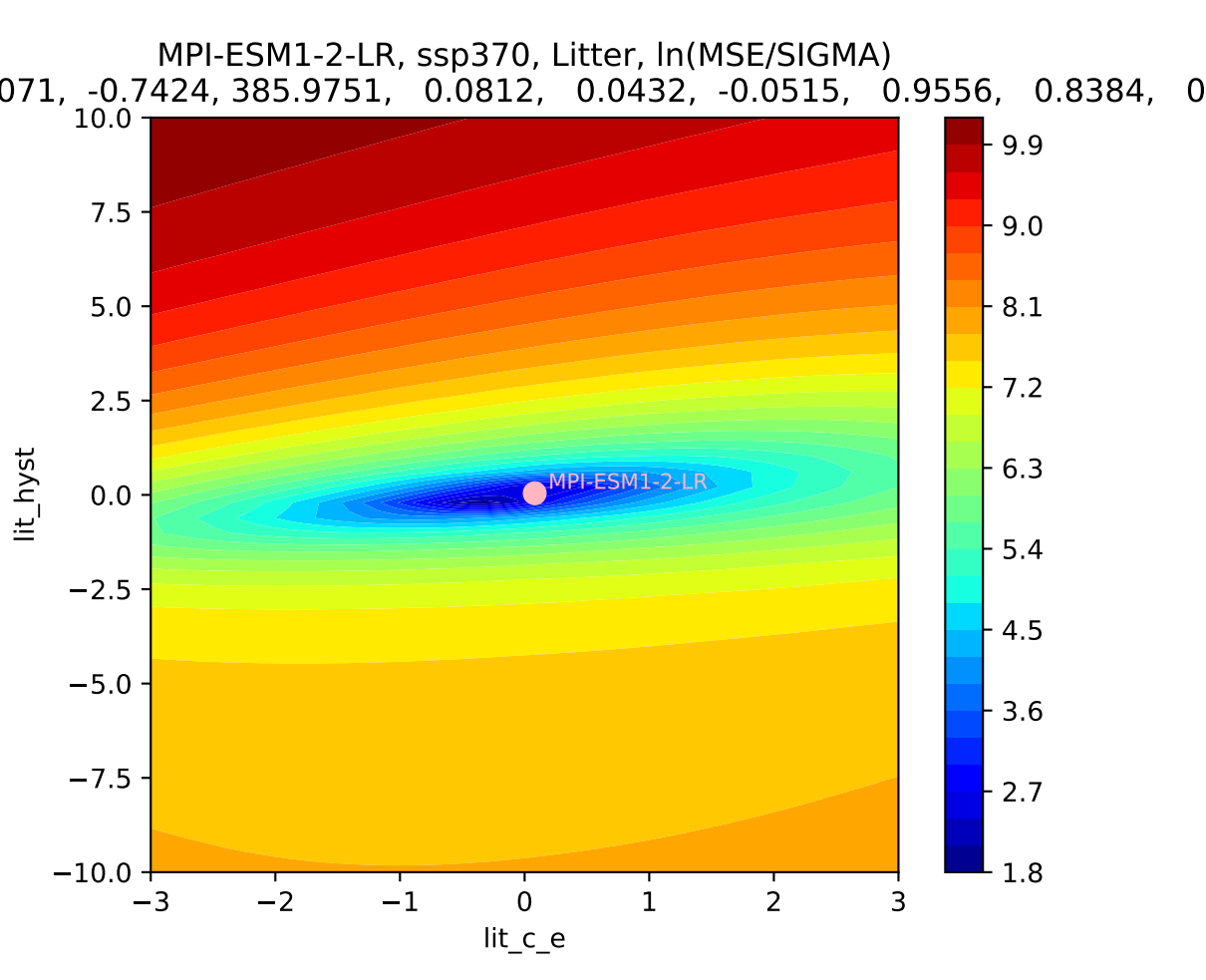

MPI-ESM1-2-LR, ssp370, Litter
ESM-Fit
Litter, ESM - FIT
ΔT

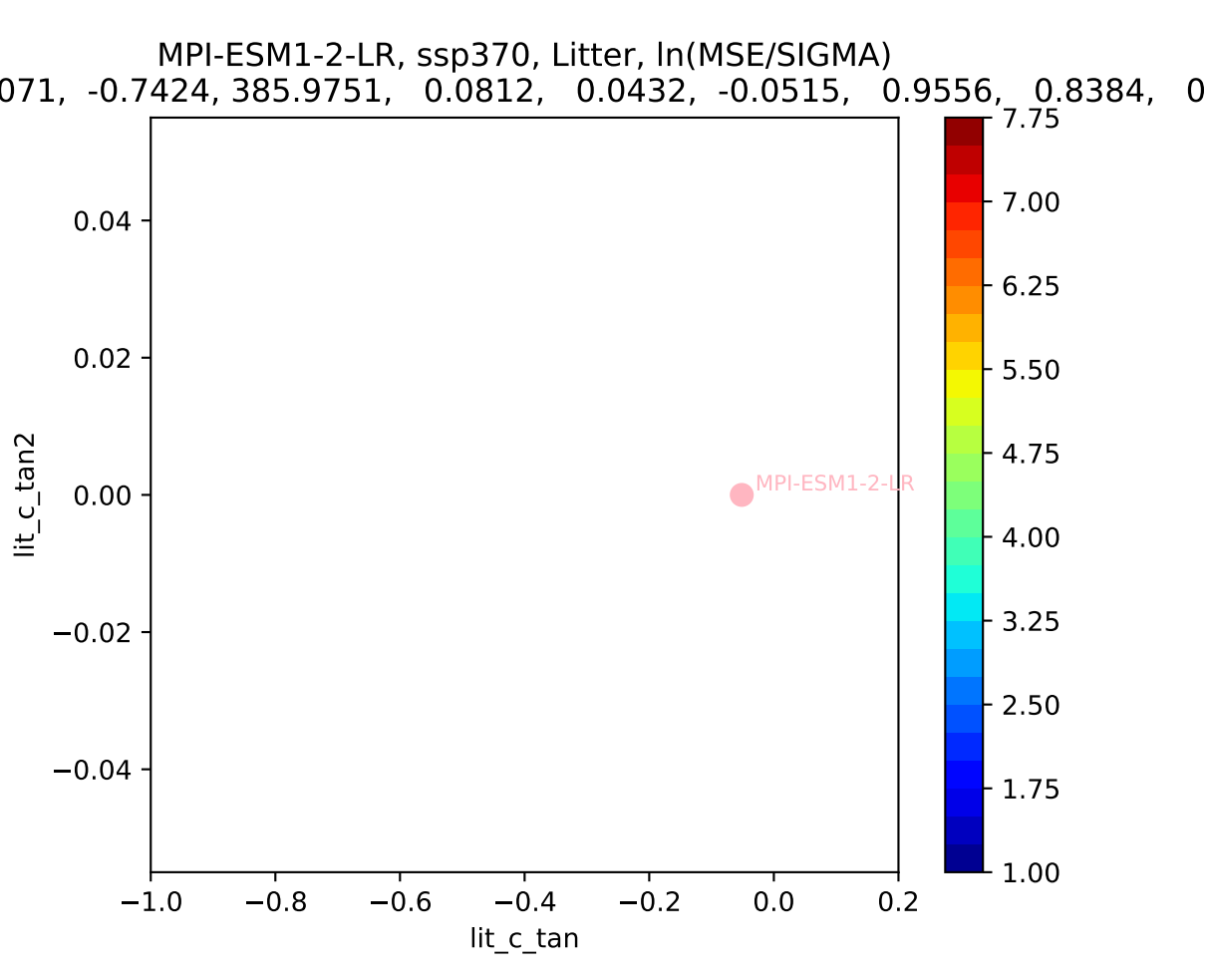

MPI-ESM1-2-LR, ssp370, Litter
ESM
Fit
Litter
c_atm

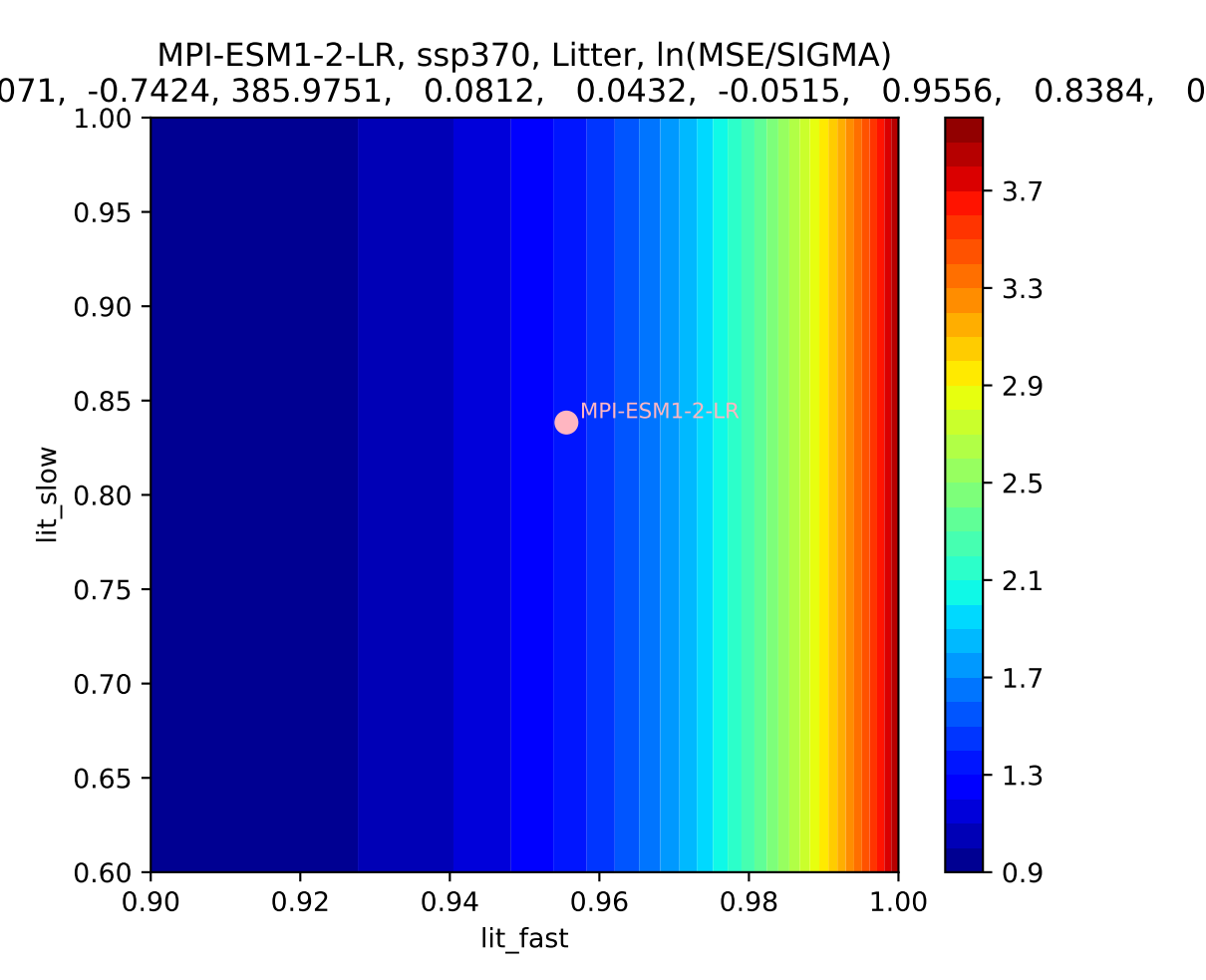

MPI-ESM1-2-LR, ssp370, Litter
ESM-Fit
Litter, ESM - FIT
c_atm

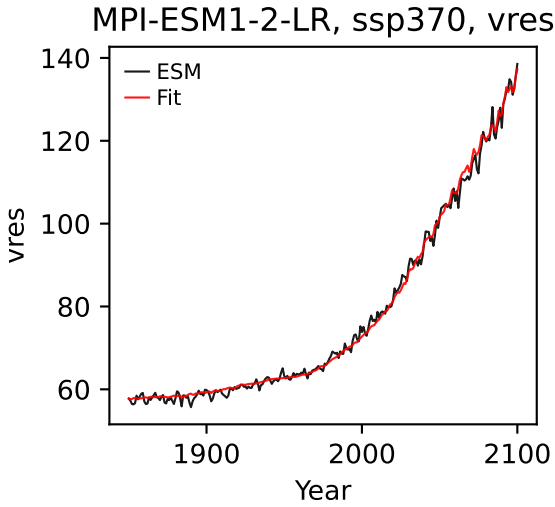

MPI-ESM1-2-LR, ssp370, Litter, ln(MSE/SIGMA)
071, -0.7424, 385.9751, 0.0812, 0.0432, -0.0515, 0.9556, 0.8384, 0
MPI-ESM1-2-LR
lit_t_e
lit_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
10.5
9.6
8.7
7.8
6.9
6.0
5.1
4.2
3.3
2.4

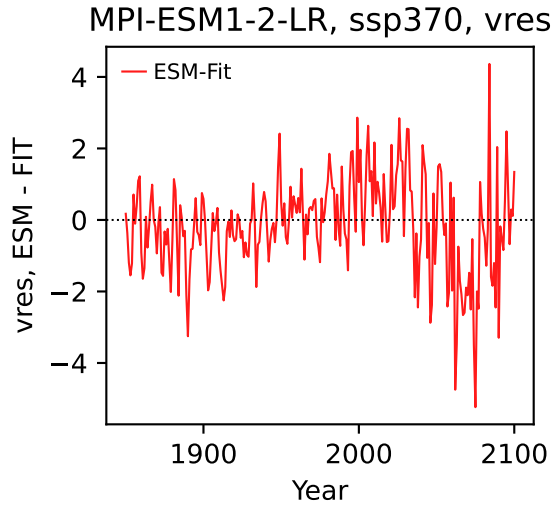

MPI-ESM1-2-LR, ssp370, Litter, ln(MSE/SIGMA)
071, -0.7424, 385.9751, 0.0812, 0.0432, -0.0515, 0.9556, 0.8384, 0
2000
1750
1500
1250
1000
750
500
250
0
lit_c_half
MPI-ESM1-2-LR
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
lit_c_l
7.25
6.50
5.75
5.00
4.25
3.50
2.75
2.00
1.25
0.50

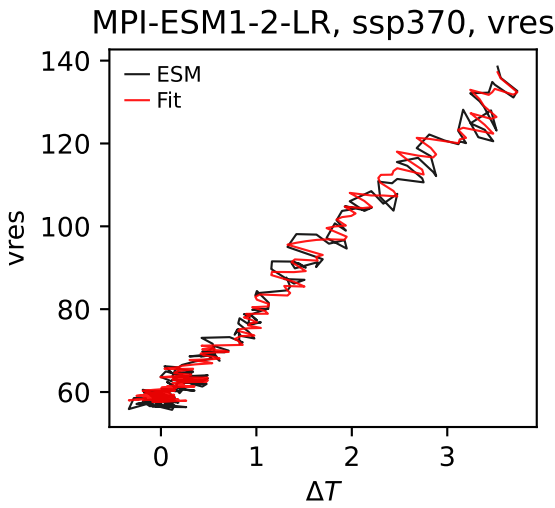

MPI-ESM1-2-LR, ssp370, Litter, ln(MSE/SIGMA)
071, -0.7424, 385.9751, 0.0812, 0.0432, -0.0515, 0.9556, 0.8384, 0
MPI-ESM1-2-LR
lit_hyst
lit_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
9.9
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8

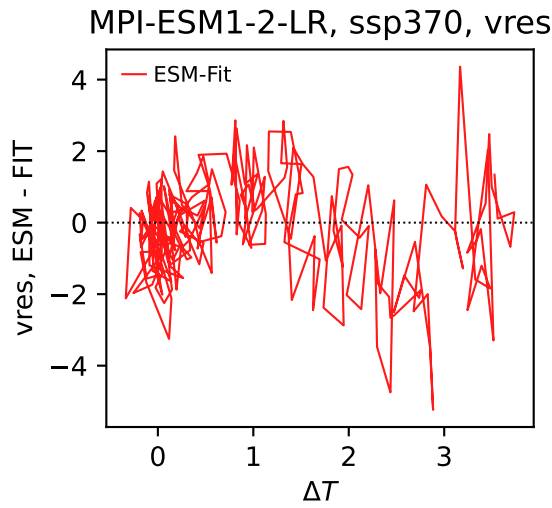

MPI-ESM1-2-LR, ssp370, Litter, ln(MSE/SIGMA)
071, -0.7424, 385.9751, 0.0812, 0.0432, -0.0515, 0.9556, 0.8384, 0
MPI-ESM1-2-LR
lit_c_tan2
lit_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.75
7.00
6.25
5.50
4.75
4.00
3.25
2.50
1.75
1.00

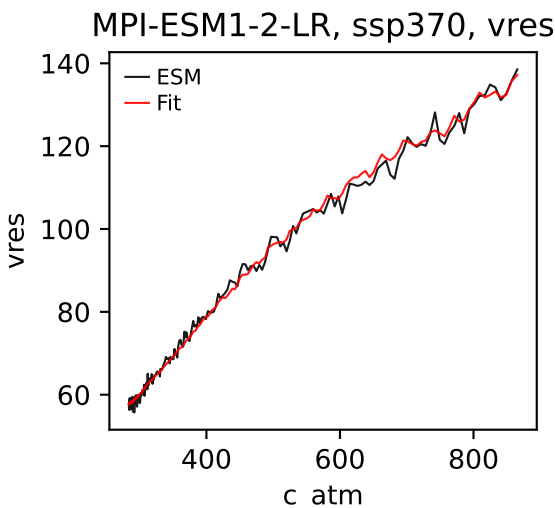

MPI-ESM1-2-LR, ssp370, Litter, ln(MSE/SIGMA)
071, -0.7424, 385.9751, 0.0812, 0.0432, -0.0515, 0.9556, 0.8384, 0
MPI-ESM1-2-LR
lit_slow
lit_fast
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.90
0.92
0.94
0.96
0.98
1.00
3.7
3.3
2.9
2.5
2.1
1.7
1.3
0.9

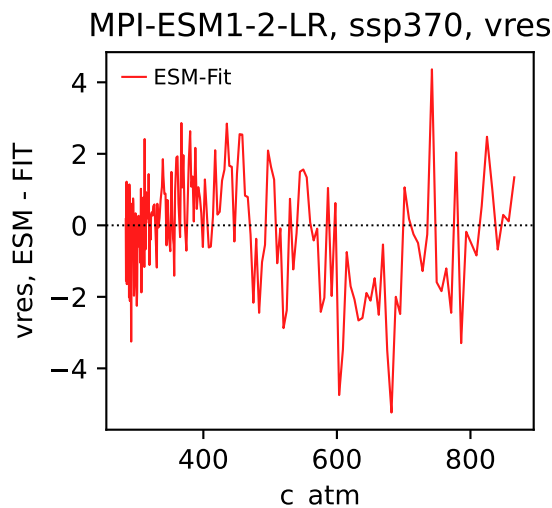

MPI-ESM1-2-LR, ssp370, vres
ESM
Fit
vres
Year
140
120
100
80
60
1900
2000
2100

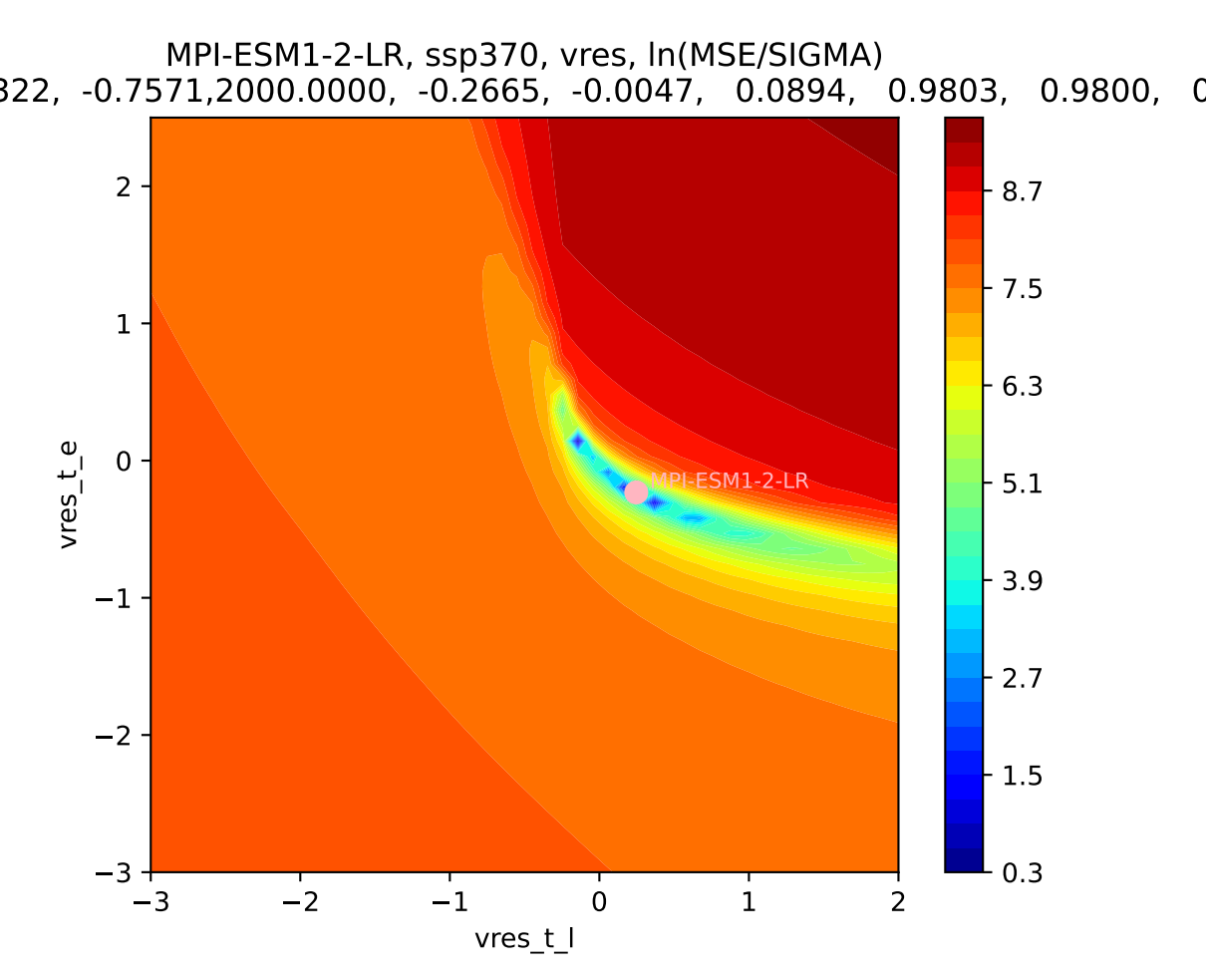

MPI-ESM1-2-LR, ssp370, vres
ESM-Fit
vres, ESM - FIT
Year
4
2
0
−2
−4
1900
2000
2100

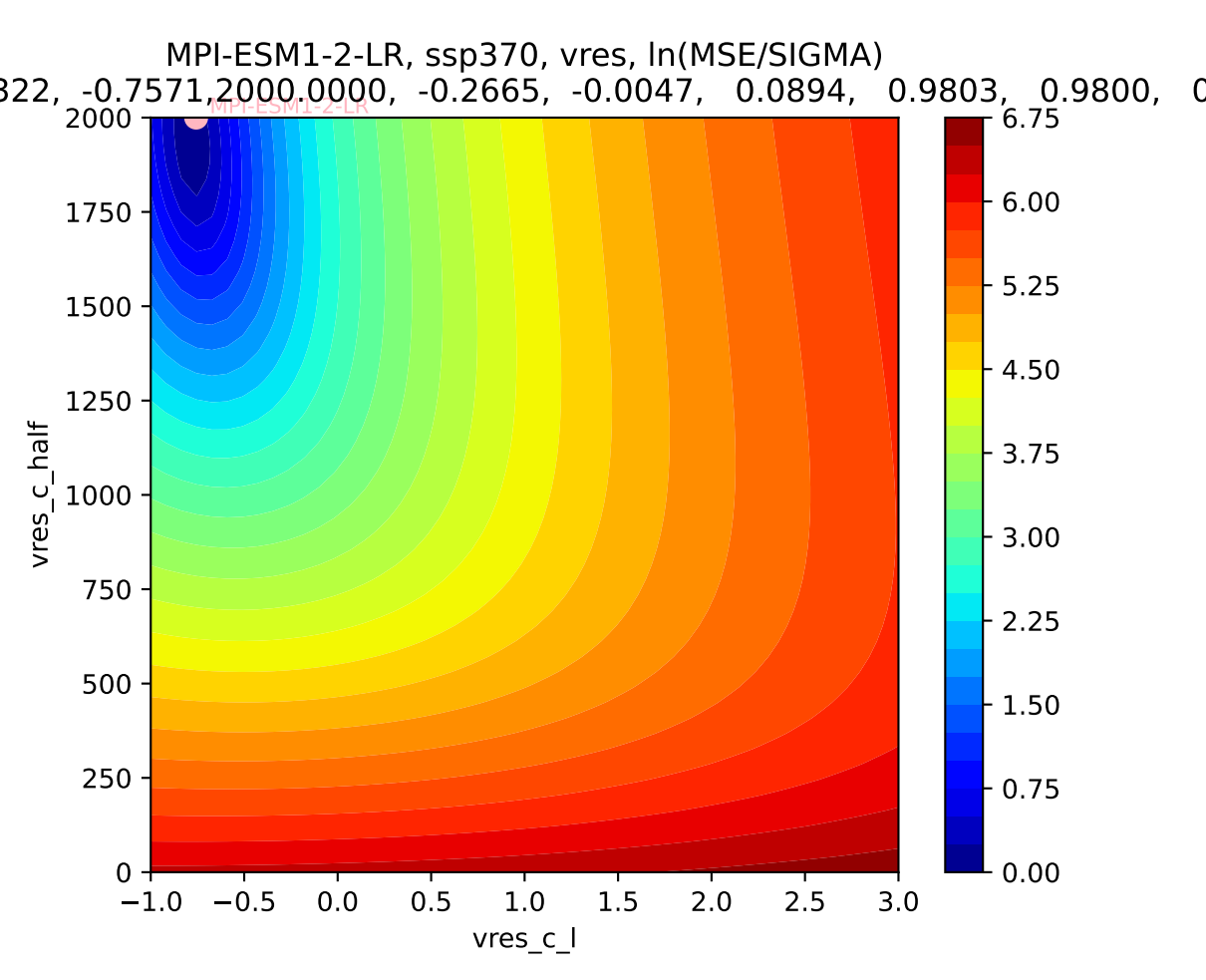

MPI-ESM1-2-LR, ssp370, vres
ESM
Fit
vres
ΔT
140
120
100
80
60
0
1
2
3

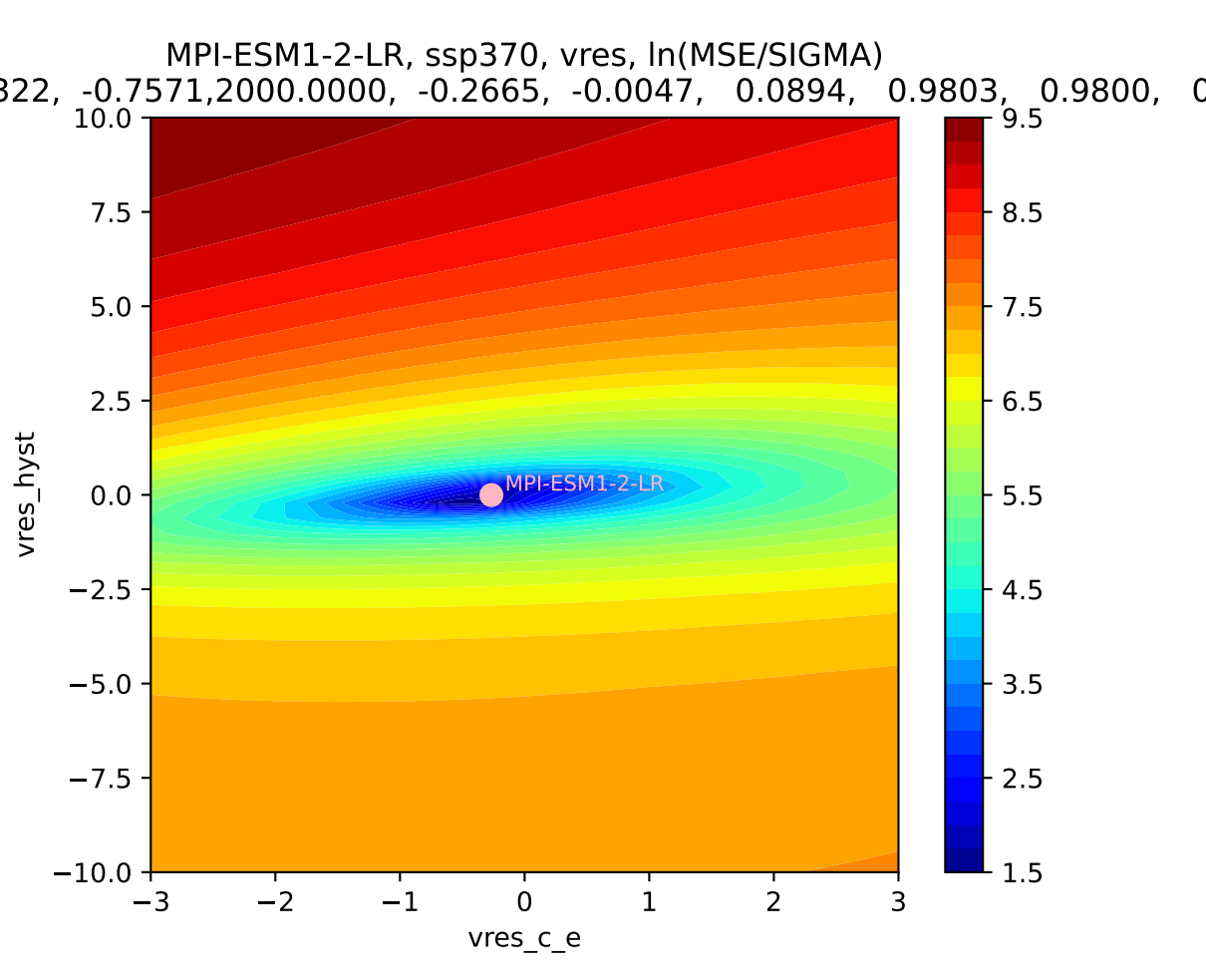

MPI-ESM1-2-LR, ssp370, vres
ESM-Fit
vres, ESM - FIT
ΔT
4
2
0
−2
−4
0
1
2
3

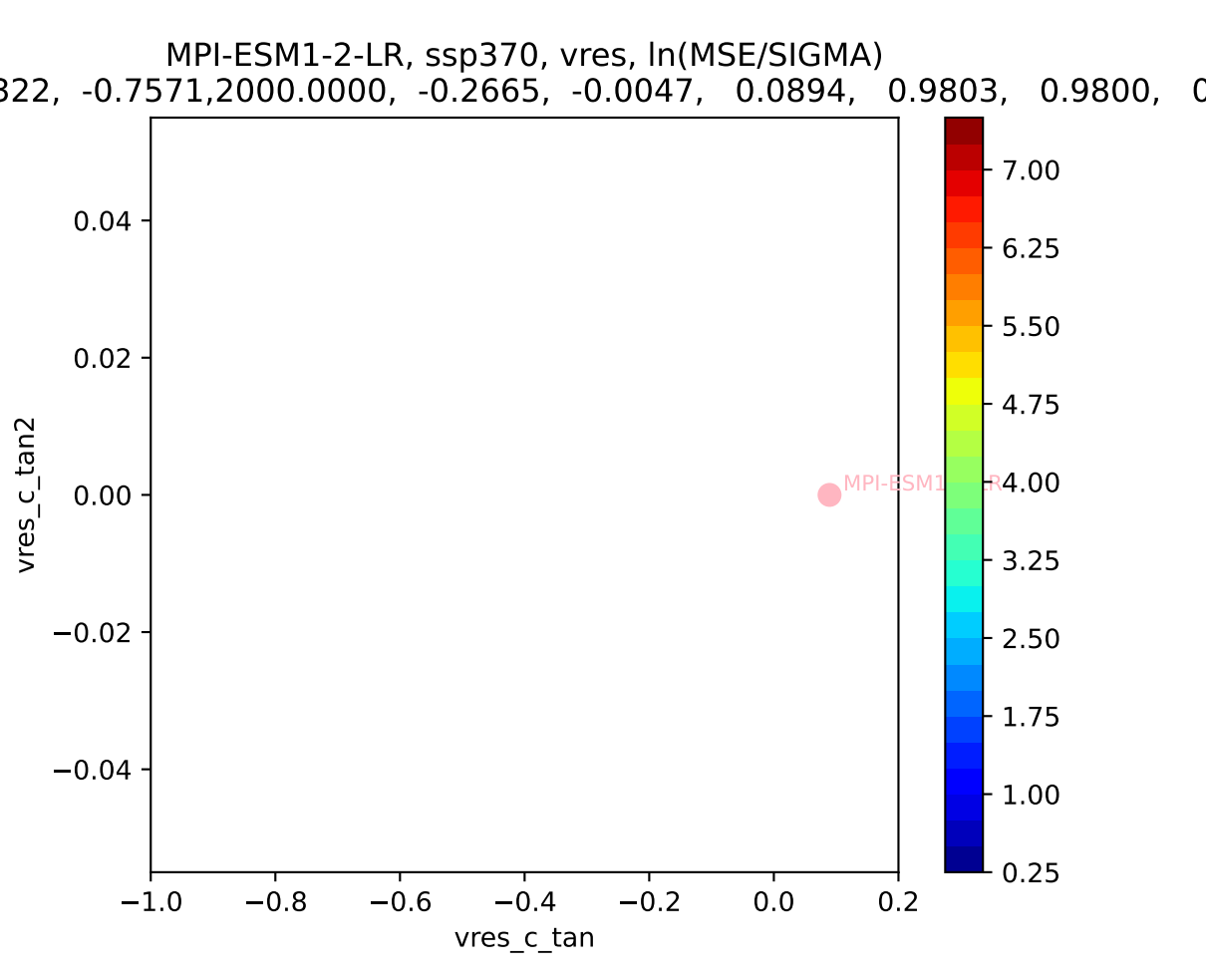

MPI-ESM1-2-LR, ssp370, vres
ESM
Fit
vres
c_atm
140
120
100
80
60
400
600
800

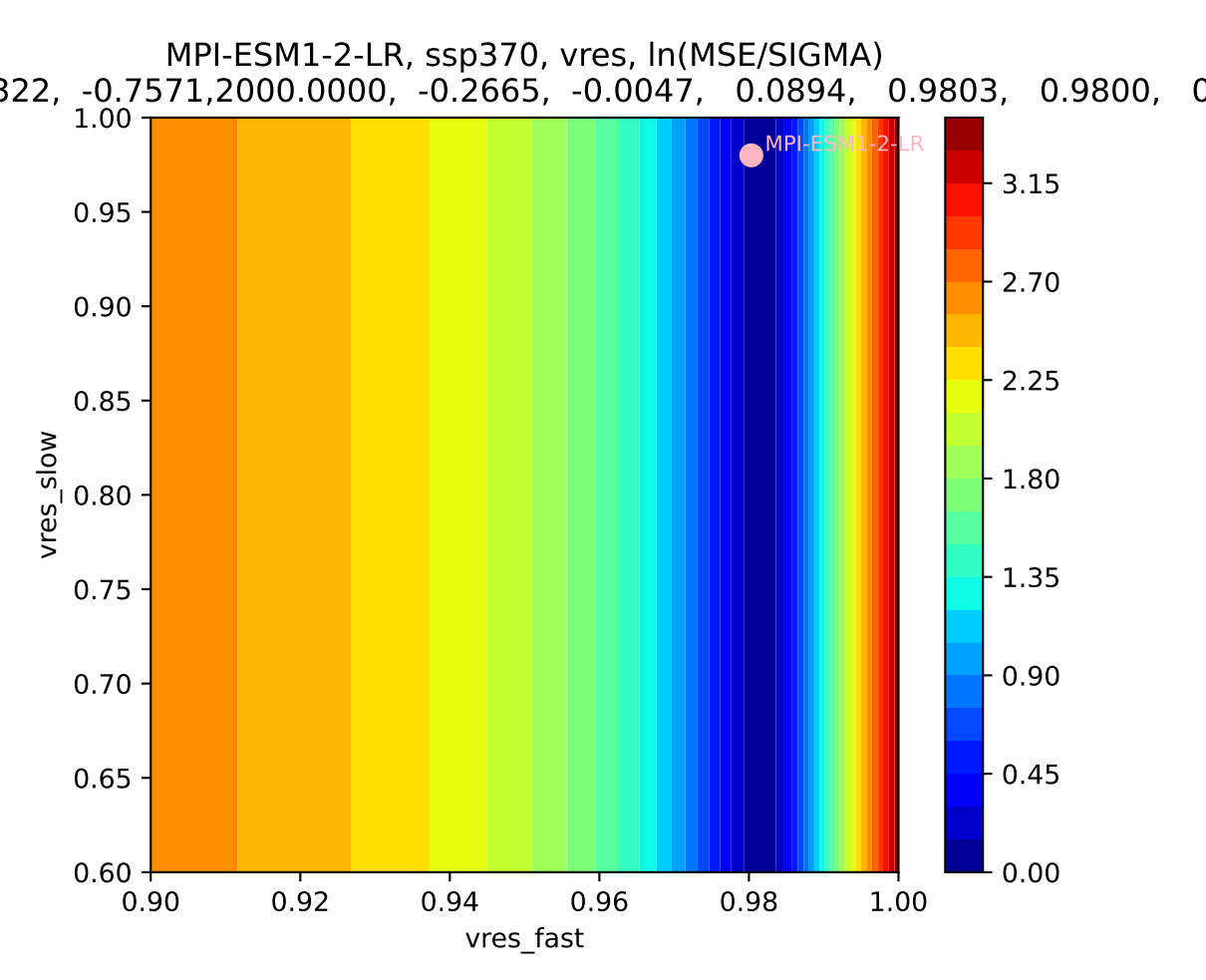

MPI-ESM1-2-LR, ssp370, vres
ESM-Fit
vres, ESM - FIT
c_atm
4
2
0
−2
−4
400
600
800

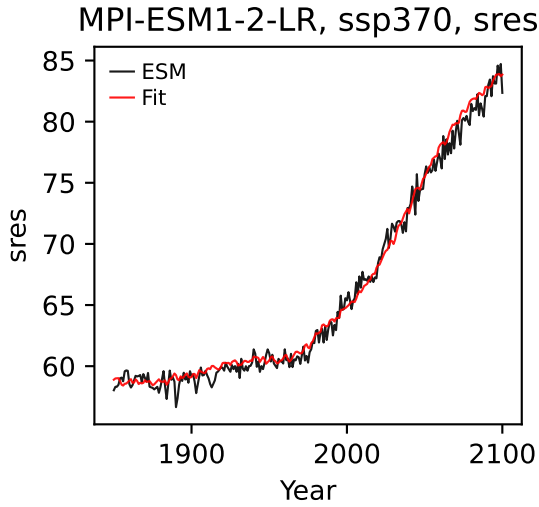

MPI-ESM1-2-LR, ssp370, vres, ln(MSE/SIGMA)
322, -0.7571,2000.0000, -0.2665, -0.0047, 0.0894, 0.9803, 0.9800, 0
MPI-ESM1-2-LR
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3

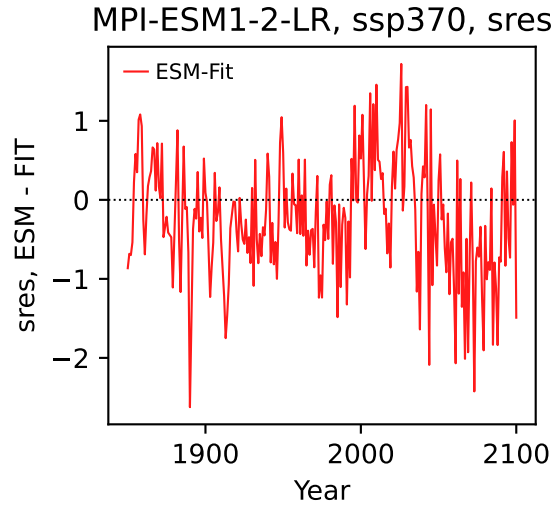

MPI-ESM1-2-LR, ssp370, vres, ln(MSE/SIGMA)
322, -0.7571,2000.0000, -0.2665, -0.0047, 0.0894, 0.9803, 0.9800, 0
MPI-ESM1-2-LR
vres_c_half
vres_c_l
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
6.75
6.00
5.25
4.50
3.75
3.00
2.25
1.50
0.75
0.00

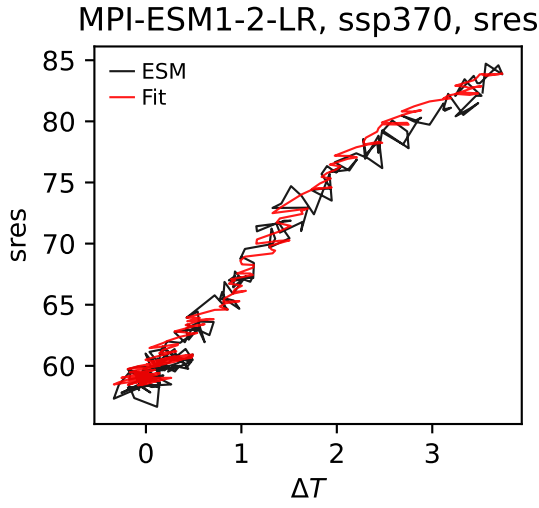

MPI-ESM1-2-LR, ssp370, vres, ln(MSE/SIGMA)
322, -0.7571,2000.0000, -0.2665, -0.0047, 0.0894, 0.9803, 0.9800, 0
MPI-ESM1-2-LR
vres_hyst
vres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
9.5
8.5
7.5
6.5
5.5
4.5
3.5
2.5
1.5

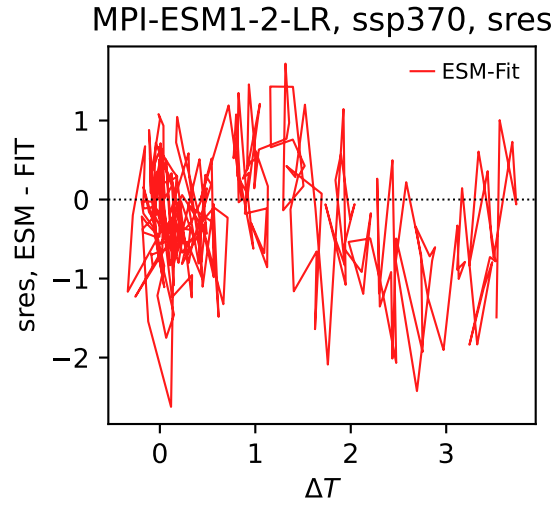

MPI-ESM1-2-LR, ssp370, vres, ln(MSE/SIGMA)
322, -0.7571,2000.0000, -0.2665, -0.0047, 0.0894, 0.9803, 0.9800, 0
vres_c_tan2
vres_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.00
6.25
5.50
4.75
4.00
3.25
2.50
1.75
1.00
0.25

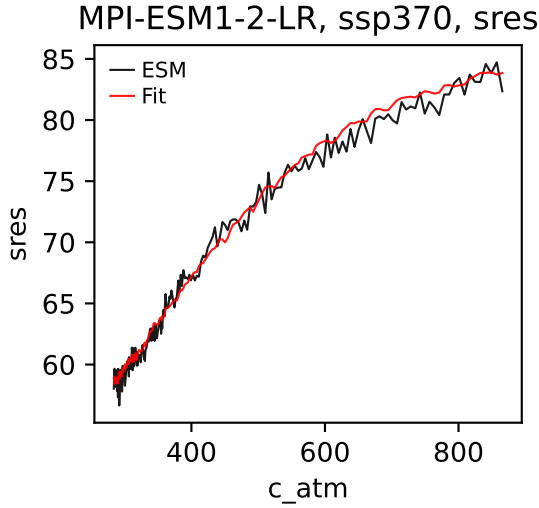

MPI-ESM1-2-LR, ssp370, vres, ln(MSE/SIGMA)
322, -0.7571,2000.0000, -0.2665, -0.0047, 0.0894, 0.9803, 0.9800, 0
MPI-ESM1-2-LR
vres_slow
vres_fast
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.90
0.92
0.94
0.96
0.98
1.00
3.15
2.70
2.25
1.80
1.35
0.90
0.45
0.00

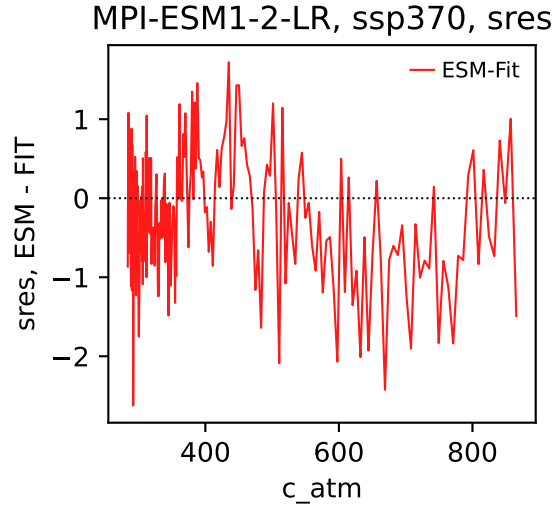

MPI-ESM1-2-LR, ssp370, sres
ESM
Fit
sres
Year

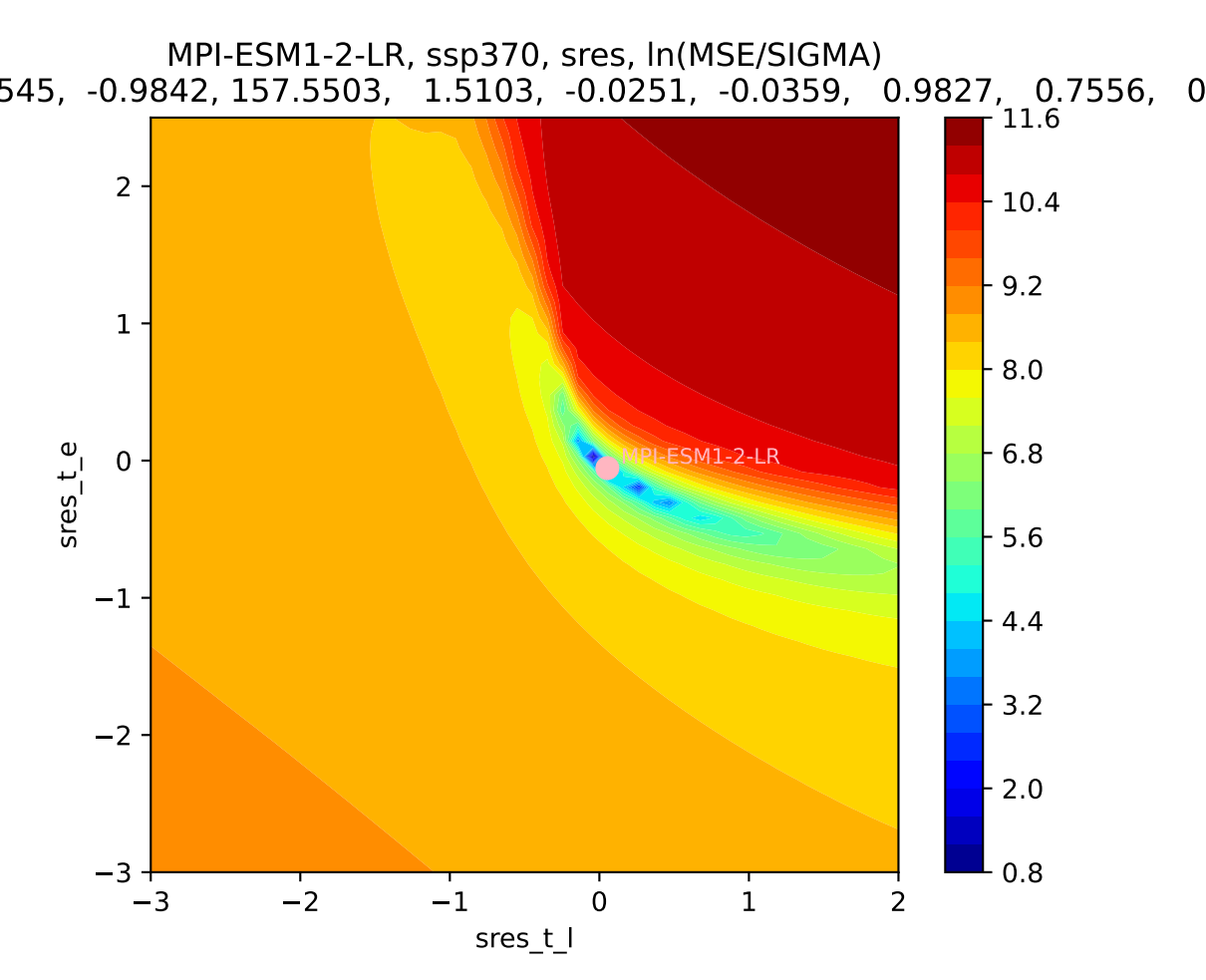

MPI-ESM1-2-LR, ssp370, sres
ESM-Fit
sres, ESM - FIT
Year

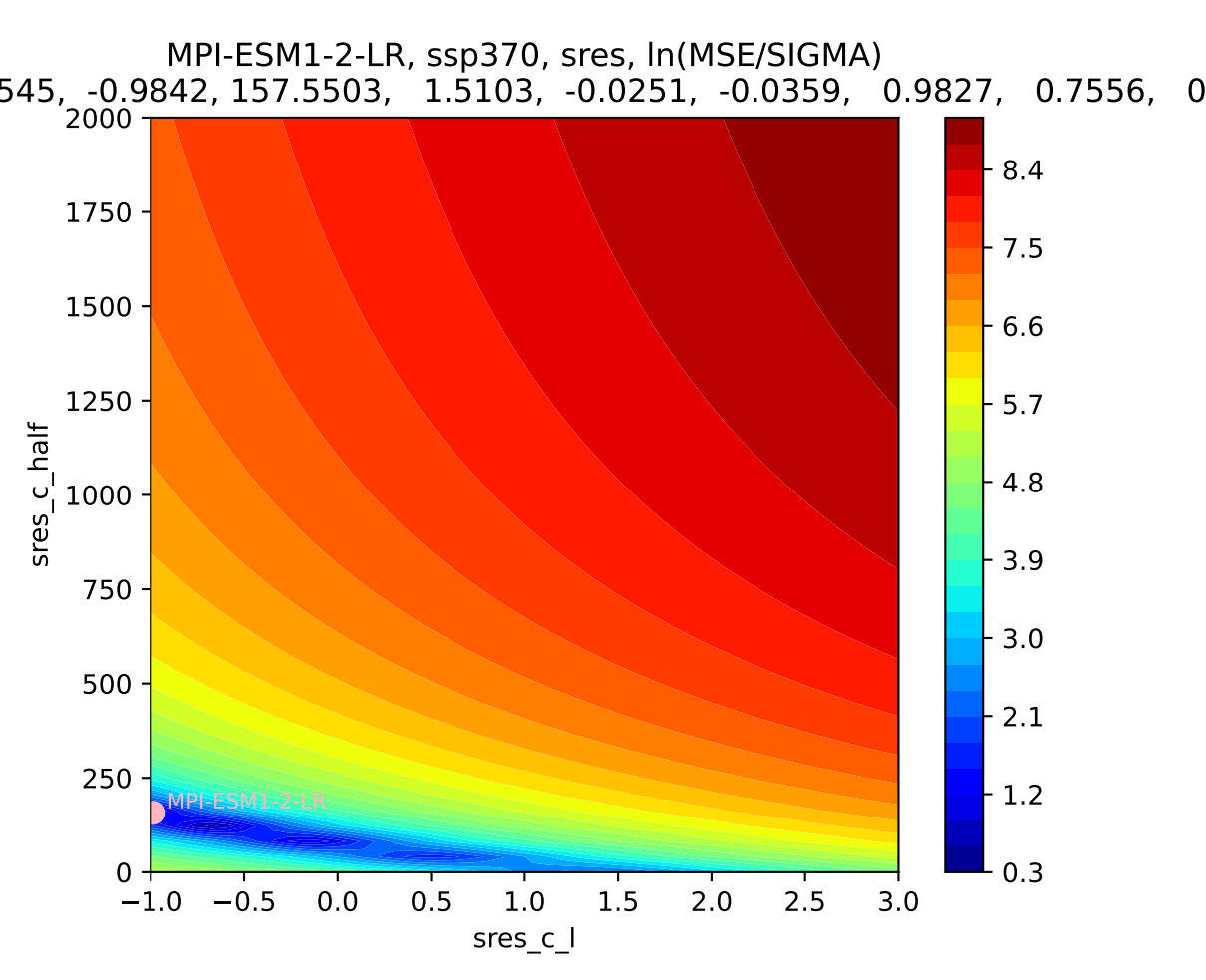

MPI-ESM1-2-LR, ssp370, sres
ESM
Fit
sres
ΔT

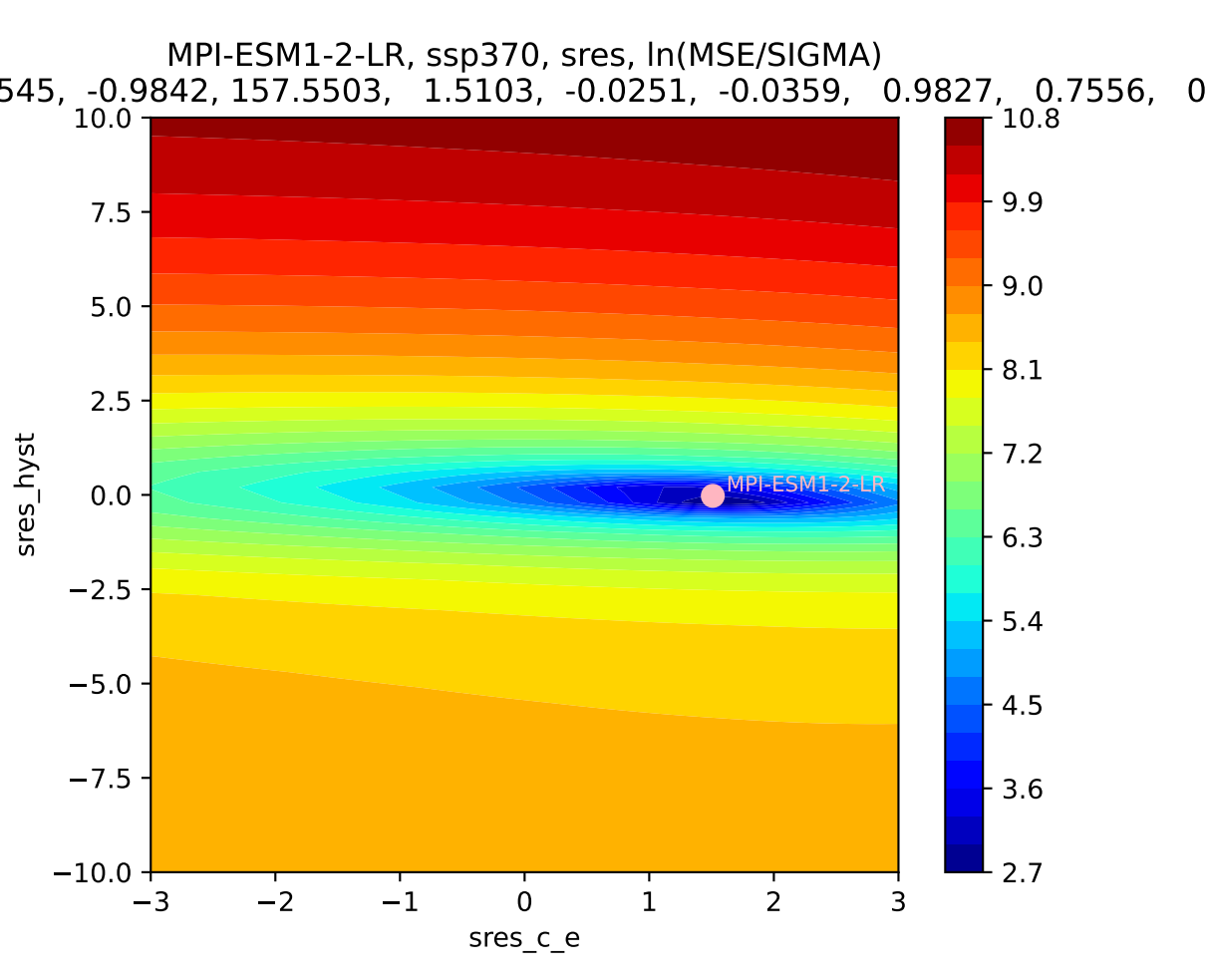

MPI-ESM1-2-LR, ssp370, sres
ESM-Fit
sres, ESM - FIT
ΔT

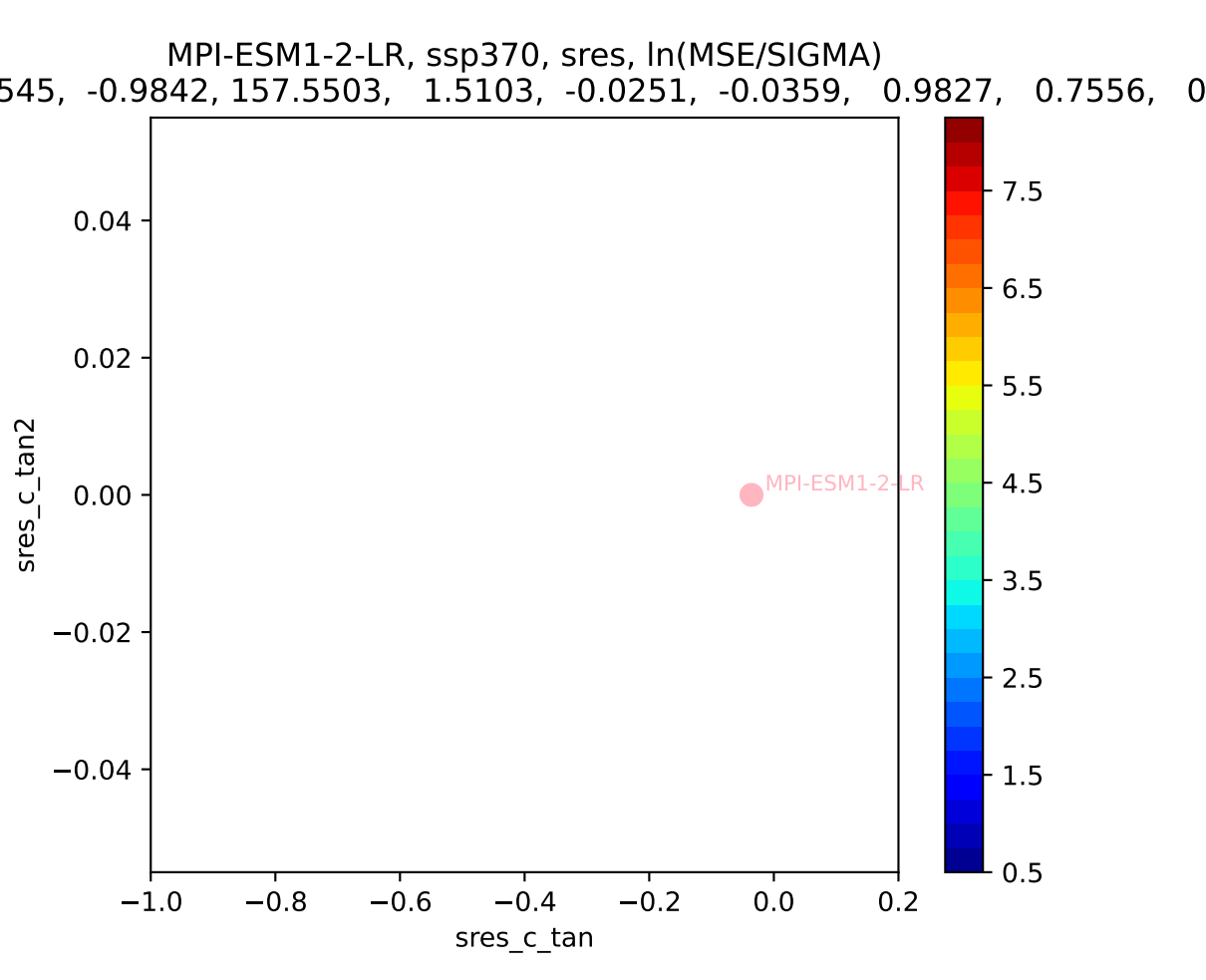

MPI-ESM1-2-LR, ssp370, sres
ESM
Fit
sres
c_atm

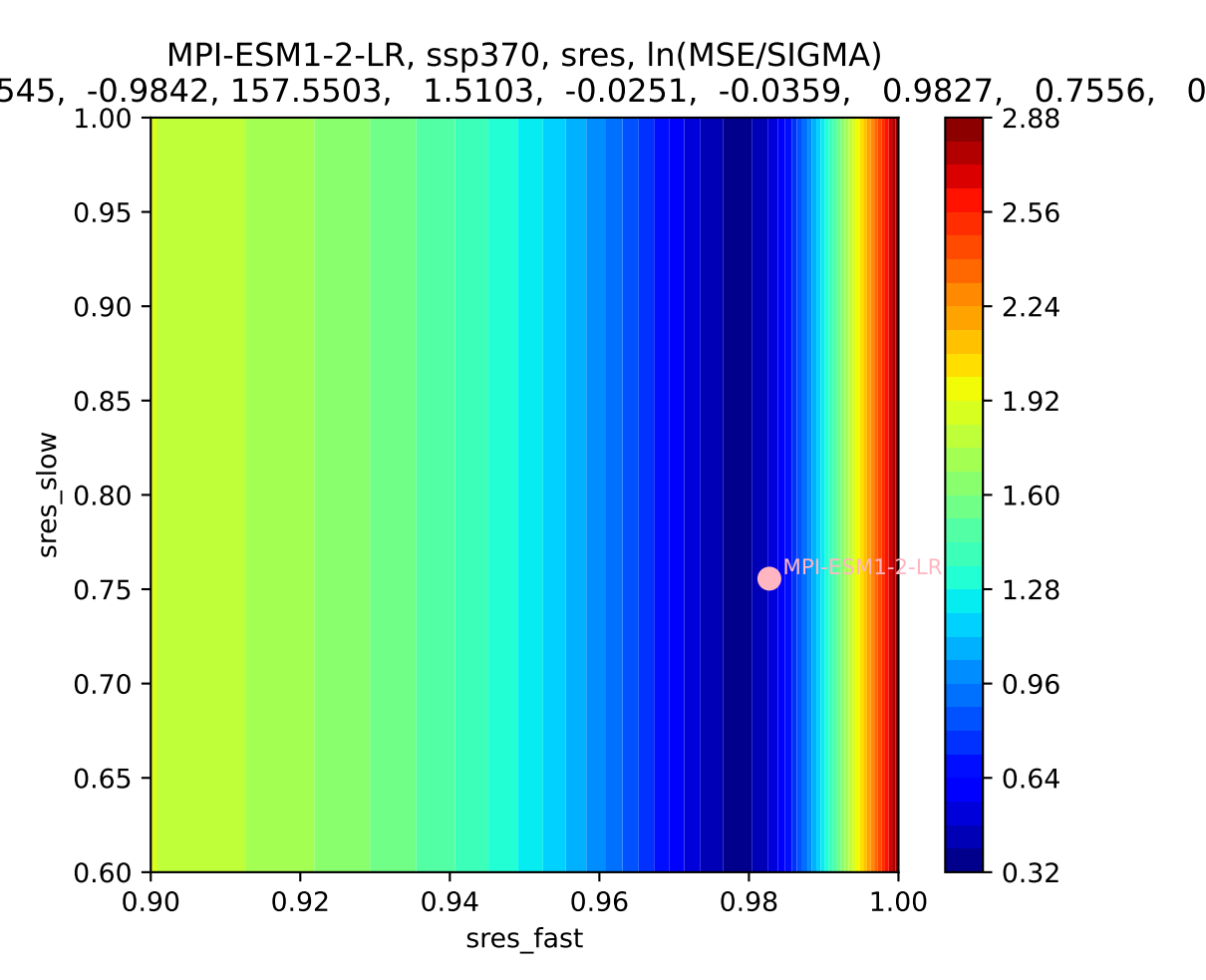

MPI-ESM1-2-LR, ssp370, sres
ESM-Fit
sres, ESM - FIT
c_atm

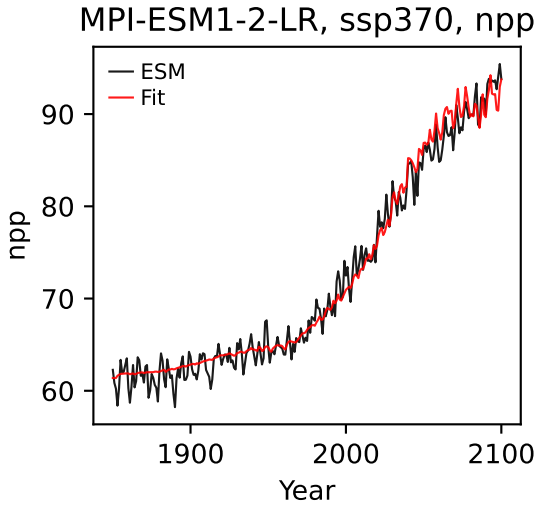

MPI-ESM1-2-LR, ssp370, sres, ln(MSE/SIGMA)
545, -0.9842, 157.5503, 1.5103, -0.0251, -0.0359, 0.9827, 0.7556, 0
MPI-ESM1-2-LR
sres_t_e
sres_t_l
−3
−2
−1
0
1
2
11.6
10.4
9.2
8.0
6.8
5.6
4.4
3.2
2.0
0.8

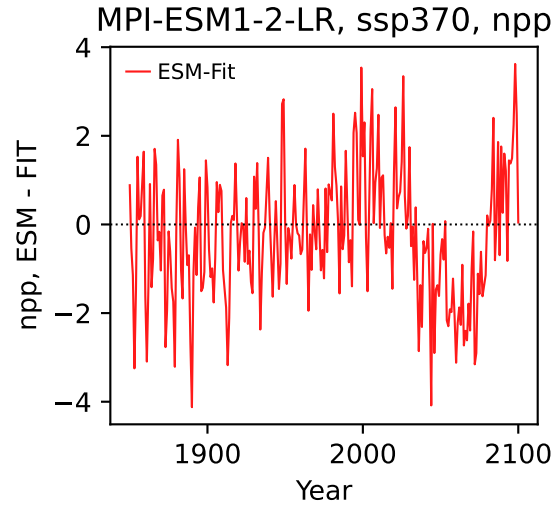

MPI-ESM1-2-LR, ssp370, sres, ln(MSE/SIGMA)
545, -0.9842, 157.5503, 1.5103, -0.0251, -0.0359, 0.9827, 0.7556, 0
sres_c_half
sres_c_l
MPI-ESM1-2-LR
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
8.4
7.5
6.6
5.7
4.8
3.9
3.0
2.1
1.2
0.3

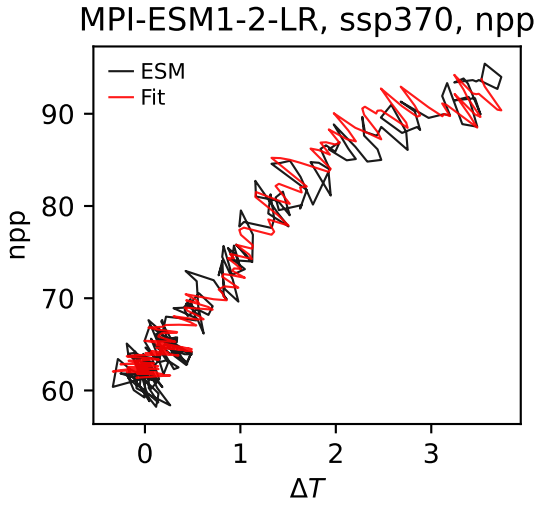

MPI-ESM1-2-LR, ssp370, sres, ln(MSE/SIGMA)
545, -0.9842, 157.5503, 1.5103, -0.0251, -0.0359, 0.9827, 0.7556, 0
MPI-ESM1-2-LR
sres_hyst
sres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
10.8
9.9
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7

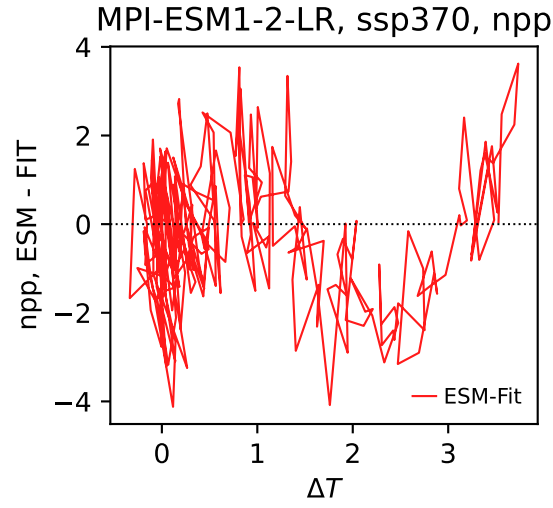

MPI-ESM1-2-LR, ssp370, sres, ln(MSE/SIGMA)
545, -0.9842, 157.5503, 1.5103, -0.0251, -0.0359, 0.9827, 0.7556, 0
MPI-ESM1-2-LR
0.04
0.02
0.00
−0.02
−0.04
sres_c_tan2
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
sres_c_tan
7.5
6.5
5.5
4.5
3.5
2.5
1.5
0.5

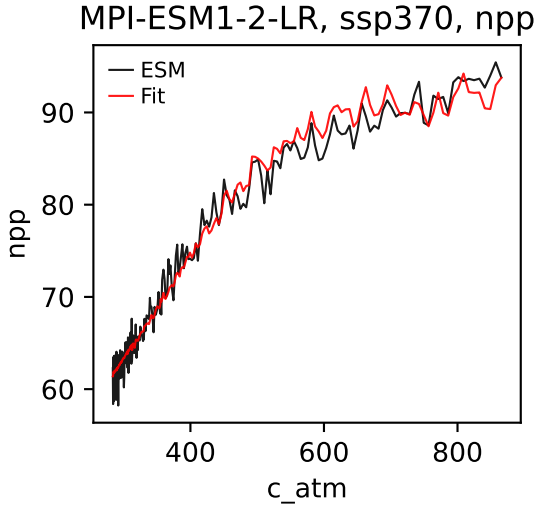

MPI-ESM1-2-LR, ssp370, sres, ln(MSE/SIGMA)
545, -0.9842, 157.5503, 1.5103, -0.0251, -0.0359, 0.9827, 0.7556, 0
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
sres_slow
MPI-ESM1-2-LR
0.90
0.92
0.94
0.96
0.98
1.00
sres_fast
2.88
2.56
2.24
1.92
1.60
1.28
0.96
0.64
0.32

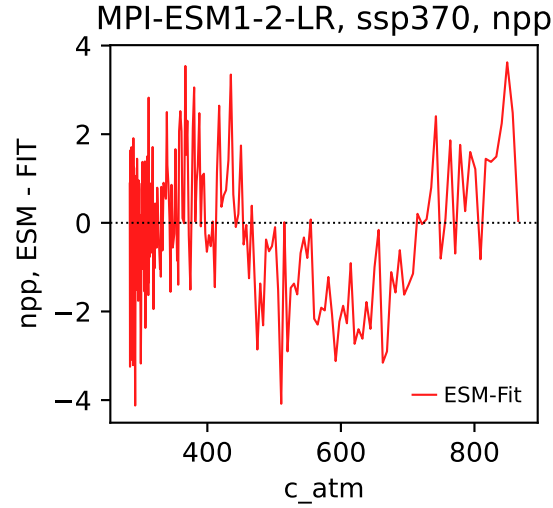

MPI-ESM1-2-LR, ssp370, npp
ESM
Fit
npp
Year

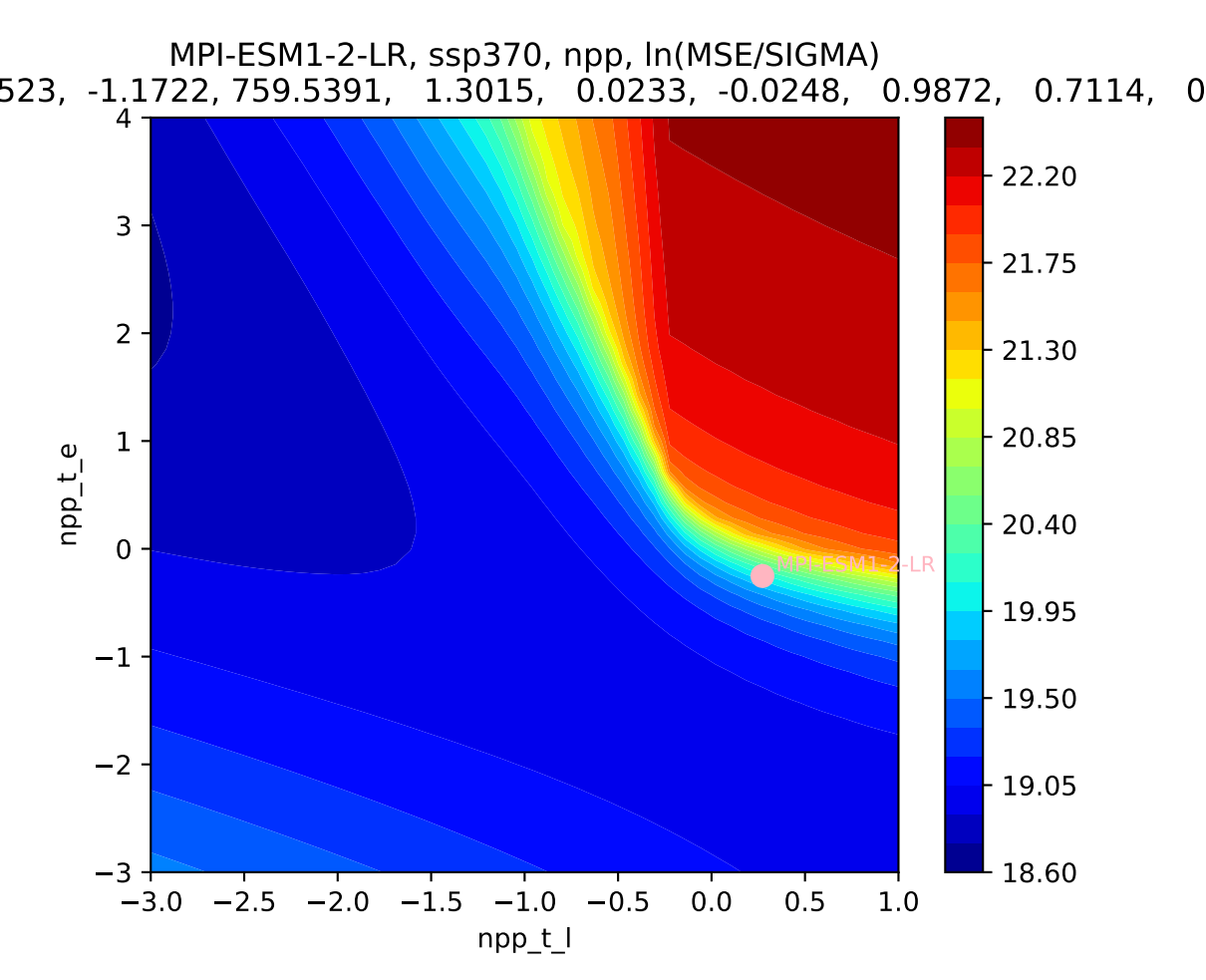

MPI-ESM1-2-LR, ssp370, npp
ESM-Fit
npp, ESM - FIT
Year

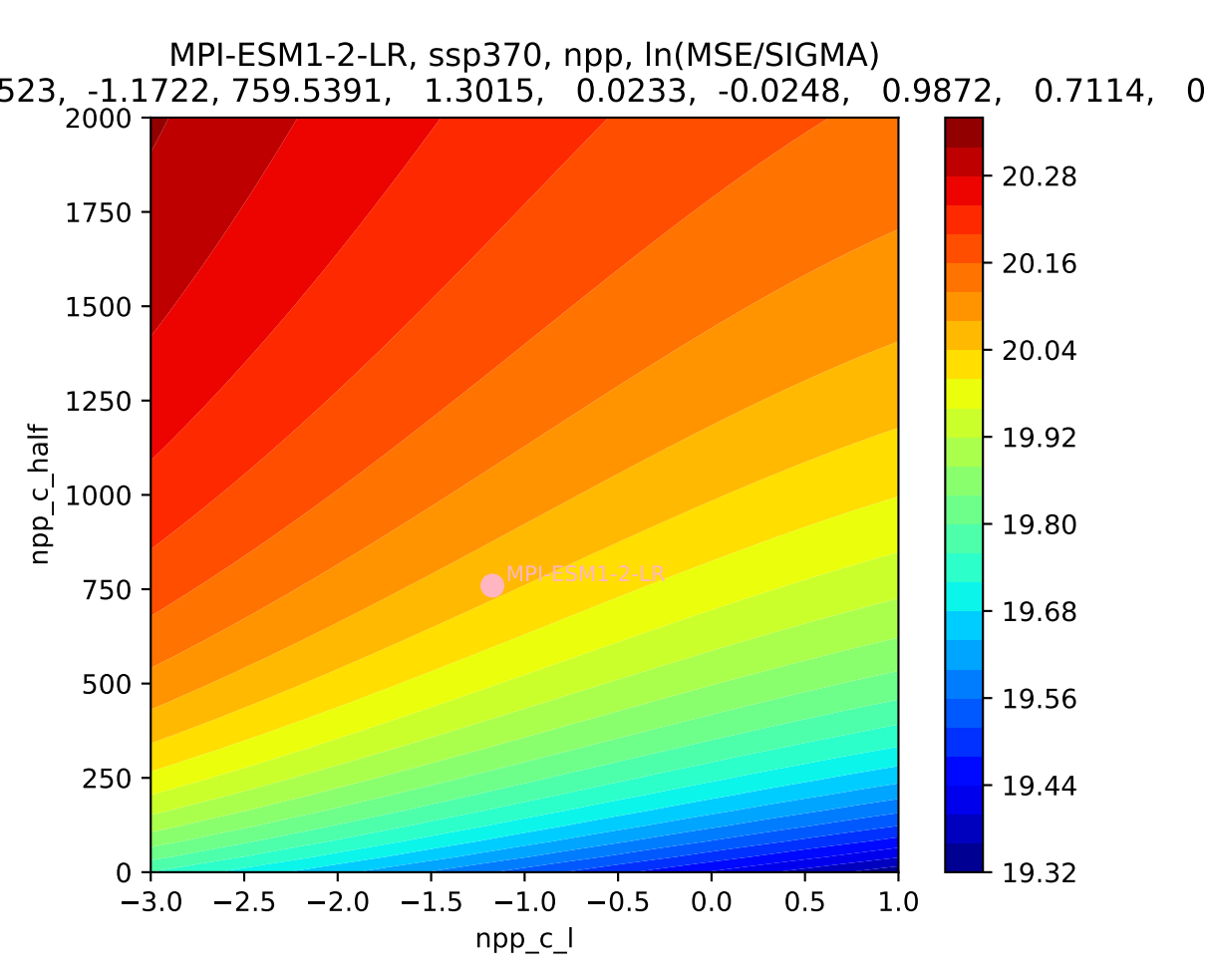

MPI-ESM1-2-LR, ssp370, npp
ESM
Fit
npp
ΔT

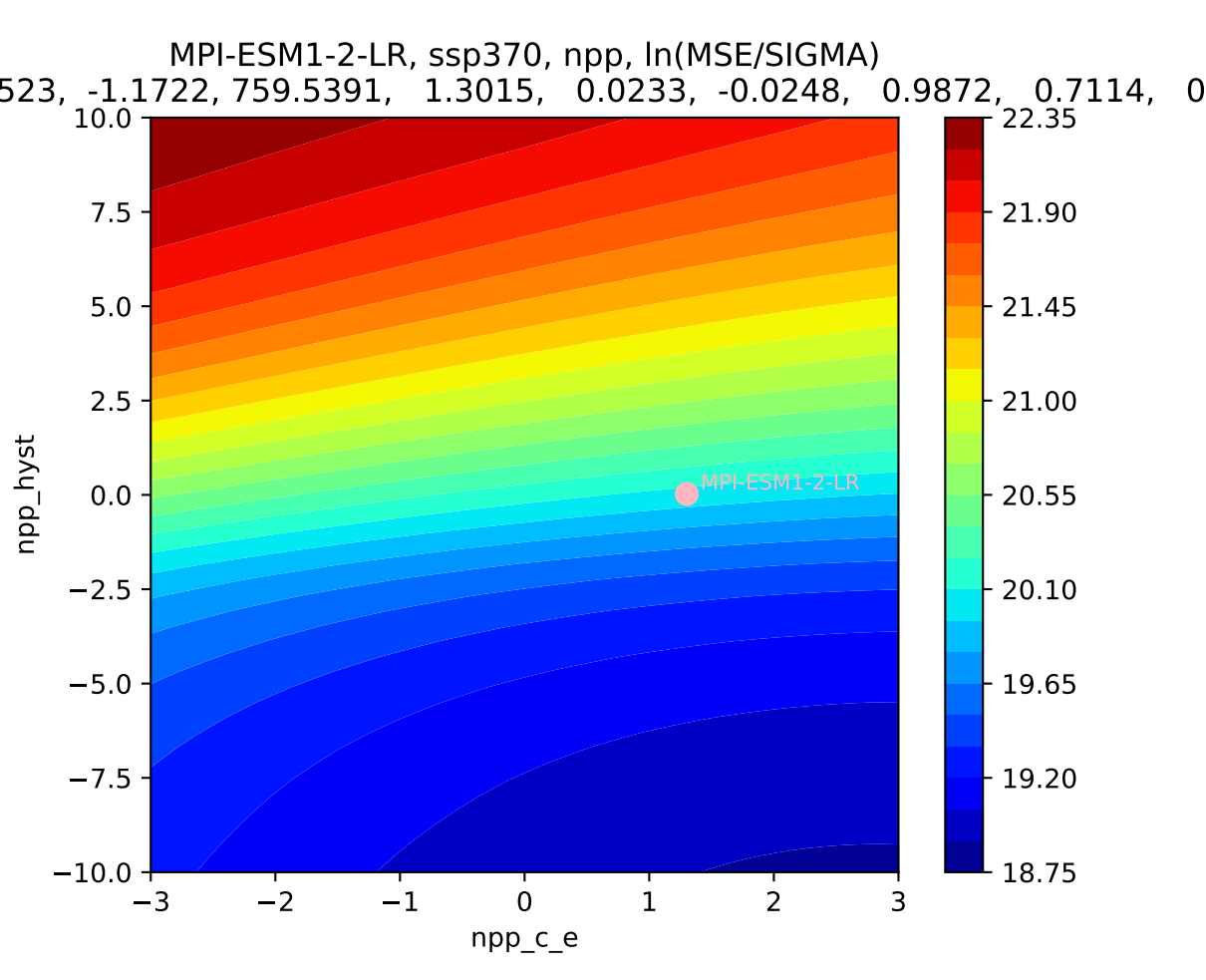

MPI-ESM1-2-LR, ssp370, npp
ESM-Fit
npp, ESM - FIT
ΔT

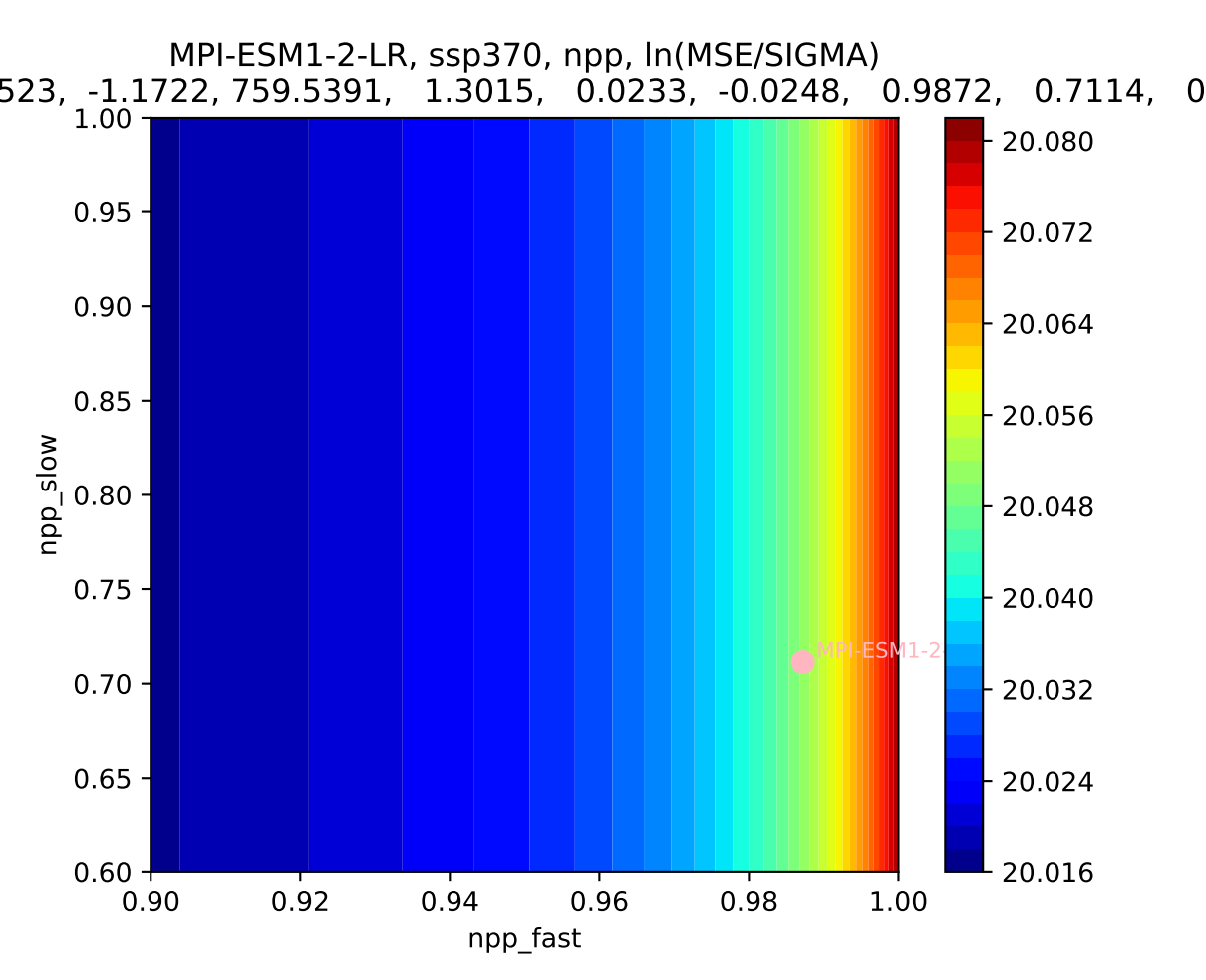

MPI-ESM1-2-LR, ssp370, npp
ESM
Fit
npp
c_atm

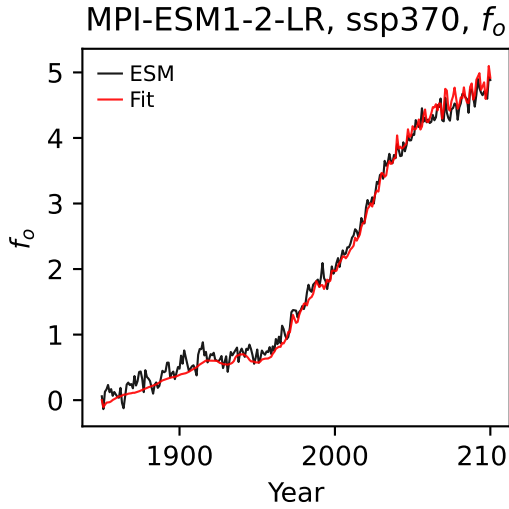

MPI-ESM1-2-LR, ssp370, npp
ESM-Fit
npp, ESM - FIT
c_atm

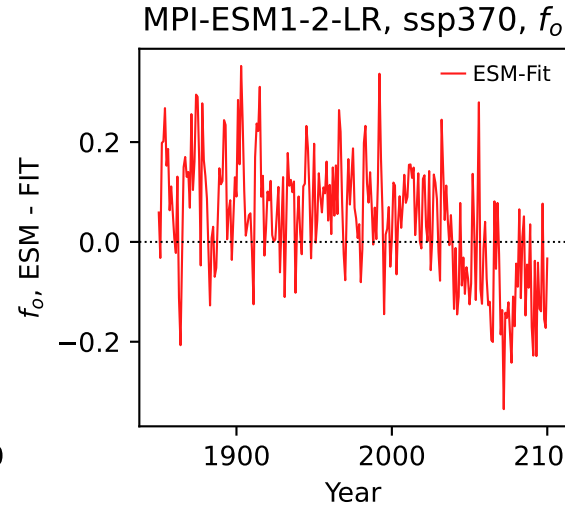

MPI-ESM1-2-LR, ssp370, npp, ln(MSE/SIGMA)
523, -1.1722, 759.5391, 1.3015, 0.0233, -0.0248, 0.9872, 0.7114, 0
MPI-ESM1-2-LR
npp_t_e
npp_t_l
4
3
2
1
0
−1
−2
−3
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
22.20
21.75
21.30
20.85
20.40
19.95
19.50
19.05
18.60

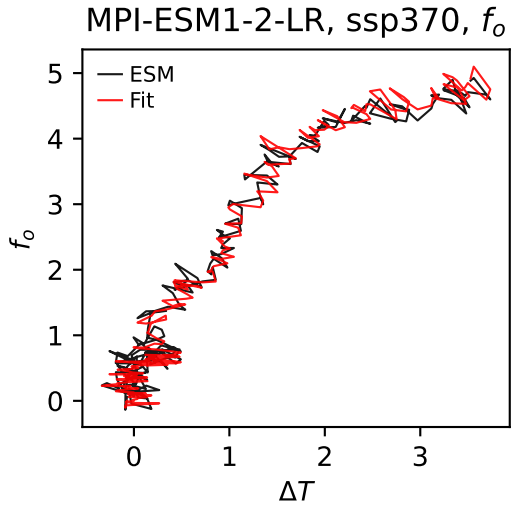

MPI-ESM1-2-LR, ssp370, npp, ln(MSE/SIGMA)
523, -1.1722, 759.5391, 1.3015, 0.0233, -0.0248, 0.9872, 0.7114, 0
2000
1750
1500
1250
1000
750
500
250
0
npp_c_half
MPI-ESM1-2-LR
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
npp_c_l
20.28
20.16
20.04
19.92
19.80
19.68
19.56
19.44
19.32

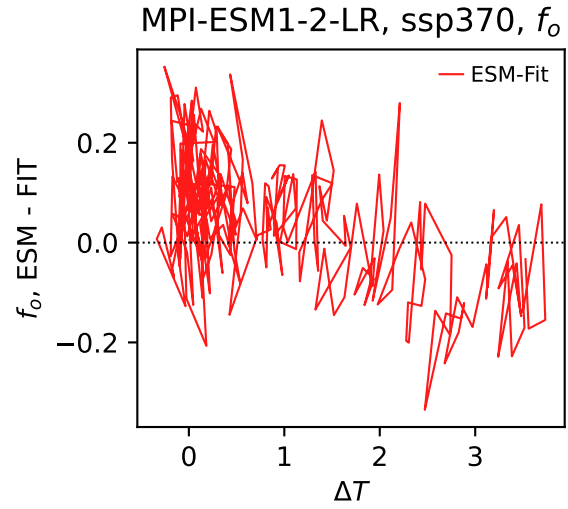

MPI-ESM1-2-LR, ssp370, npp, ln(MSE/SIGMA)
523, -1.1722, 759.5391, 1.3015, 0.0233, -0.0248, 0.9872, 0.7114, 0
MPI-ESM1-2-LR
npp_hyst
npp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
22.35
21.90
21.45
21.00
20.55
20.10
19.65
19.20
18.75

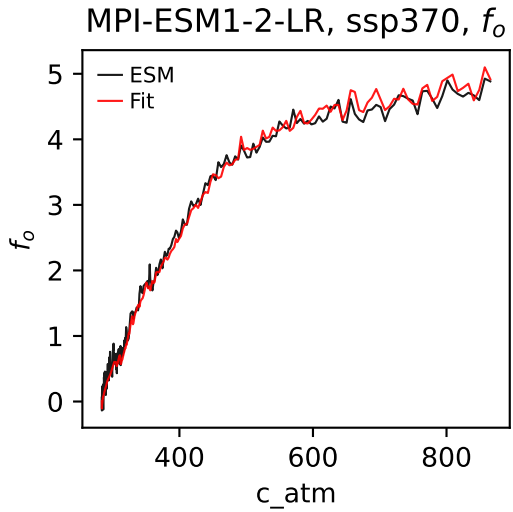

MPI-ESM1-2-LR, ssp370, npp, ln(MSE/SIGMA)
523, -1.1722, 759.5391, 1.3015, 0.0233, -0.0248, 0.9872, 0.7114, 0
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
npp_slow
0.90
0.92
0.94
0.96
0.98
1.00
npp_fast
MPI-ESM1-2
20.080
20.072
20.064
20.056
20.048
20.040
20.032
20.024
20.016

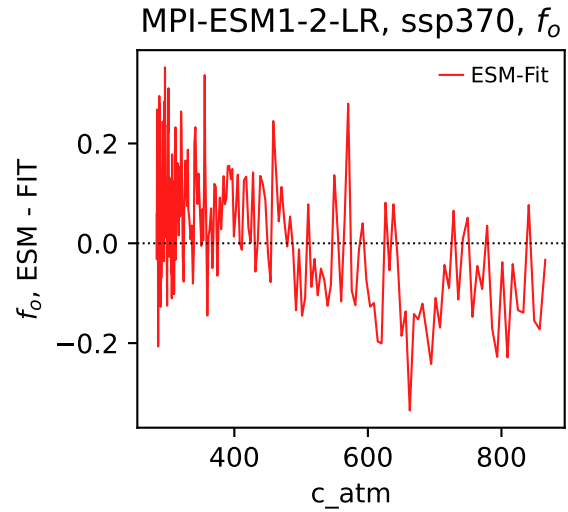

MPI-ESM1-2-LR, ssp370, f_o
ESM
Fit
f_o
Year

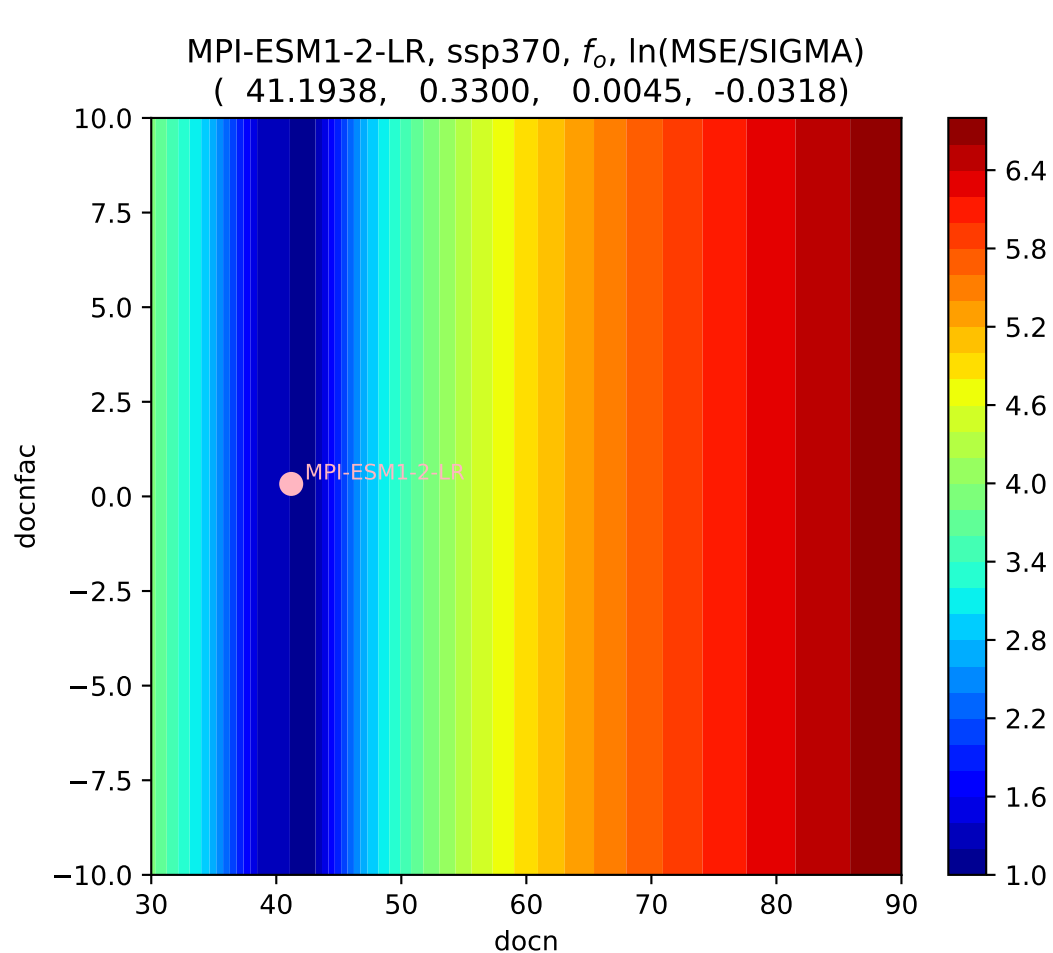

MPI-ESM1-2-LR, ssp370, f_o
ESM-Fit
f_o, ESM - FIT
Year

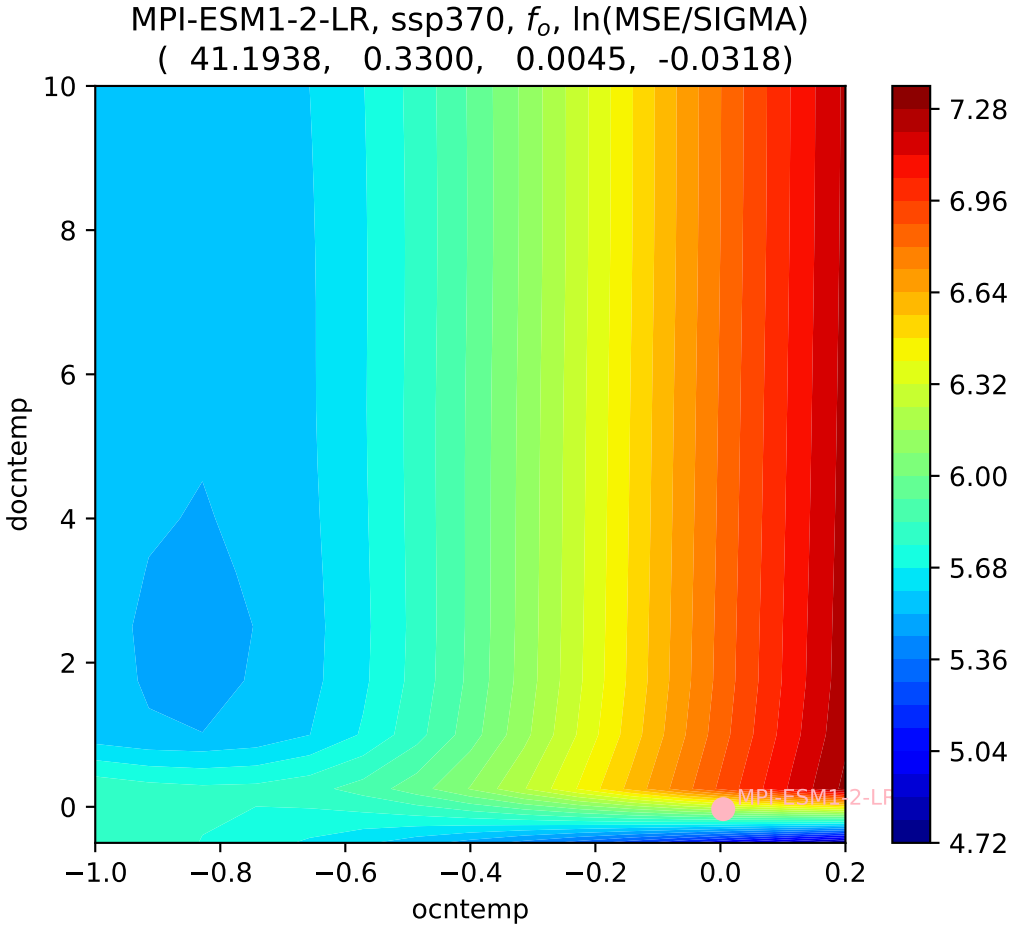

MPI-ESM1-2-LR, ssp370, f_o
ESM
Fit
f_o
ΔT


MPI-ESM1-2-LR, ssp370, f_o
ESM-Fit
f_o, ESM - FIT
ΔT


MPI-ESM1-2-LR, ssp370, f_o
ESM
Fit
f_o
c_atm


MPI-ESM1-2-LR, ssp370, f_o
ESM-Fit
f_o, ESM - FIT
c_atm


MPI-ESM1-2-LR, ssp370, f_o, ln(MSE/SIGMA)
(41.1938, 0.3300, 0.0045, -0.0318)
MPI-ESM1-2-LR
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
6.4
5.8
5.2
4.6
4.0
3.4
2.8
2.2
1.6
1.0


MPI-ESM1-2-LR, ssp370, f_o, ln(MSE/SIGMA)
(41.1938, 0.3300, 0.0045, -0.0318)
docntemp
ocntemp
10
8
6
4
2
0
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.28
6.96
6.64
6.32
6.00
5.68
5.36
5.04
4.72
MPI-ESM1-2-LR