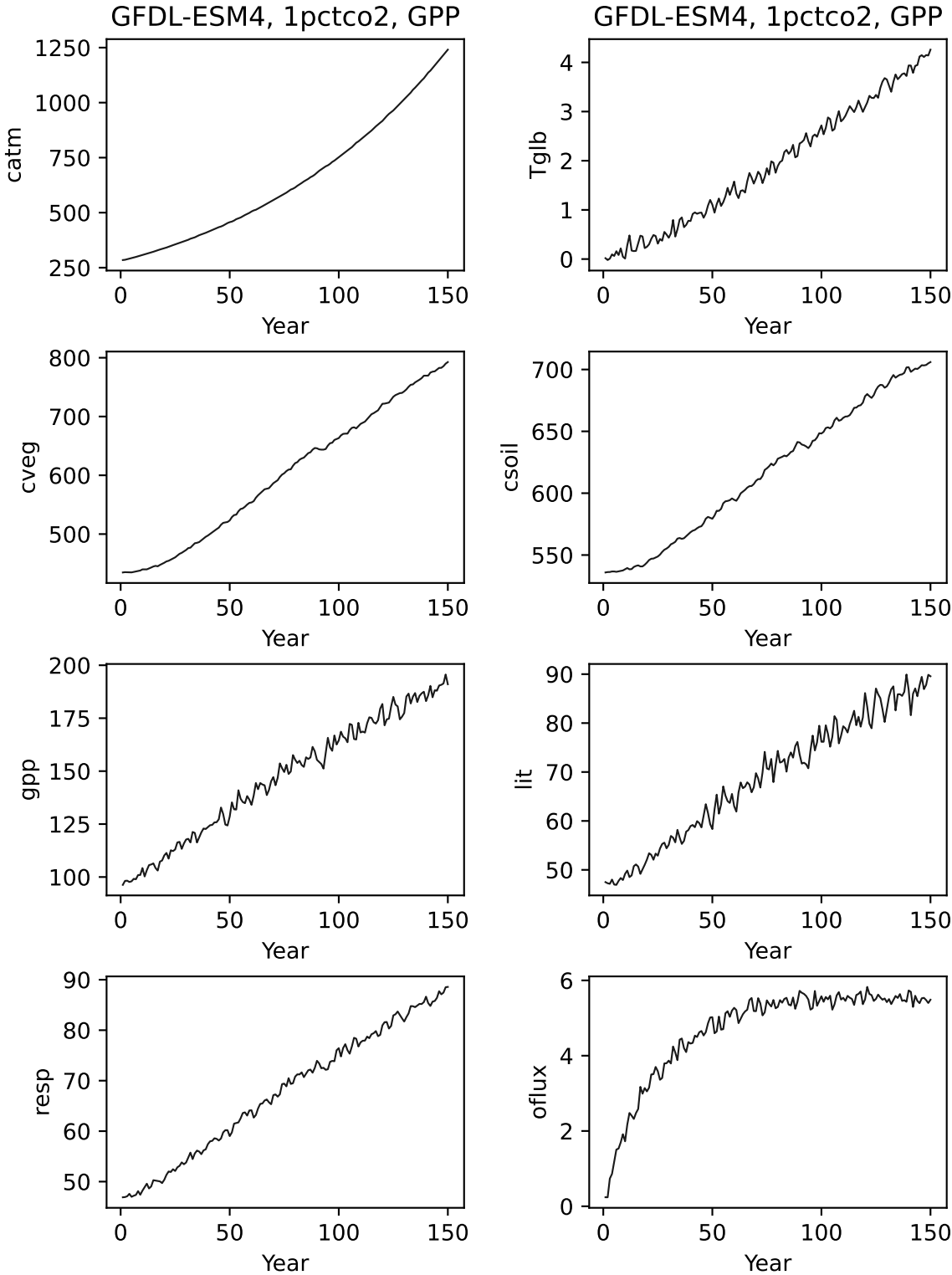
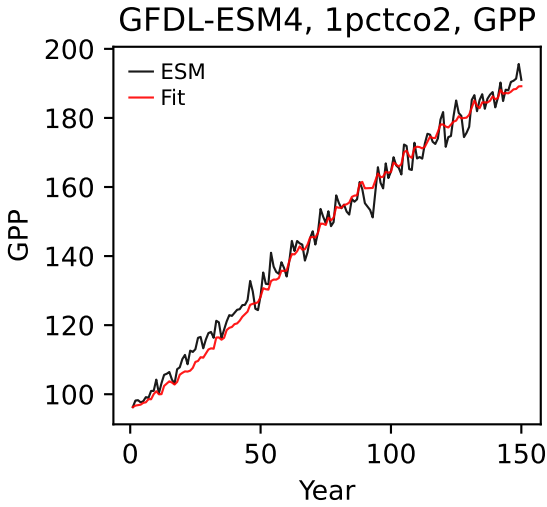
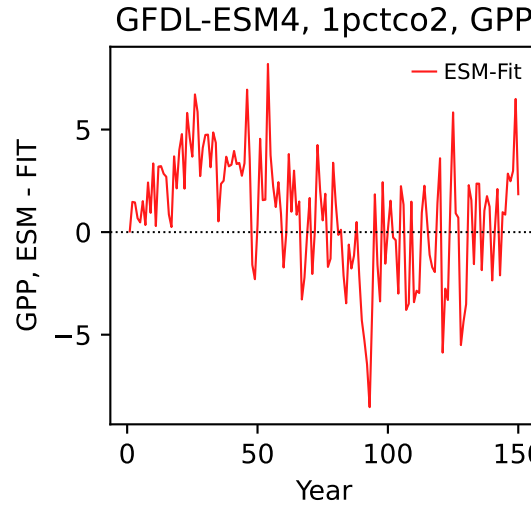
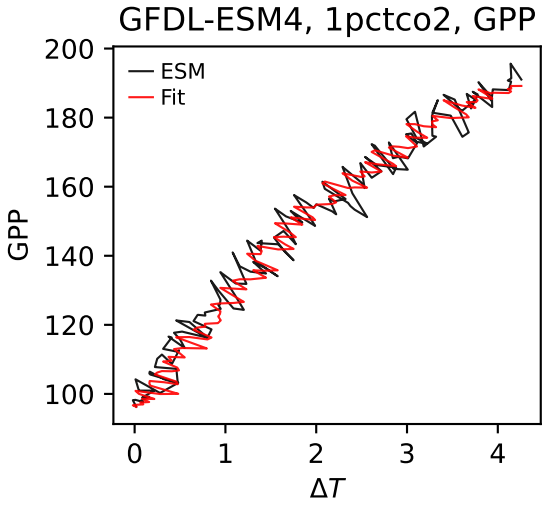
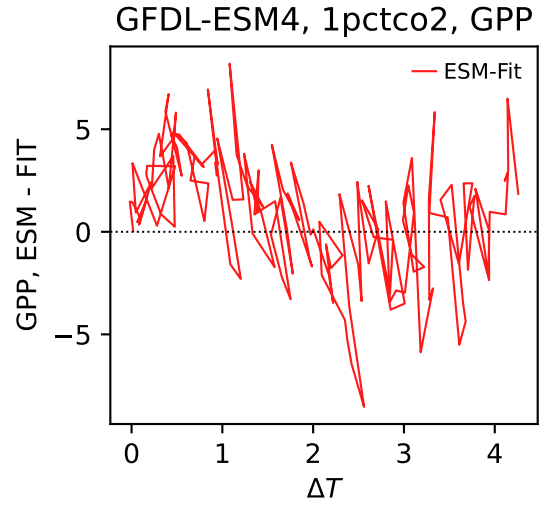
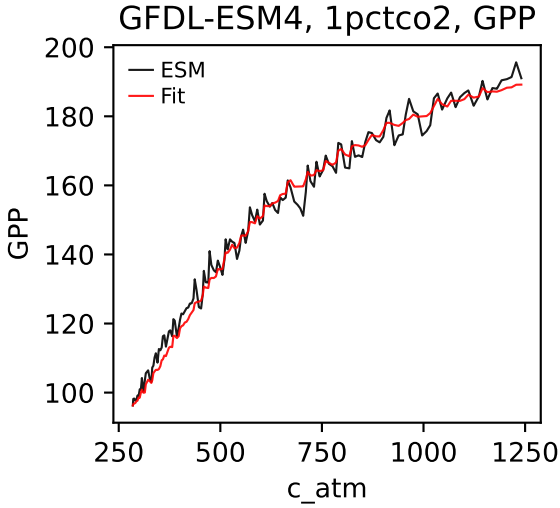

GFDL-ESM4, 1pctco2, GPP
GFDL-ESM4, 1pctco2, GPP
catm
Tglb
cveg
csoil
gpp
lit
resp
oflux
Year

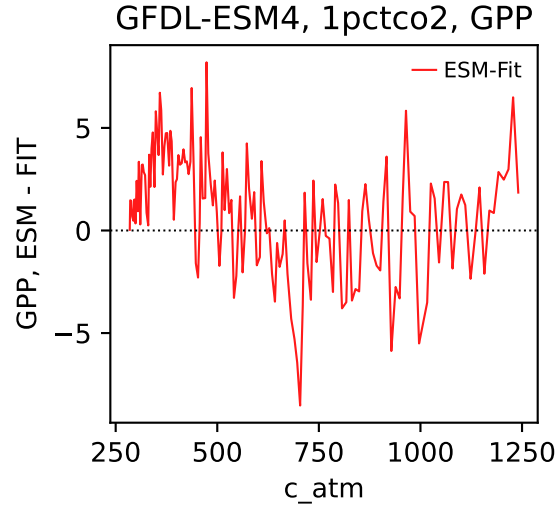

GFDL-ESM4, 1pctco2, GPP
ESM
Fit
GPP
Year

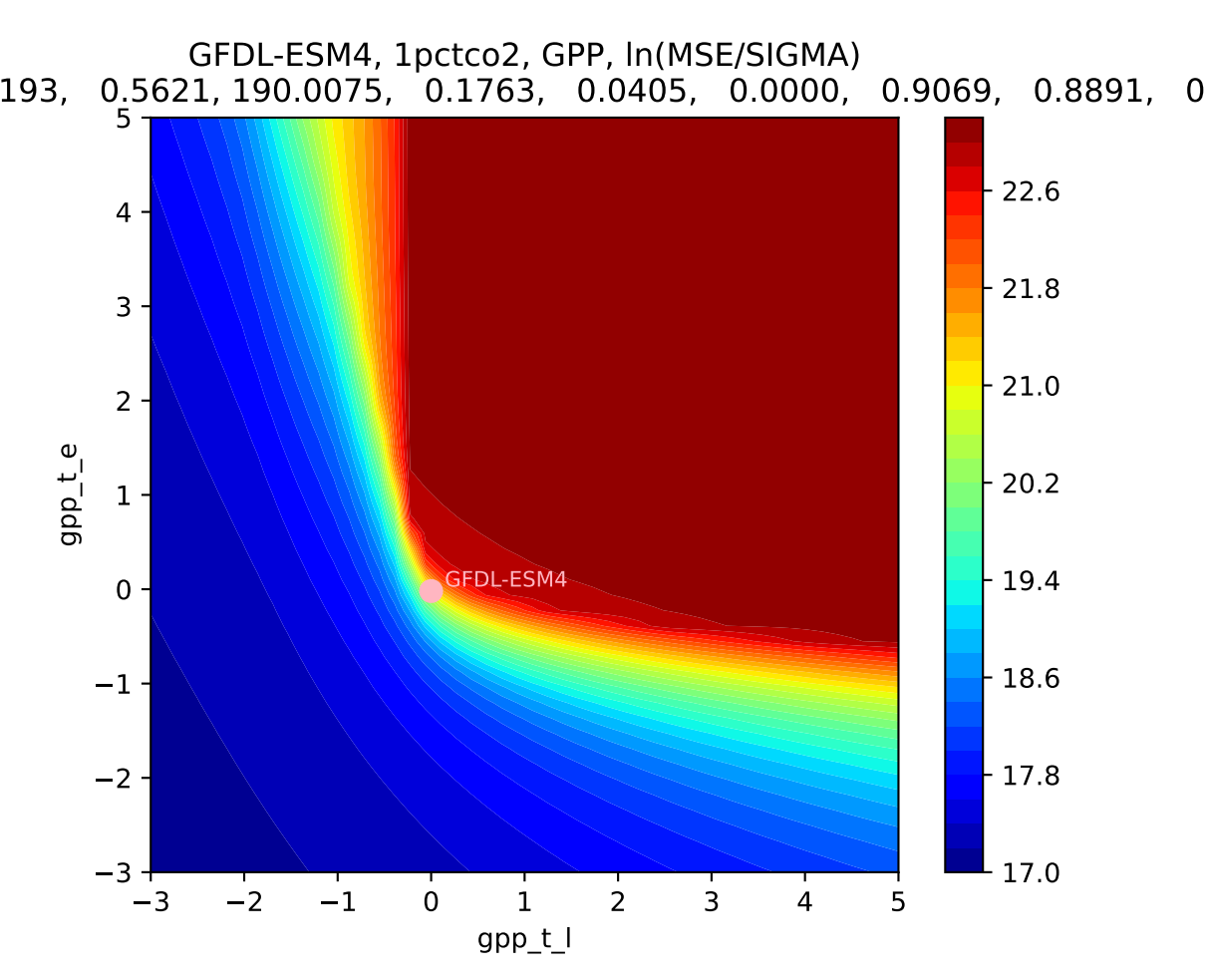

GFDL-ESM4, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
Year

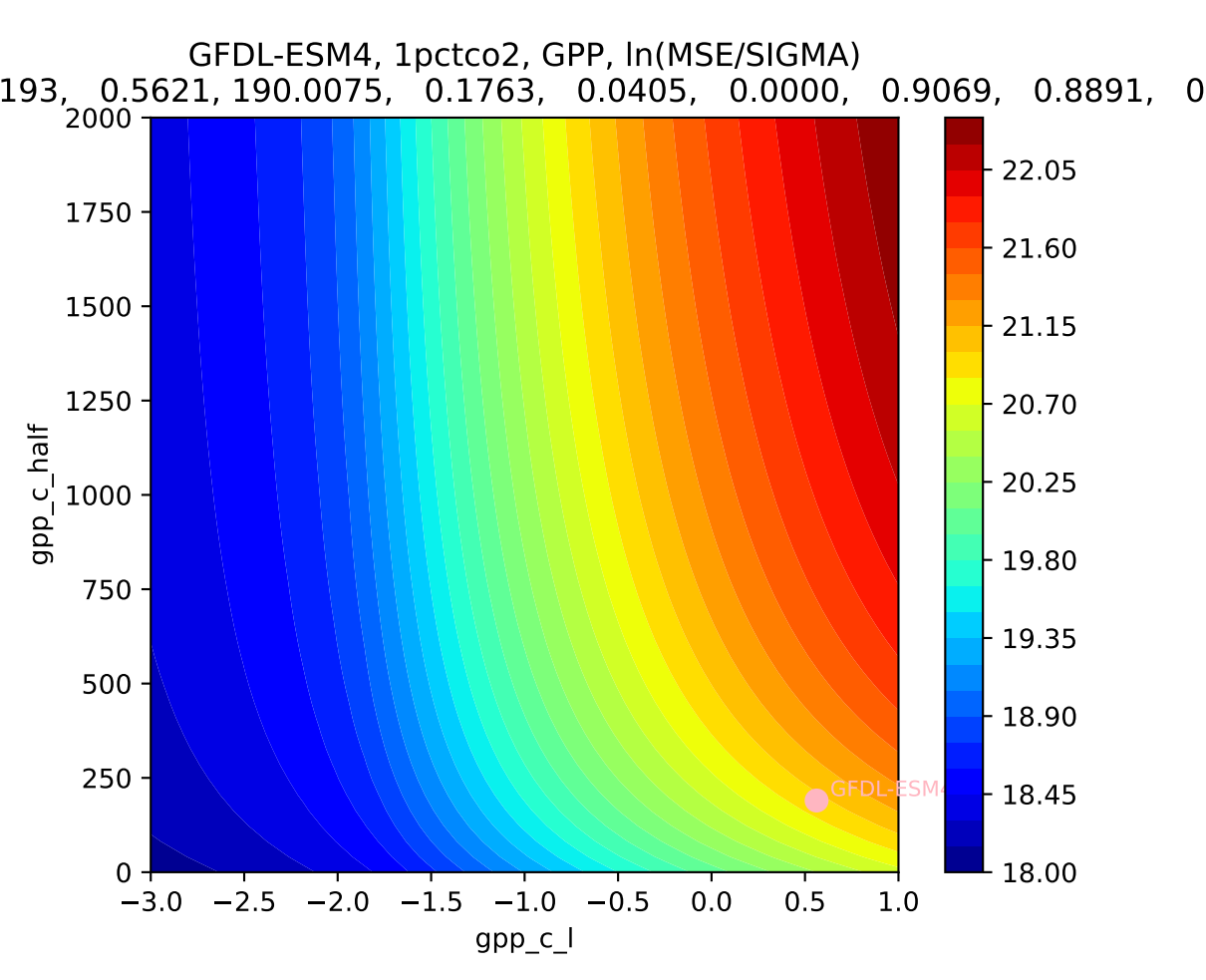

GFDL-ESM4, 1pctco2, GPP
ESM
Fit
GPP
ΔT

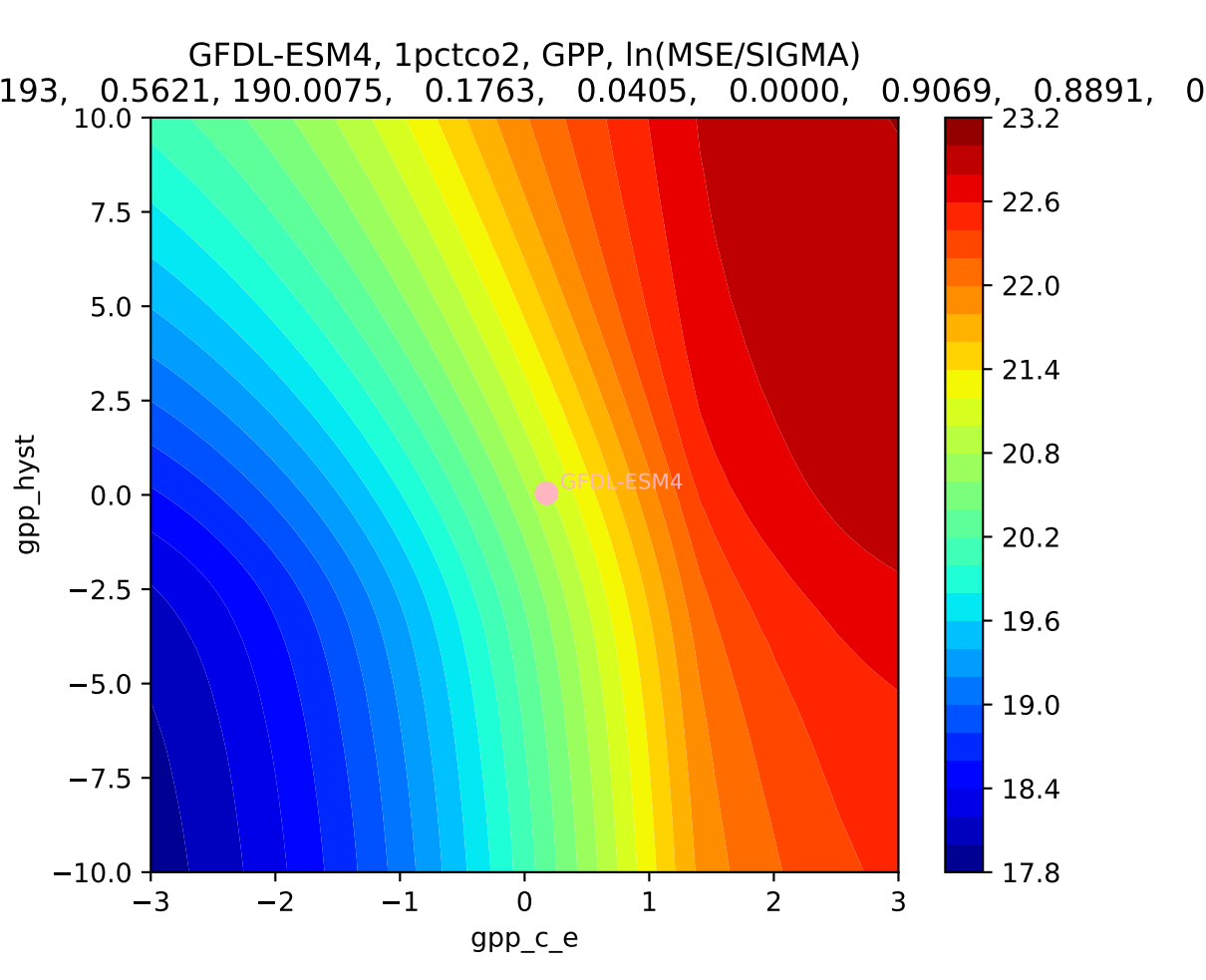

GFDL-ESM4, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

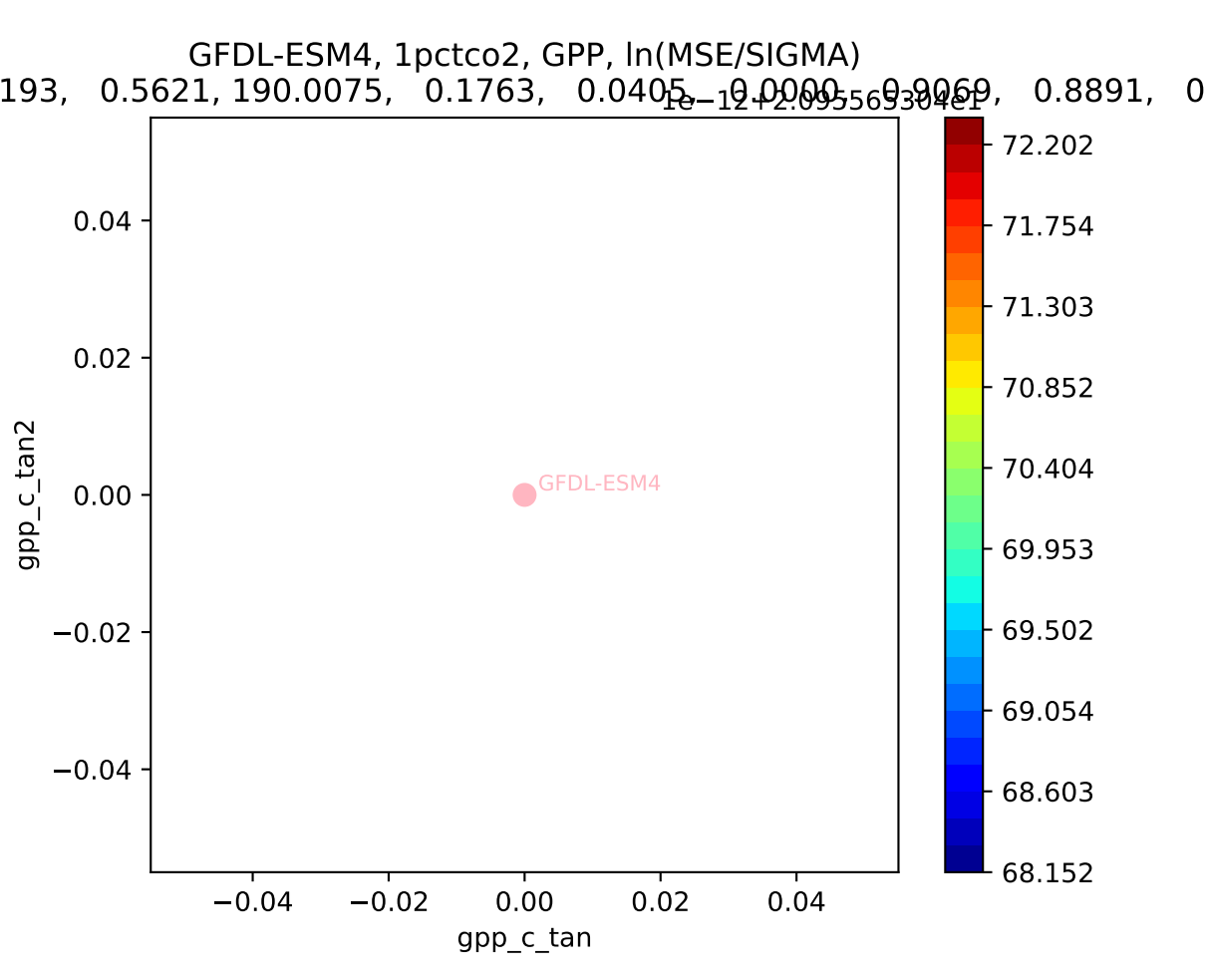

GFDL-ESM4, 1pctco2, GPP
ESM
Fit
GPP
c_atm

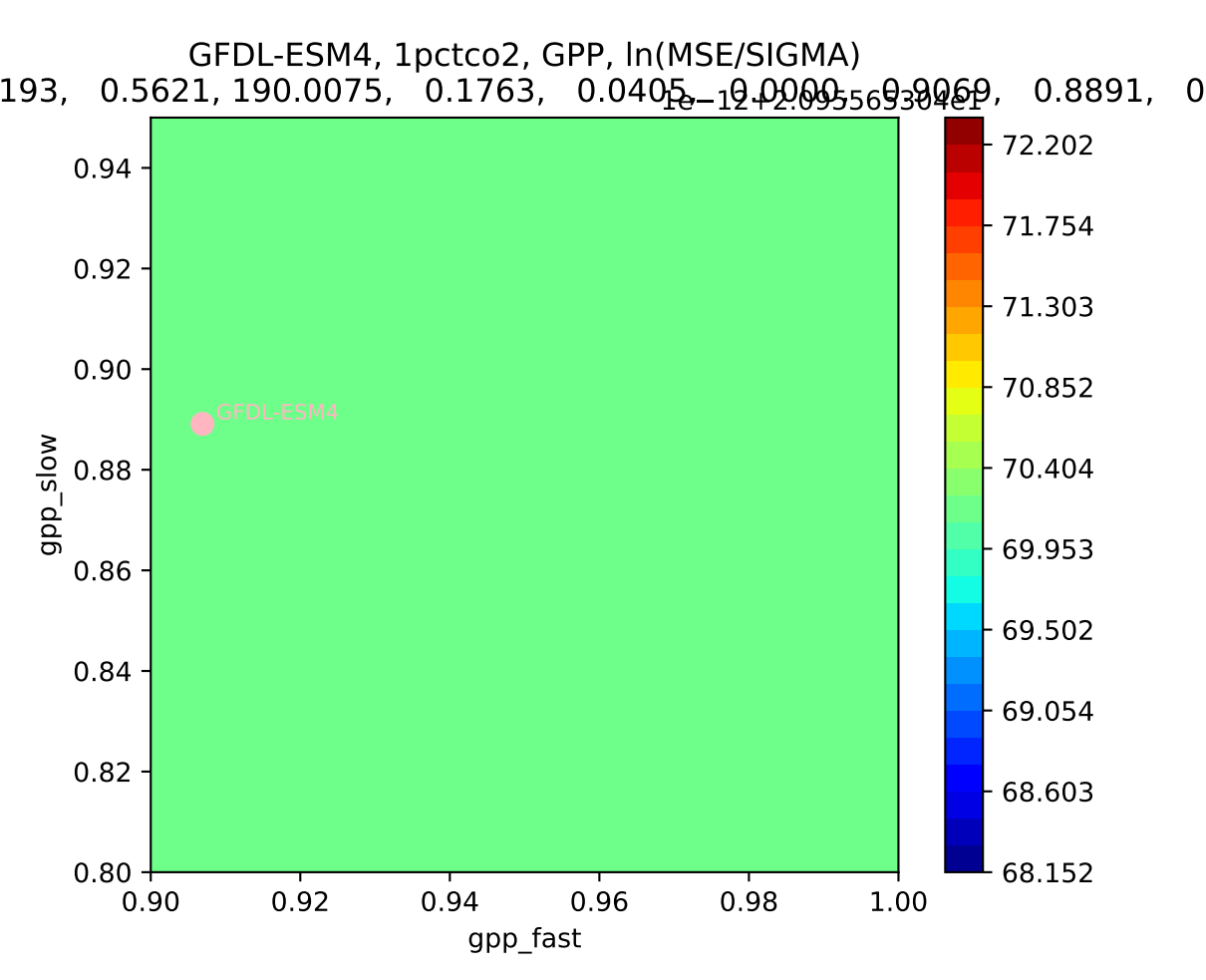

GFDL-ESM4, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

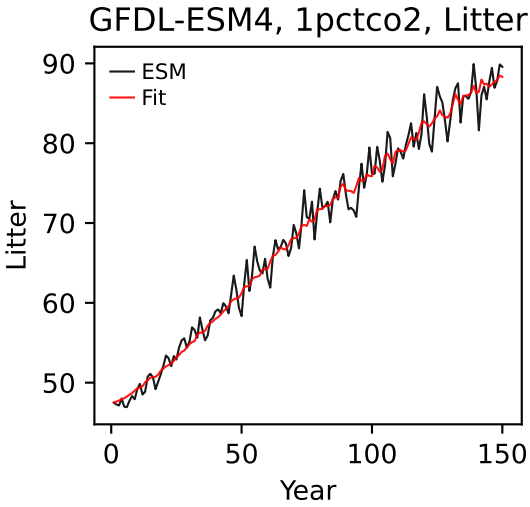

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
193, 0.5621, 190.0075, 0.1763, 0.0405, 0.0000, 0.9069, 0.8891, 0
GFDL-ESM4
gpp_t_e
gpp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
22.6
21.8
21.0
20.2
19.4
18.6
17.8
17.0

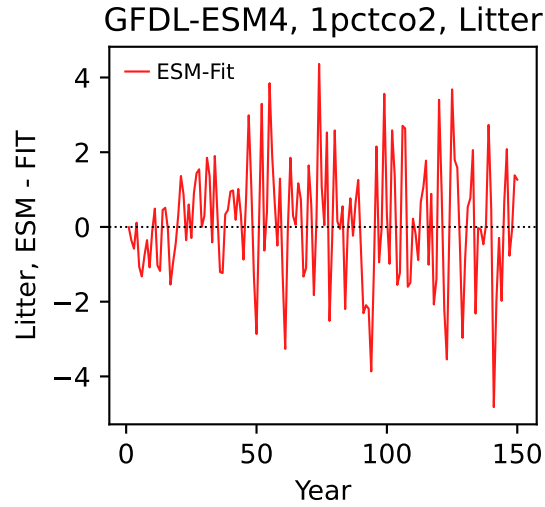

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
193, 0.5621, 190.0075, 0.1763, 0.0405, 0.0000, 0.9069, 0.8891, 0
gpp_c_half
gpp_c_l
2000
1750
1500
1250
1000
750
500
250
0
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
22.05
21.60
21.15
20.70
20.25
19.80
19.35
18.90
18.45
18.00
GFDL-ESM4

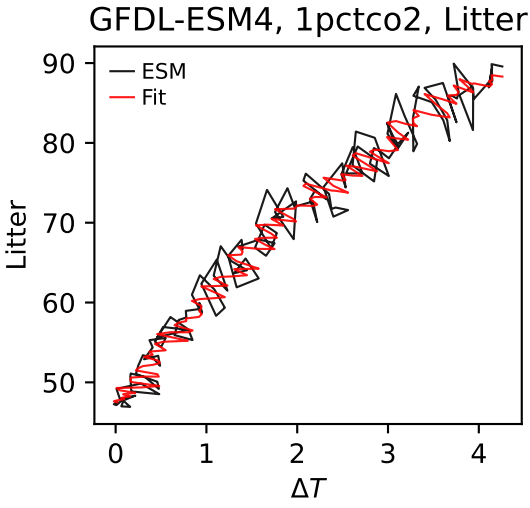

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
193, 0.5621, 190.0075, 0.1763, 0.0405, 0.0000, 0.9069, 0.8891, 0
GFDL-ESM4
gpp_hyst
gpp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
23.2
22.6
22.0
21.4
20.8
20.2
19.6
19.0
18.4
17.8

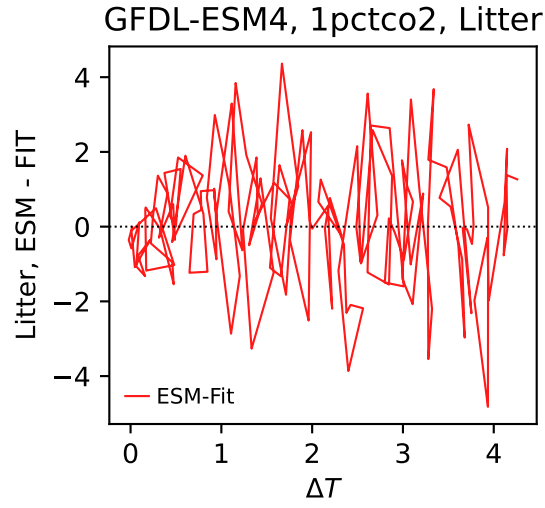

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
193, 0.5621, 190.0075, 0.1763, 0.0405, 0.0000, 0.9069, 0.8891, 0
1e−12+2.0955633041
GFDL-ESM4
gpp_c_tan2
gpp_c_tan
0.04
0.02
0.00
−0.02
−0.04
72.202
71.754
71.303
70.852
70.404
69.953
69.502
69.054
68.603
68.152

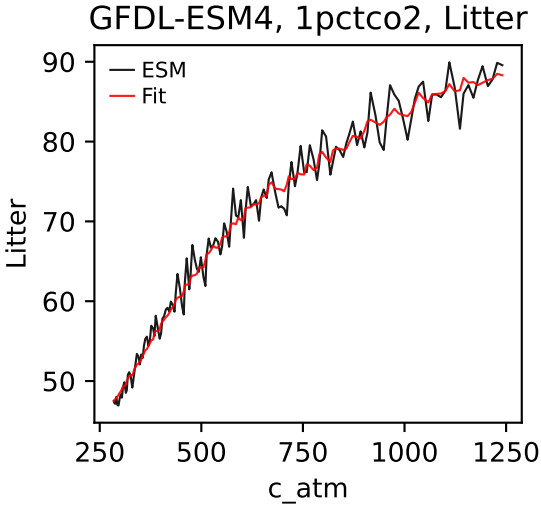

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
193, 0.5621, 190.0075, 0.1763, 0.0405, 0.0000, 0.9069, 0.8891, 0
1e−12+2.0955633041
GFDL-ESM4
gpp_slow
gpp_fast
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
0.90
0.92
0.94
0.96
0.98
1.00
72.202
71.754
71.303
70.852
70.404
69.953
69.502
69.054
68.603
68.152

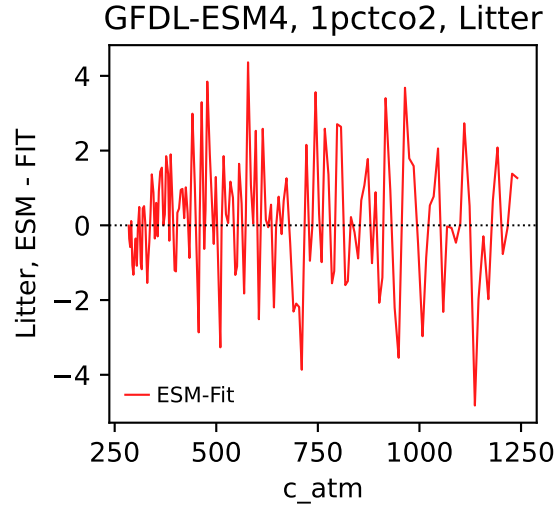

GFDL-ESM4, 1pctco2, Litter
ESM
Fit
Litter
Year

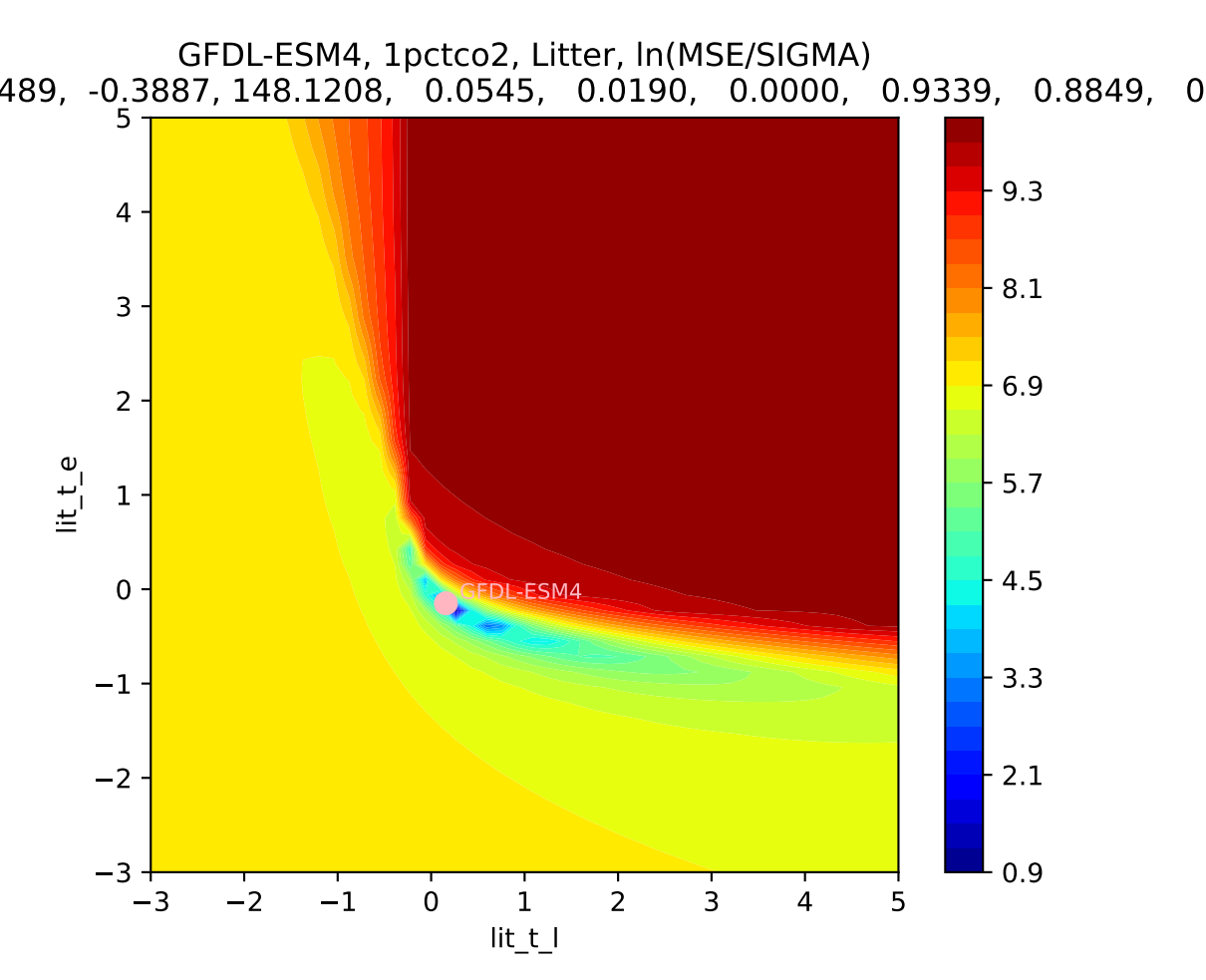

GFDL-ESM4, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
Year

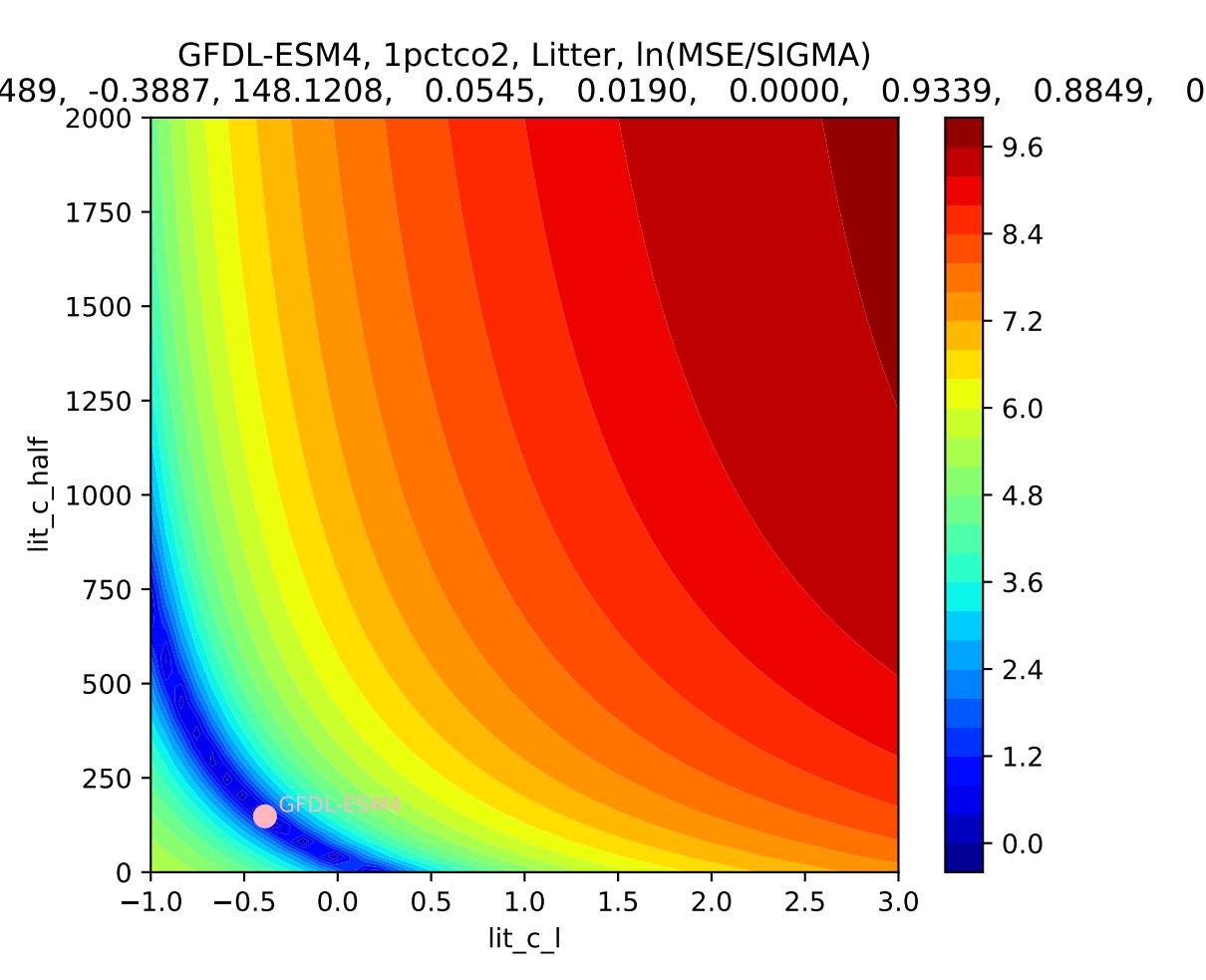

GFDL-ESM4, 1pctco2, Litter
ESM
Fit
Litter
ΔT

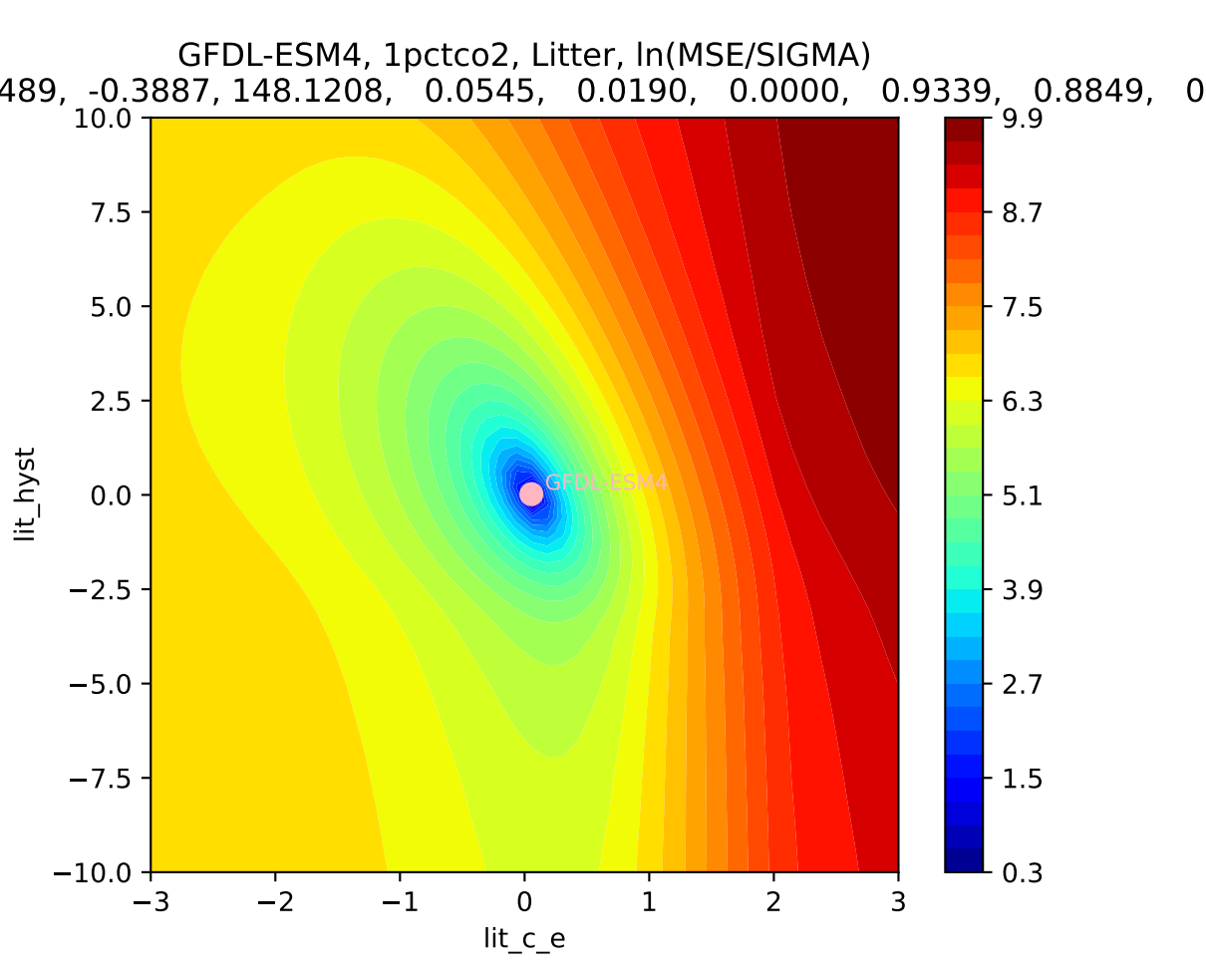

GFDL-ESM4, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
ΔT

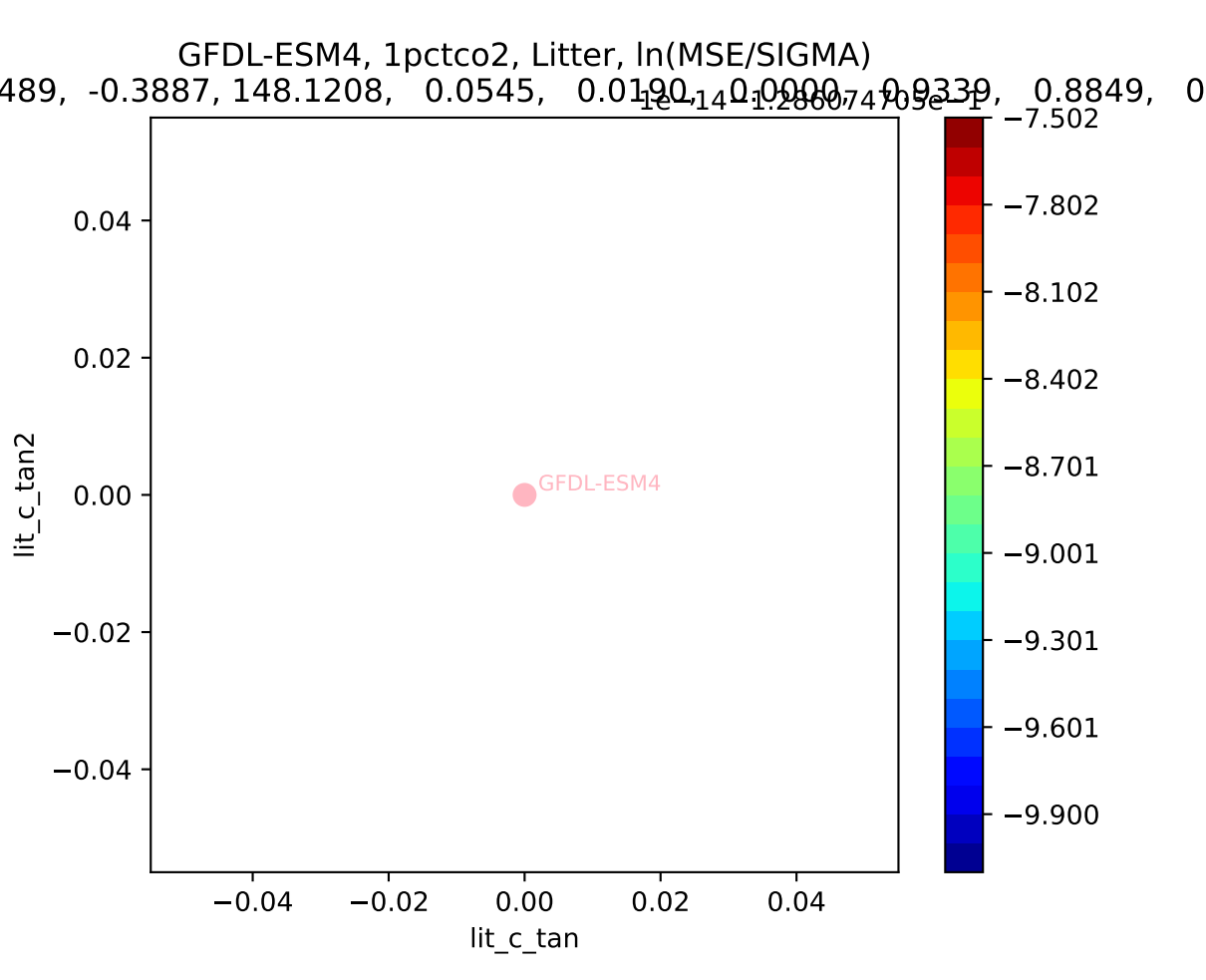

GFDL-ESM4, 1pctco2, Litter
ESM
Fit
Litter
c_atm

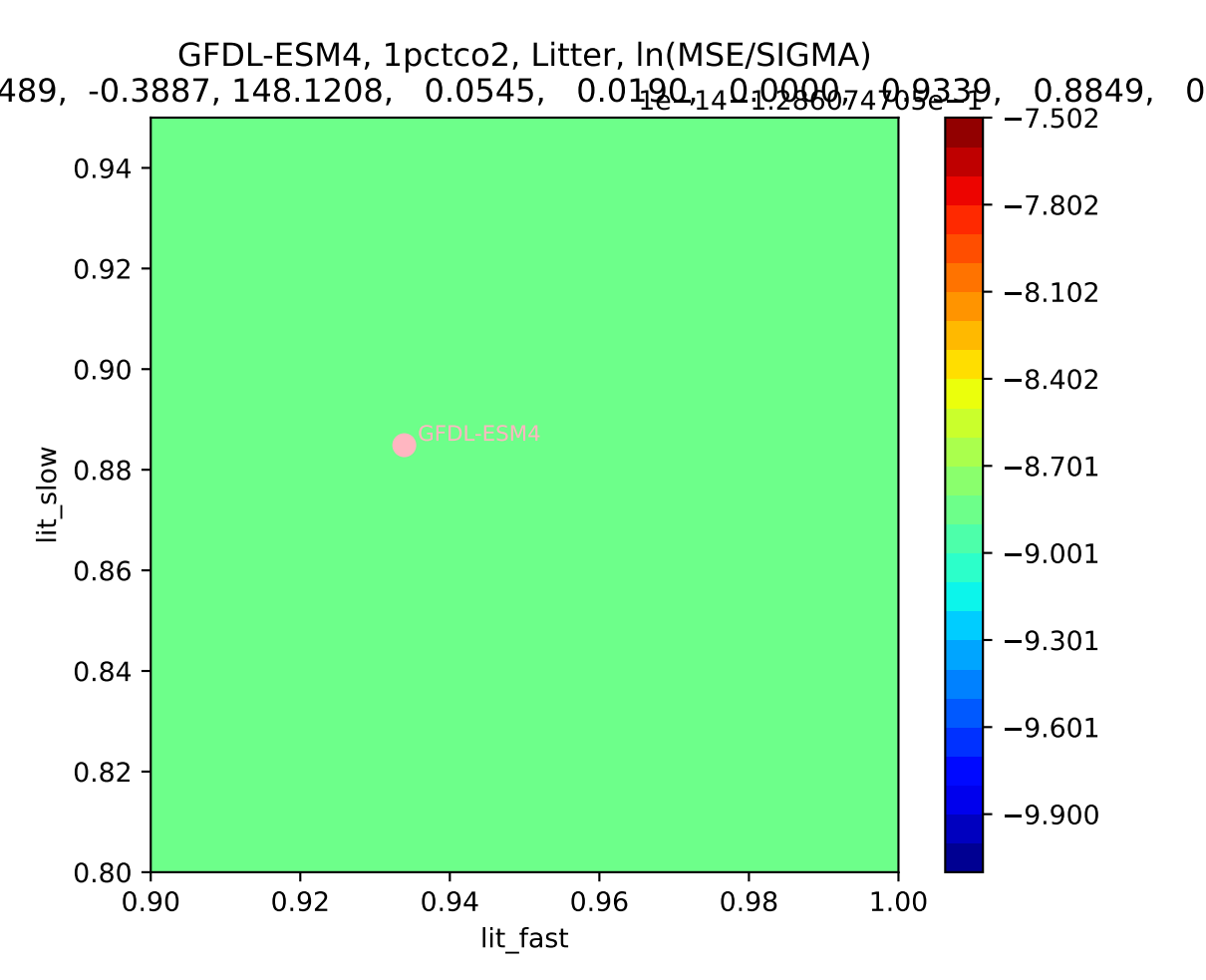

GFDL-ESM4, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
c_atm

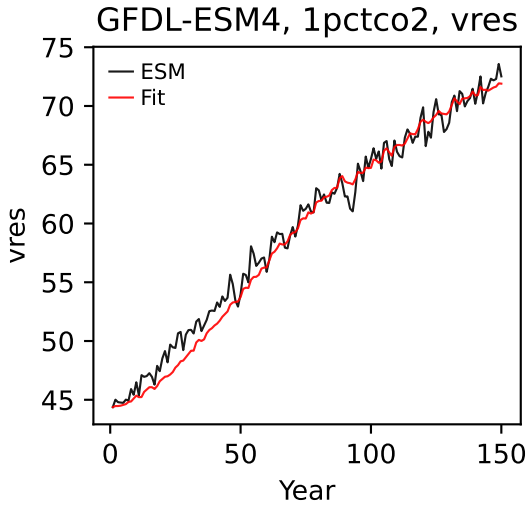

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
489, -0.3887, 148.1208, 0.0545, 0.0190, 0.0000, 0.9339, 0.8849, 0
GFDL-ESM4
lit_t_e
lit_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
9.3
8.1
6.9
5.7
4.5
3.3
2.1
0.9

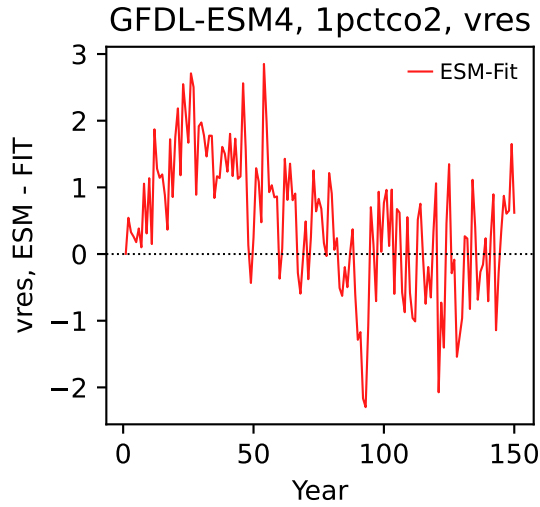

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
489, -0.3887, 148.1208, 0.0545, 0.0190, 0.0000, 0.9339, 0.8849, 0
lit_c_half
lit_c_l
GFDL-ESM4
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

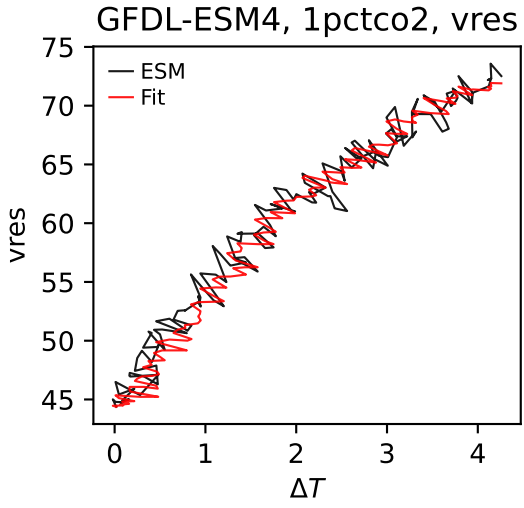

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
489, -0.3887, 148.1208, 0.0545, 0.0190, 0.0000, 0.9339, 0.8849, 0
GFDL-ESM4
lit_hyst
lit_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3

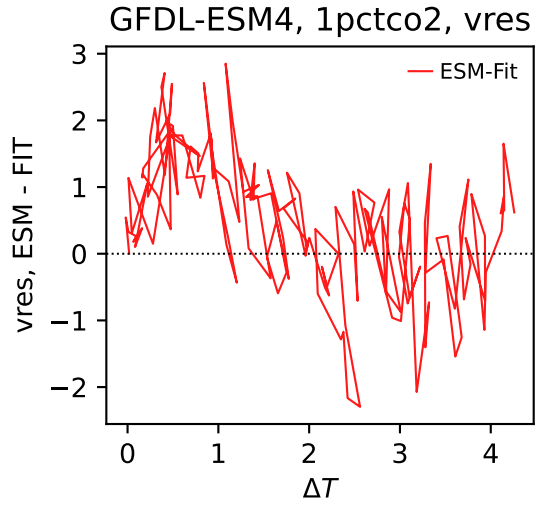

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
489, -0.3887, 148.1208, 0.0545, 0.0190, 0.0000, 0.9339, 0.8849, 0
1e−14 −1.2860747705e−1
GFDL-ESM4
lit_c_tan2
lit_c_tan
0.04
0.02
0.00
−0.02
−0.04
−7.502
−7.802
−8.102
−8.402
−8.701
−9.001
−9.301
−9.601
−9.900

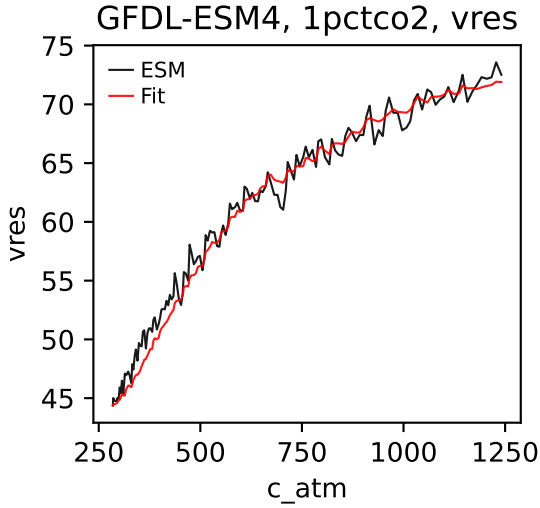

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
489, -0.3887, 148.1208, 0.0545, 0.0190, 0.0000, 0.9339, 0.8849, 0
1e−14 −1.2860747705e−1
GFDL-ESM4
lit_slow
lit_fast
0.80
0.82
0.84
0.86
0.88
0.90
0.92
0.94
0.90
0.92
0.94
0.96
0.98
1.00
−7.502
−7.802
−8.102
−8.402
−8.701
−9.001
−9.301
−9.601
−9.900

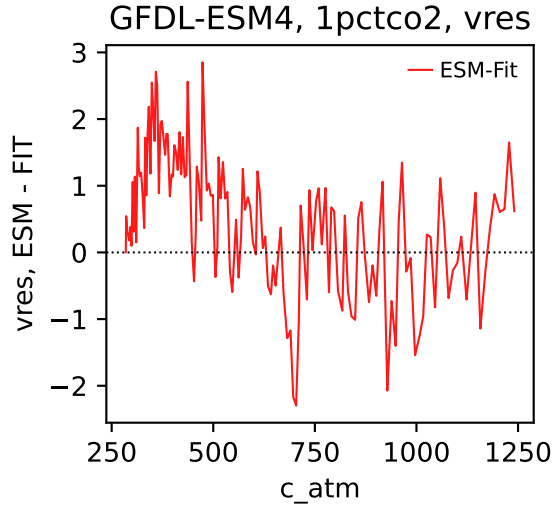

GFDL-ESM4, 1pctco2, vres
ESM
Fit
vres
Year

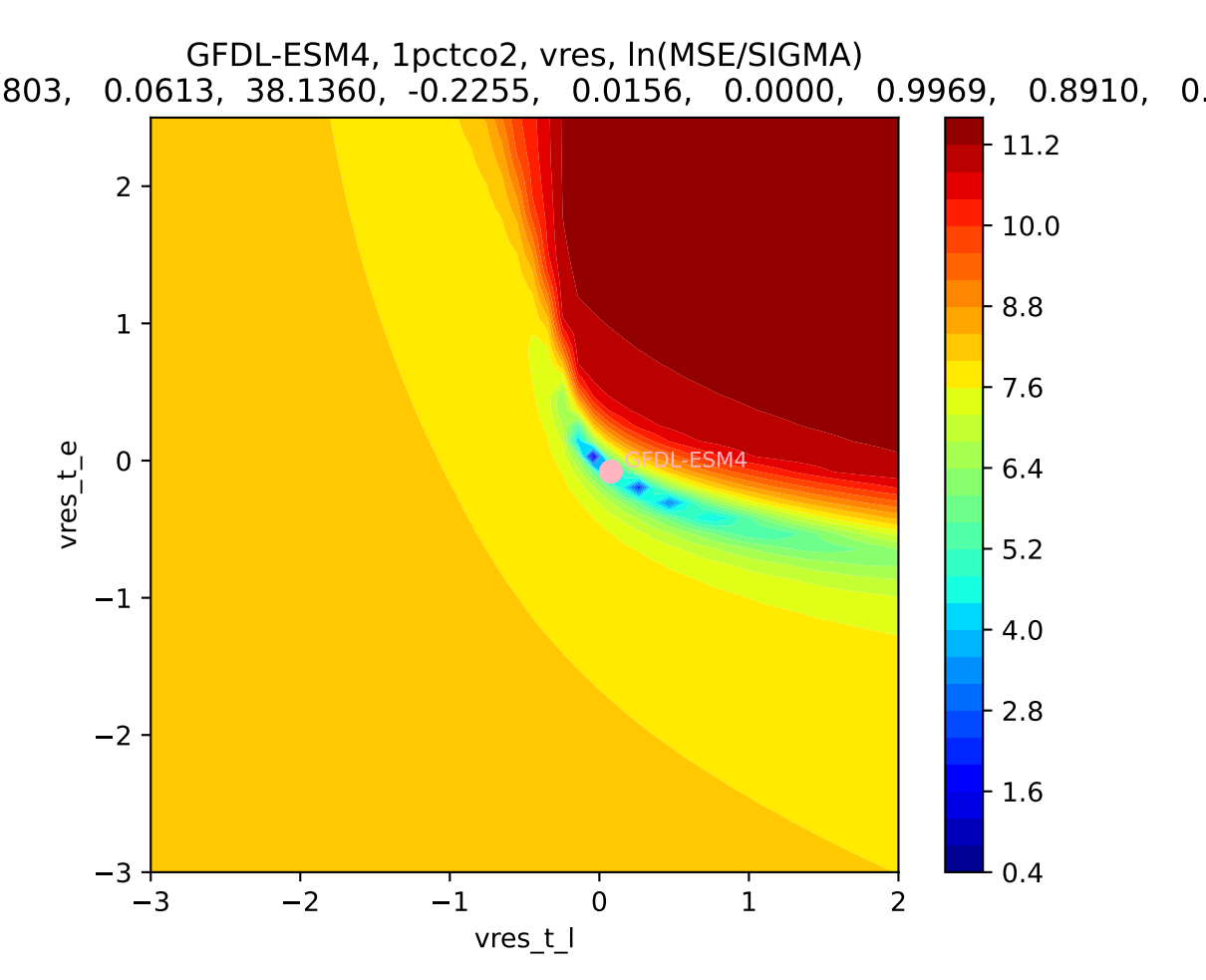

GFDL-ESM4, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
Year

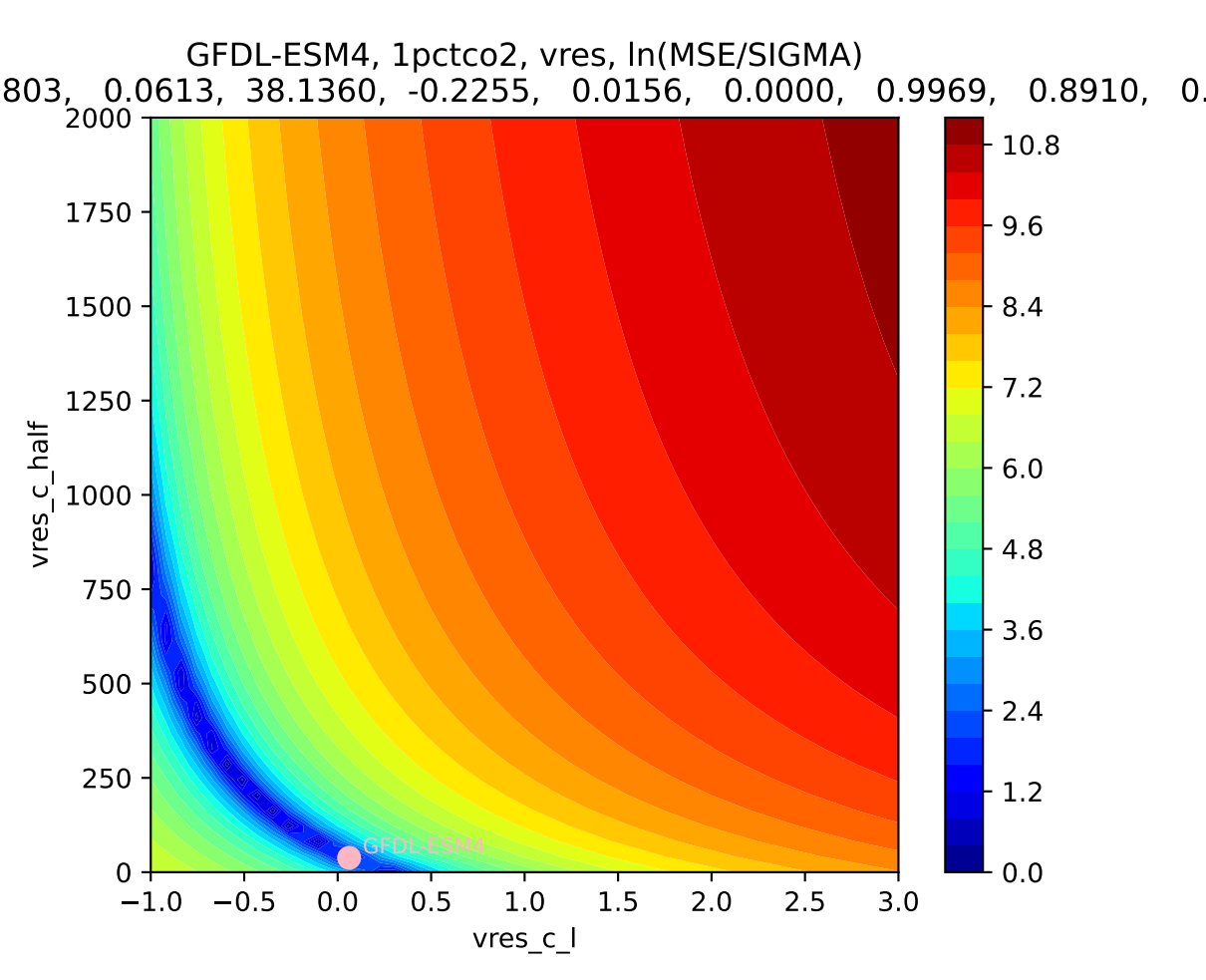

GFDL-ESM4, 1pctco2, vres
ESM
Fit
vres
ΔT

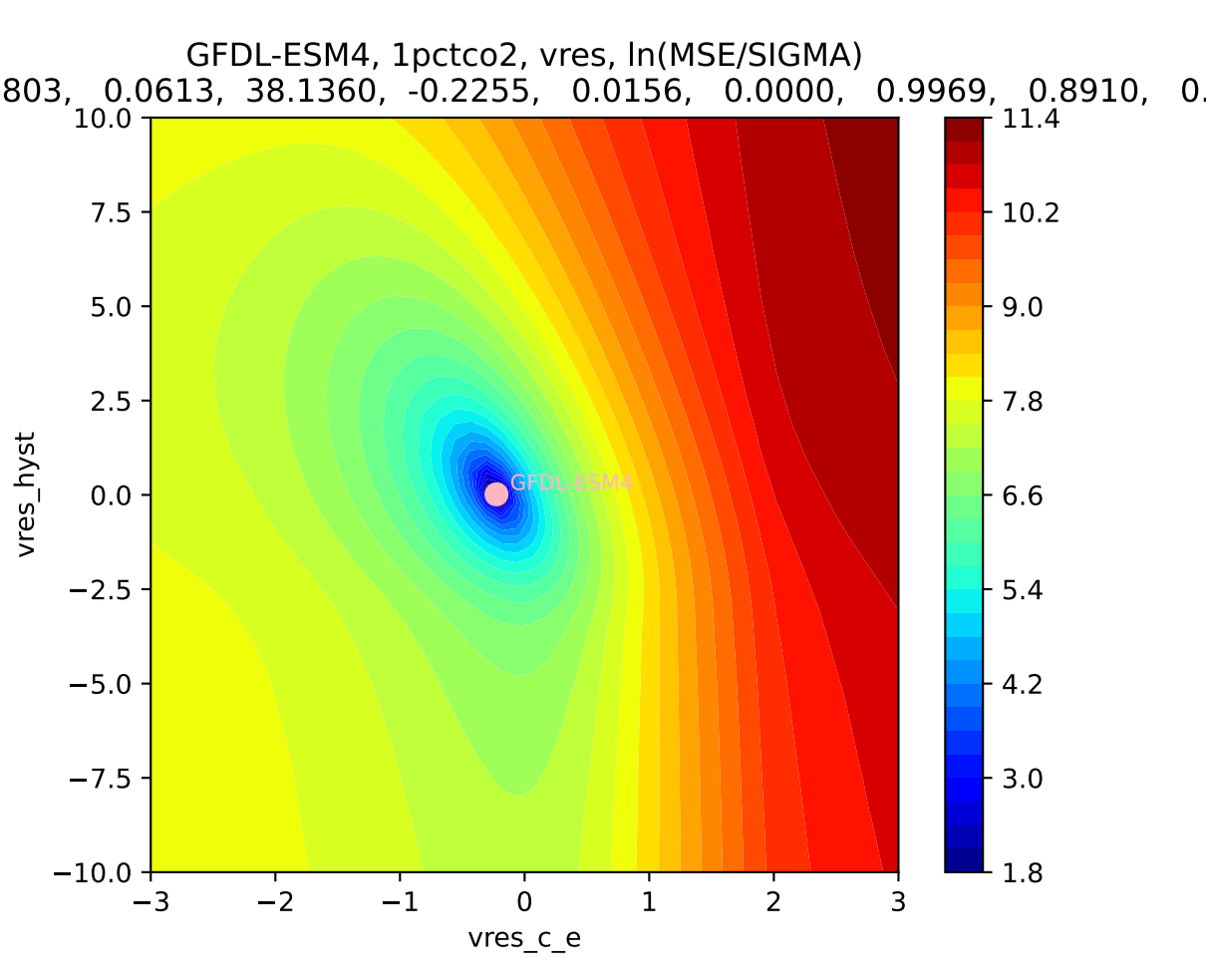

GFDL-ESM4, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
ΔT

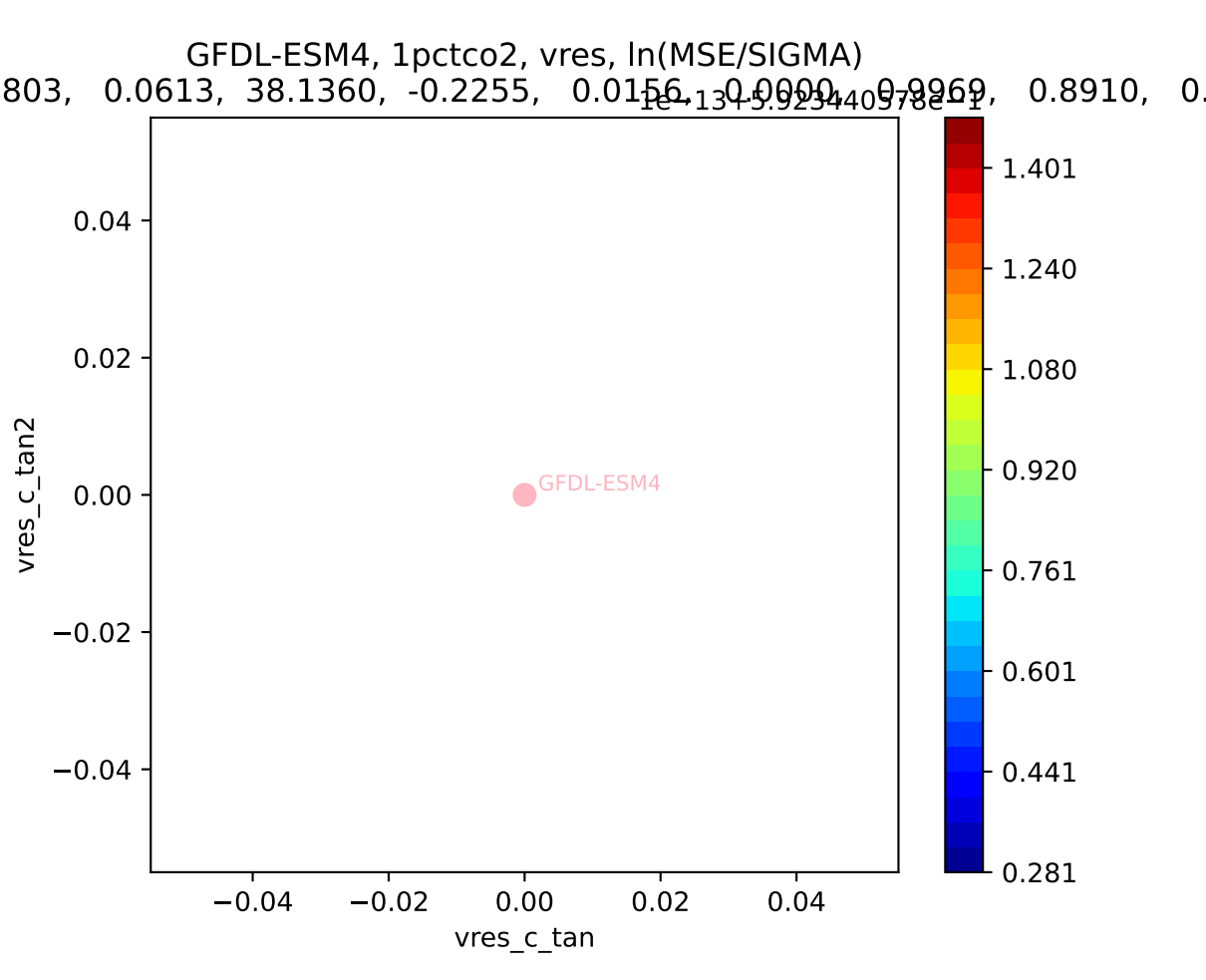

GFDL-ESM4, 1pctco2, vres
ESM
Fit
vres
c_atm

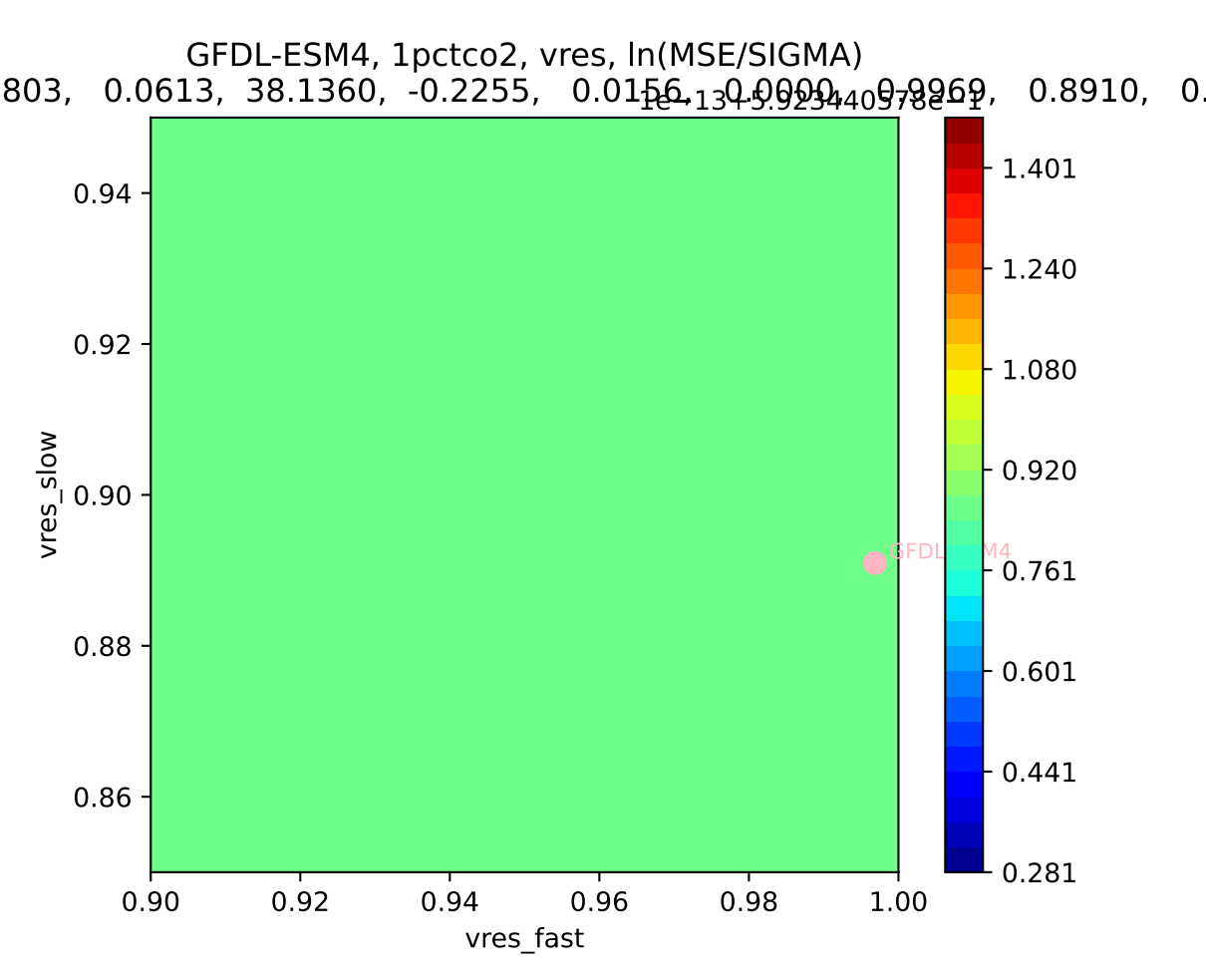

GFDL-ESM4, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
c_atm

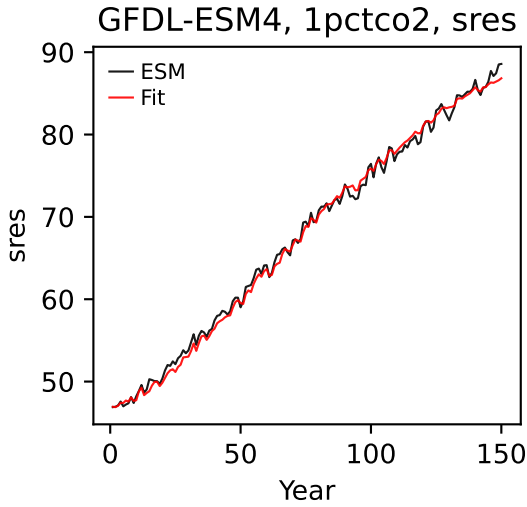

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
803, 0.0613, 38.1360, -0.2255, 0.0156, 0.0000, 0.9969, 0.8910, 0.
GFDL-ESM4
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
11.2
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6
0.4

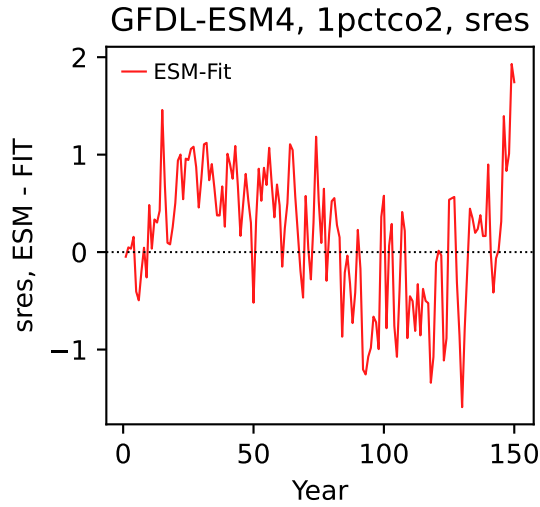

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
803, 0.0613, 38.1360, -0.2255, 0.0156, 0.0000, 0.9969, 0.8910, 0.
vres_c_half
vres_c_l
GFDL-ESM4
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
10.8
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

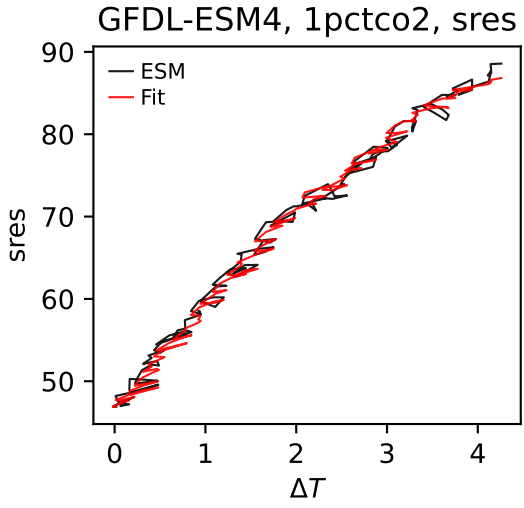

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
803, 0.0613, 38.1360, -0.2255, 0.0156, 0.0000, 0.9969, 0.8910, 0.
GFDL-ESM4
vres_hyst
vres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
11.4
10.2
9.0
7.8
6.6
5.4
4.2
3.0
1.8

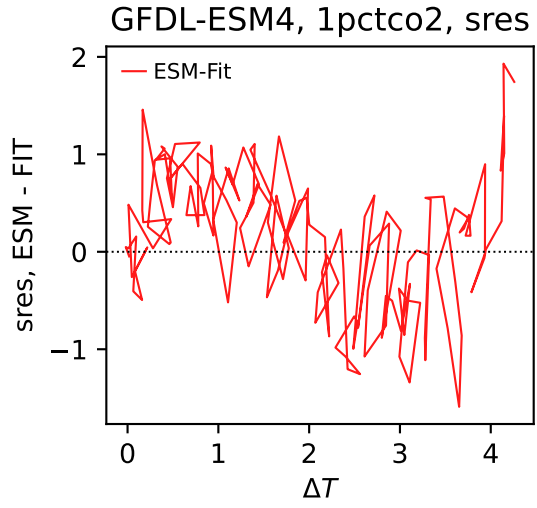

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
803, 0.0613, 38.1360, -0.2255, 0.0156, 0.0000, 0.9969, 0.8910, 0.
1e+13+5.92344057e-1
GFDL-ESM4
vres_c_tan2
vres_c_tan
0.04
0.02
0.00
−0.02
−0.04
1.401
1.240
1.080
0.920
0.761
0.601
0.441
0.281

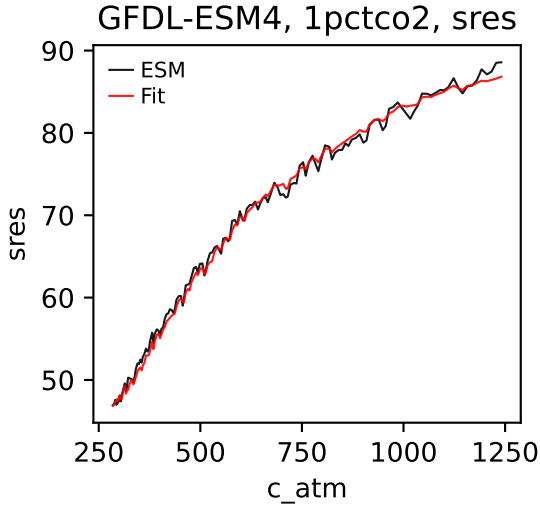

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
803, 0.0613, 38.1360, -0.2255, 0.0156, 0.0000, 0.9969, 0.8910, 0.
1e+13+5.92344057e-1
1.401
1.240
1.080
0.920
0.761
0.601
0.441
0.281
0.94
0.92
0.90
0.88
0.86
vres_slow
0.90
0.92
0.94
0.96
0.98
1.00
vres_fast

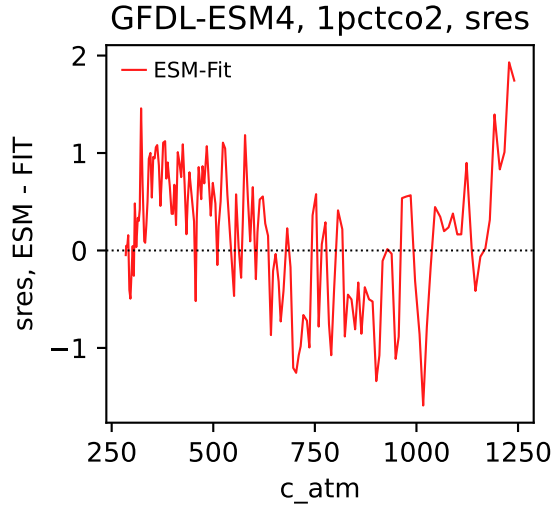

GFDL-ESM4, 1pctco2, sres
ESM
Fit
sres
Year

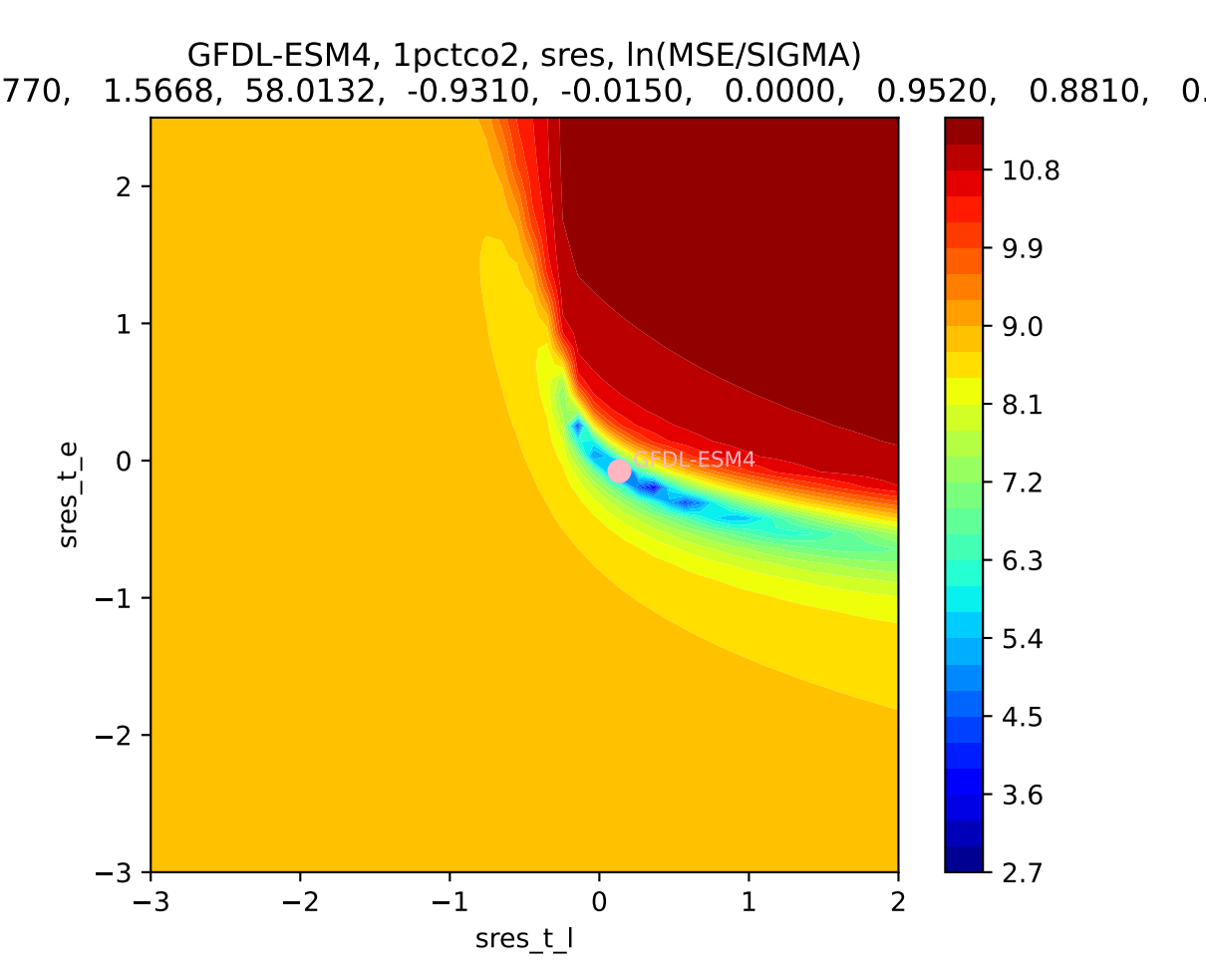

GFDL-ESM4, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
Year

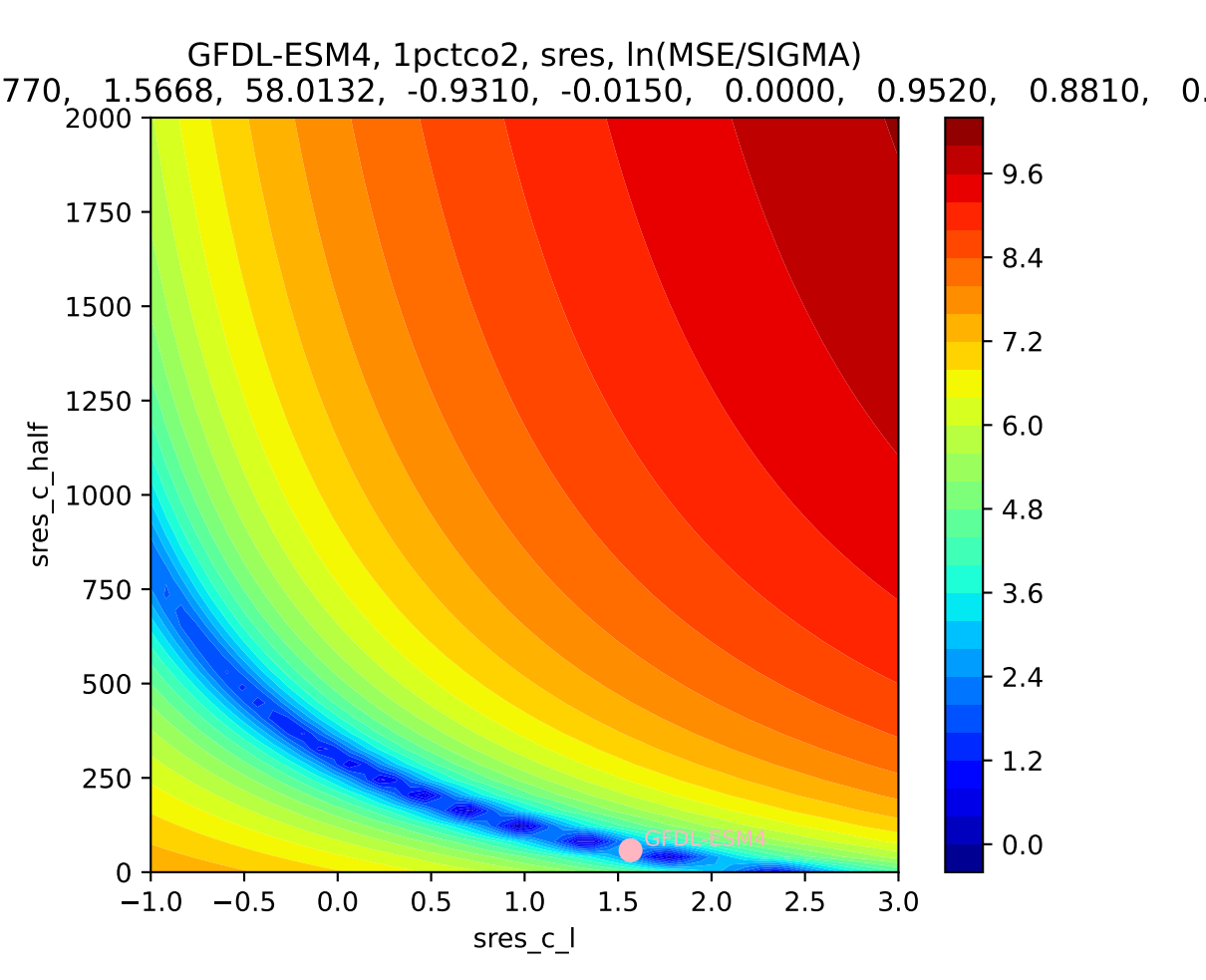

GFDL-ESM4, 1pctco2, sres
ESM
Fit
sres
ΔT

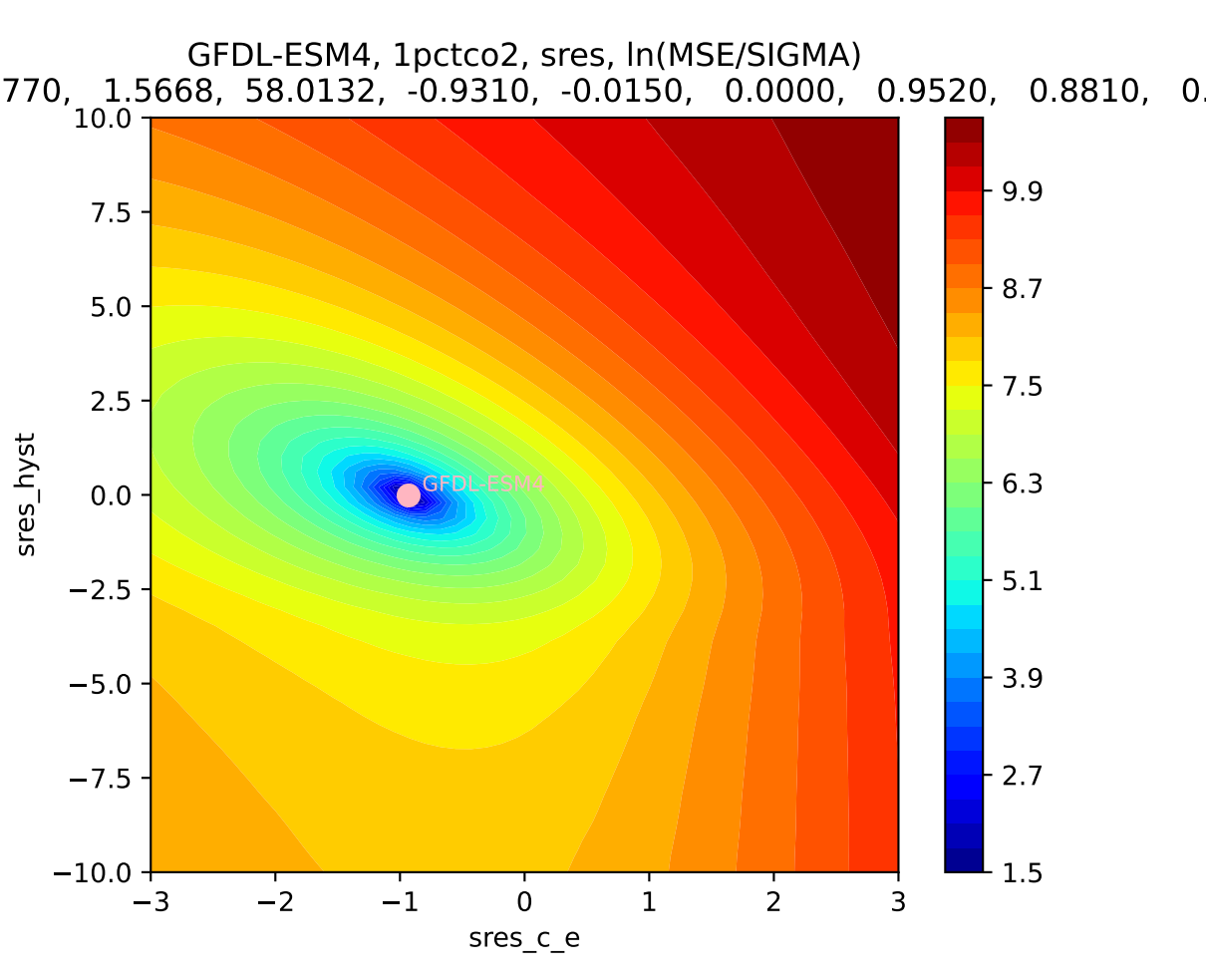

GFDL-ESM4, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
ΔT

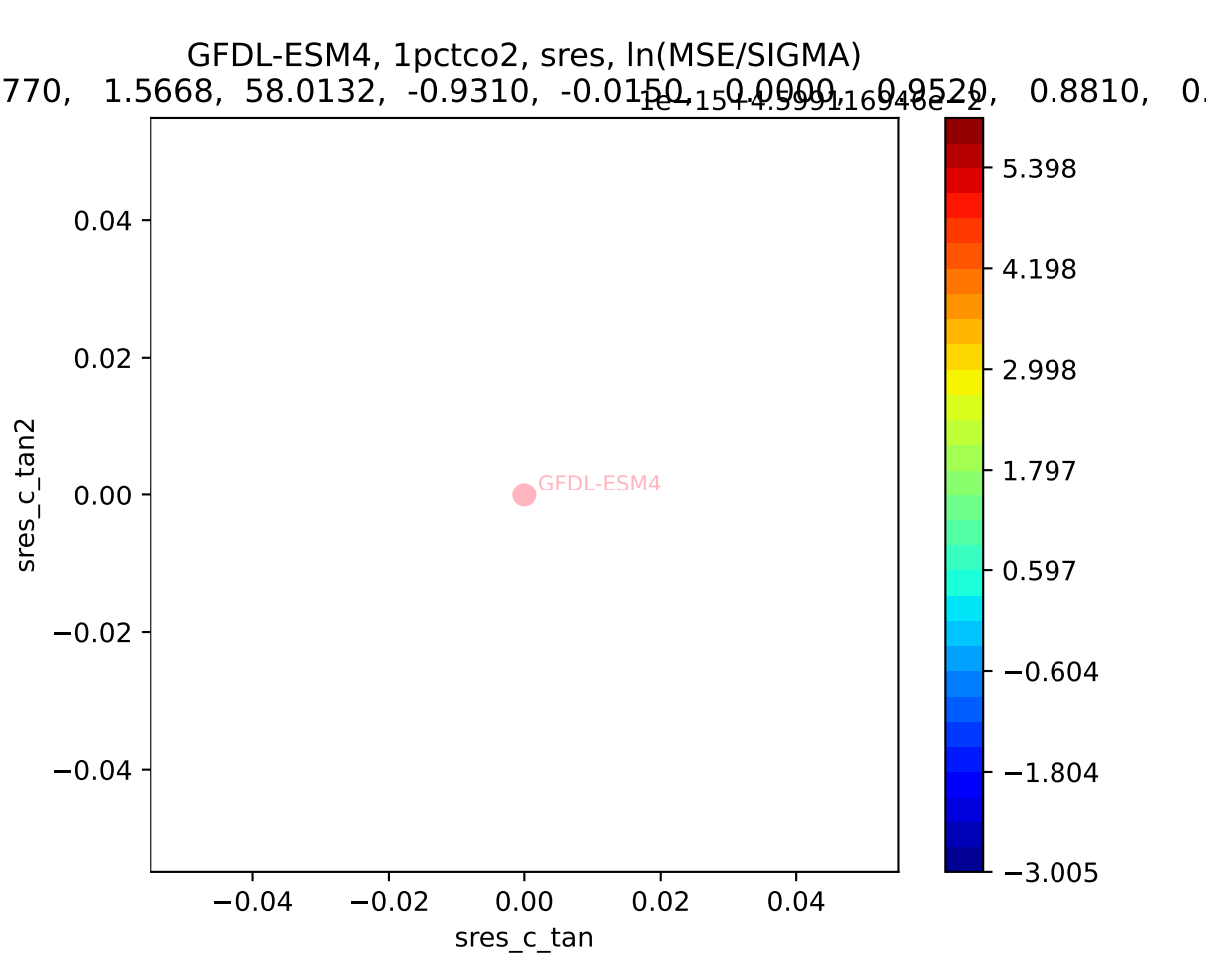

GFDL-ESM4, 1pctco2, sres
ESM
Fit
sres
c_atm

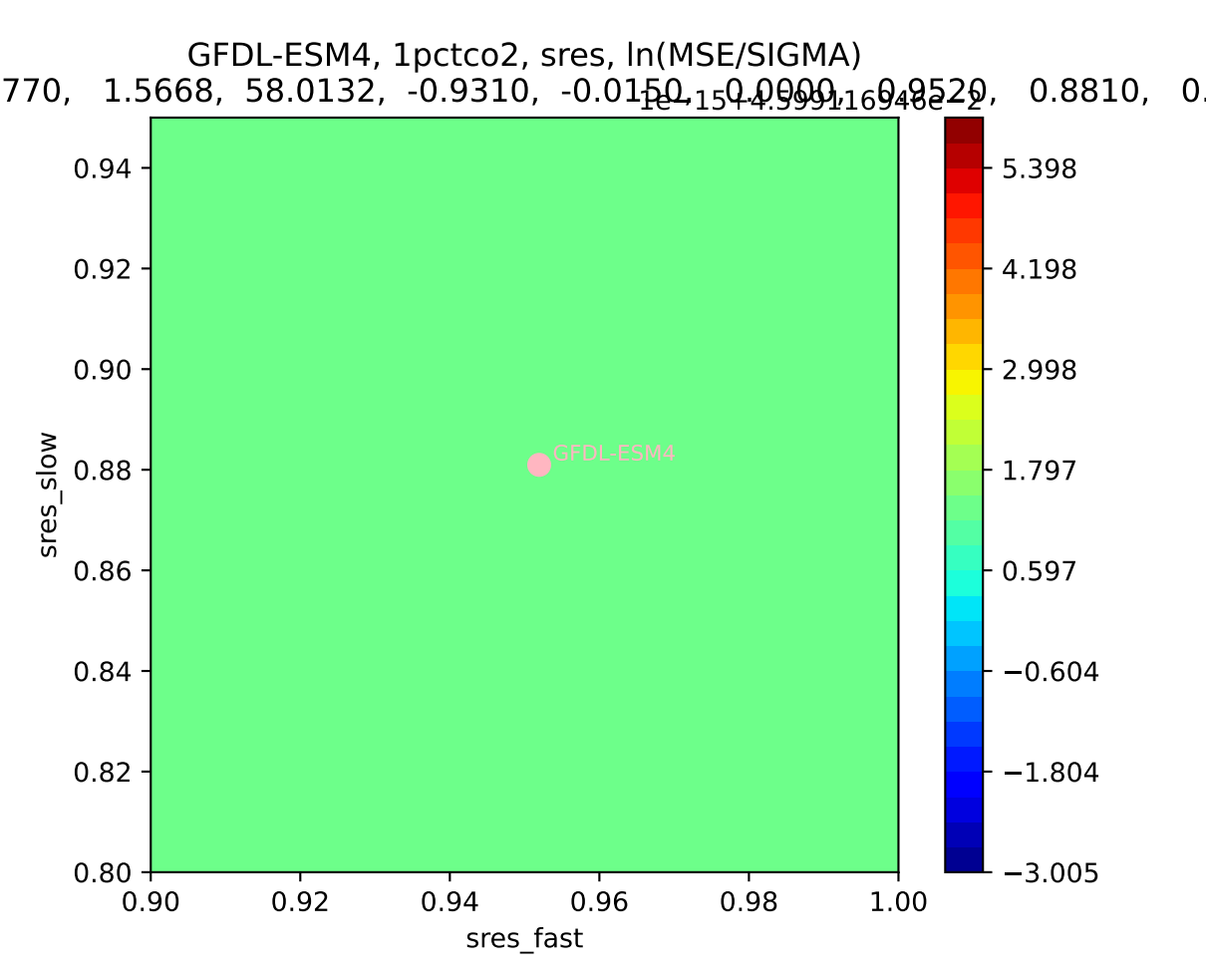

GFDL-ESM4, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
c_atm

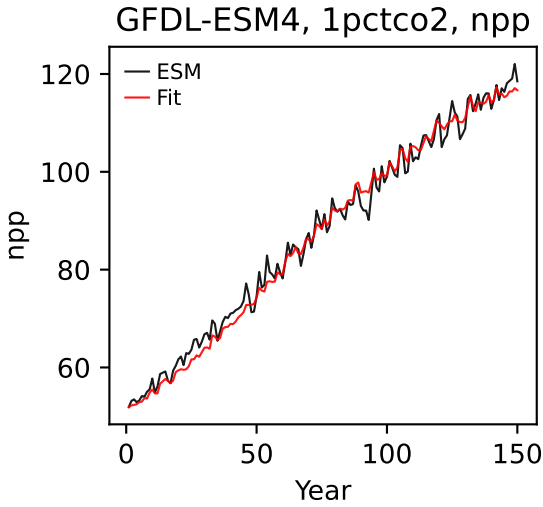

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
770, 1.5668, 58.0132, -0.9310, -0.0150, 0.0000, 0.9520, 0.8810, 0.
GFDL-ESM4
sres_t_e
sres_t_l
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
10.8
9.9
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7

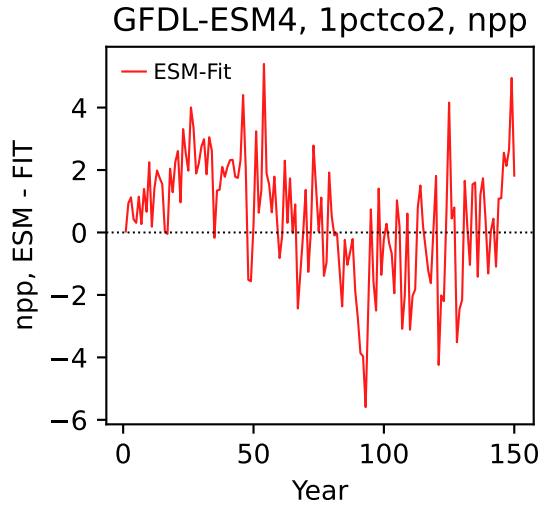

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
770, 1.5668, 58.0132, -0.9310, -0.0150, 0.0000, 0.9520, 0.8810, 0.
sres_c_half
sres_c_l
GFDL-ESM4
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

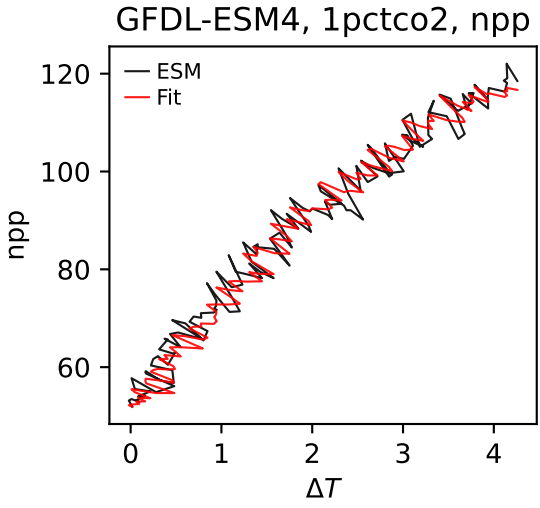

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
770, 1.5668, 58.0132, -0.9310, -0.0150, 0.0000, 0.9520, 0.8810, 0.
GFDL-ESM4
sres_hyst
sres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5

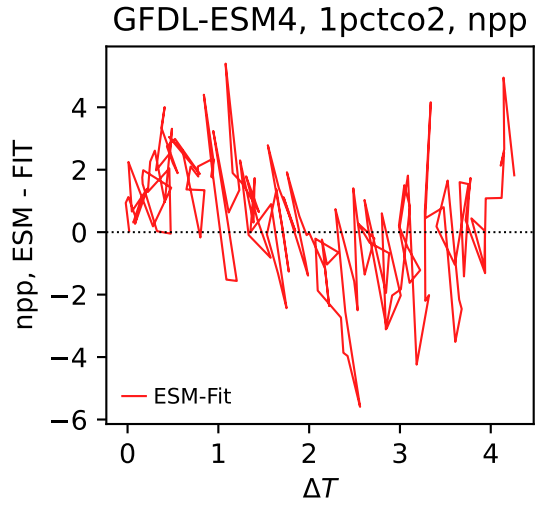

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
770, 1.5668, 58.0132, -0.9310, -0.0150, 0.0000, 0.9520, 0.8810, 0.
1e−15 4.599 1.694e−2
GFDL-ESM4
sres_c_tan2
sres_c_tan
0.04
0.02
0.00
−0.02
−0.04
5.398
4.198
2.998
1.797
0.597
−0.604
−1.804
−3.005

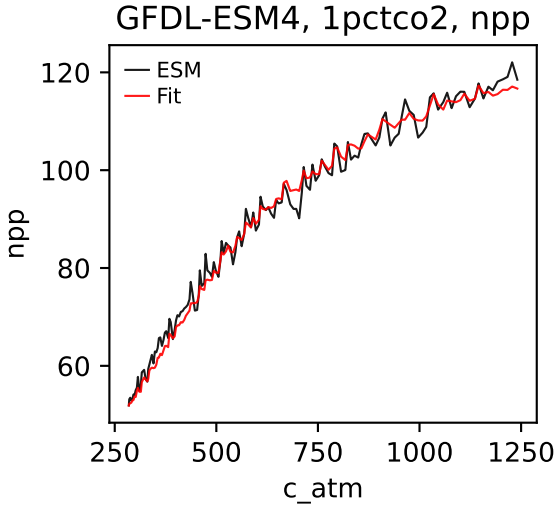

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
770, 1.5668, 58.0132, -0.9310, -0.0150, 0.0000, 0.9520, 0.8810, 0.
1e−15+4.5991169468e−2
GFDL-ESM4
sres_slow
sres_fast
0.80
0.82
0.84
0.86
0.88
0.90
0.92
0.94
0.90
0.92
0.94
0.96
0.98
1.00
5.398
4.198
2.998
1.797
0.597
−0.604
−1.804
−3.005

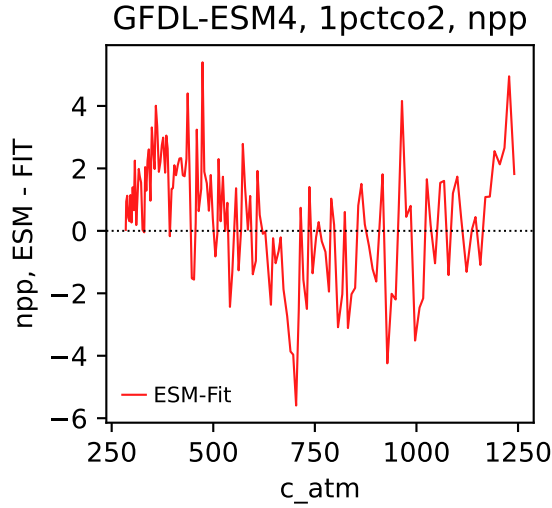

GFDL-ESM4, 1pctco2, npp
ESM
Fit
npp
Year

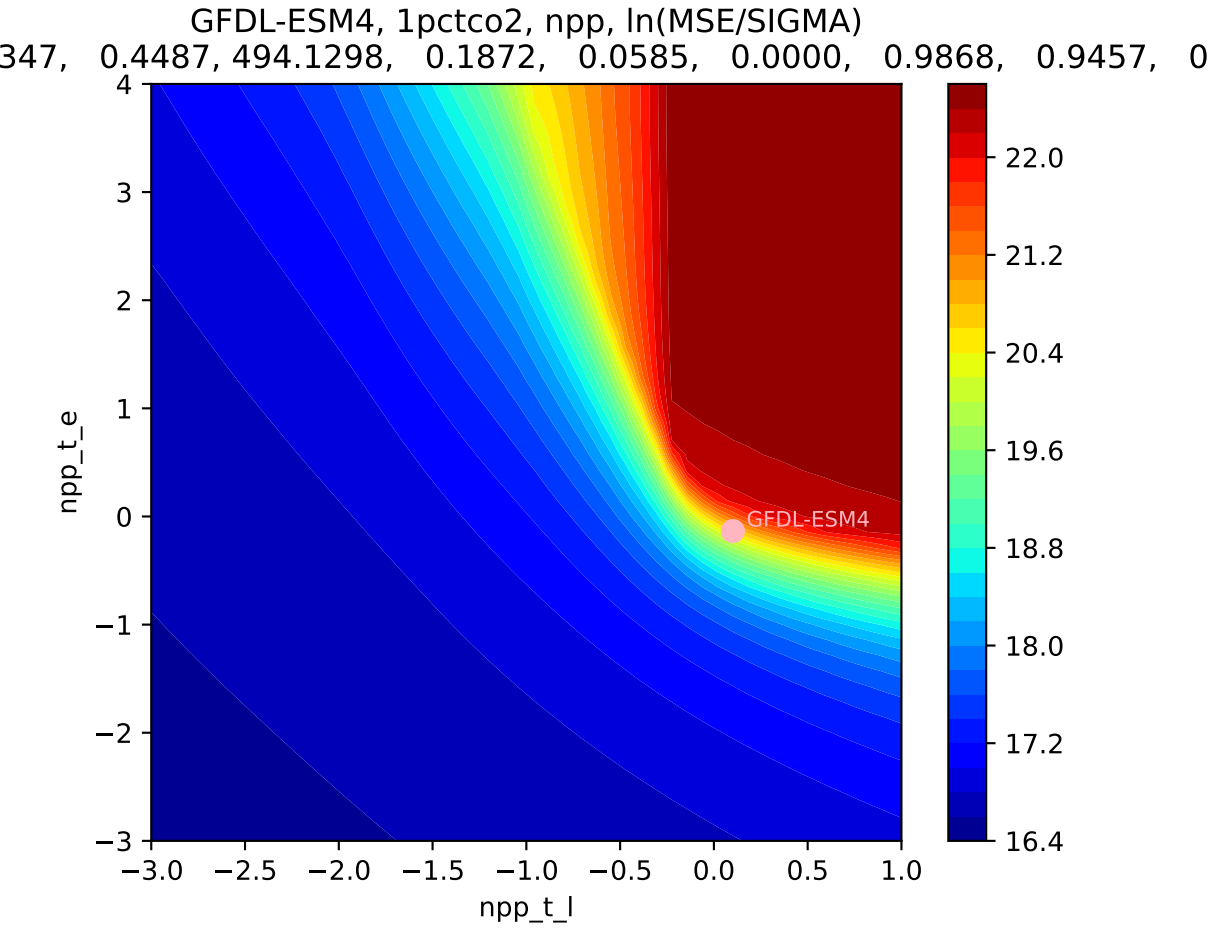

GFDL-ESM4, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
Year

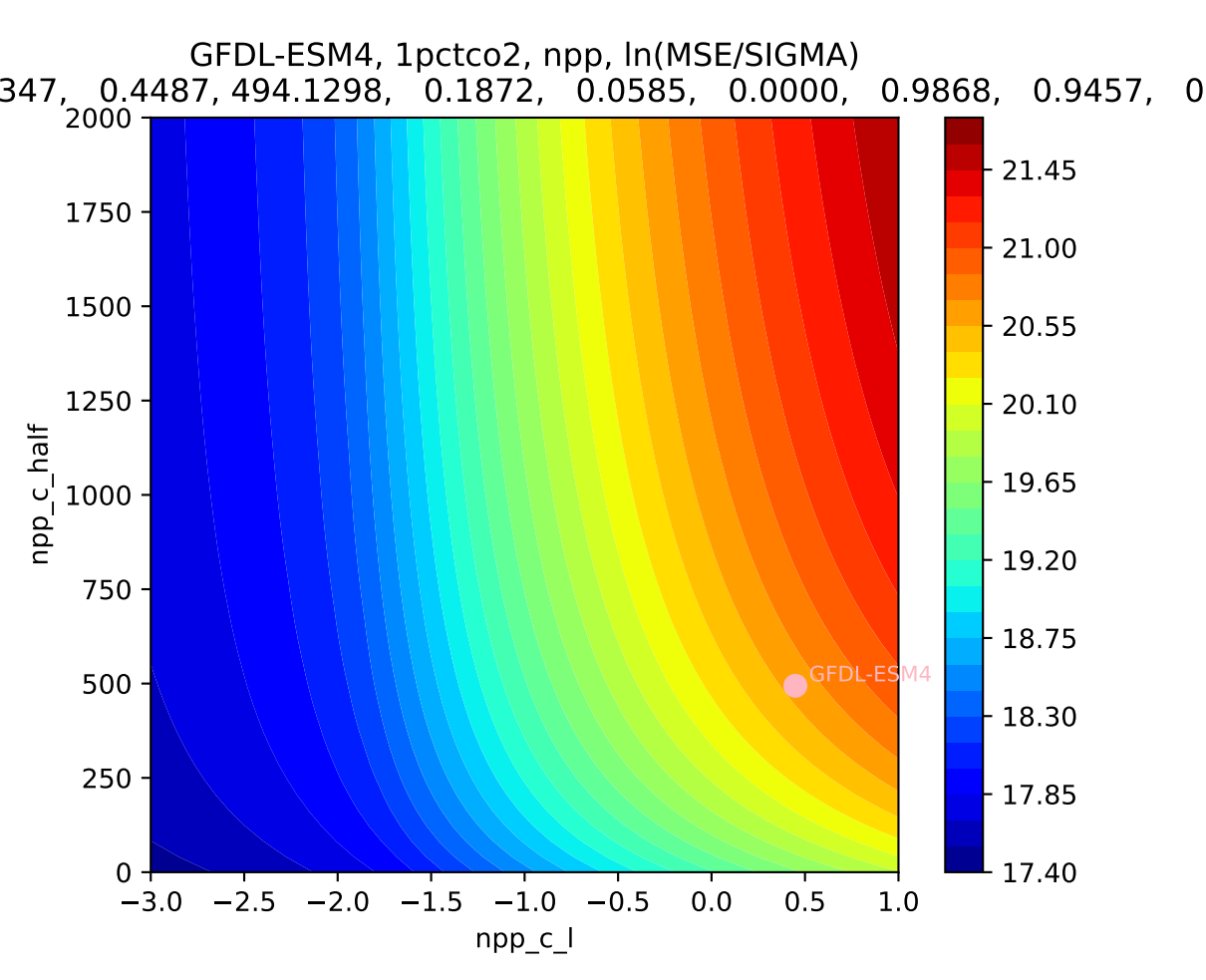

GFDL-ESM4, 1pctco2, npp
ESM
Fit
npp
ΔT

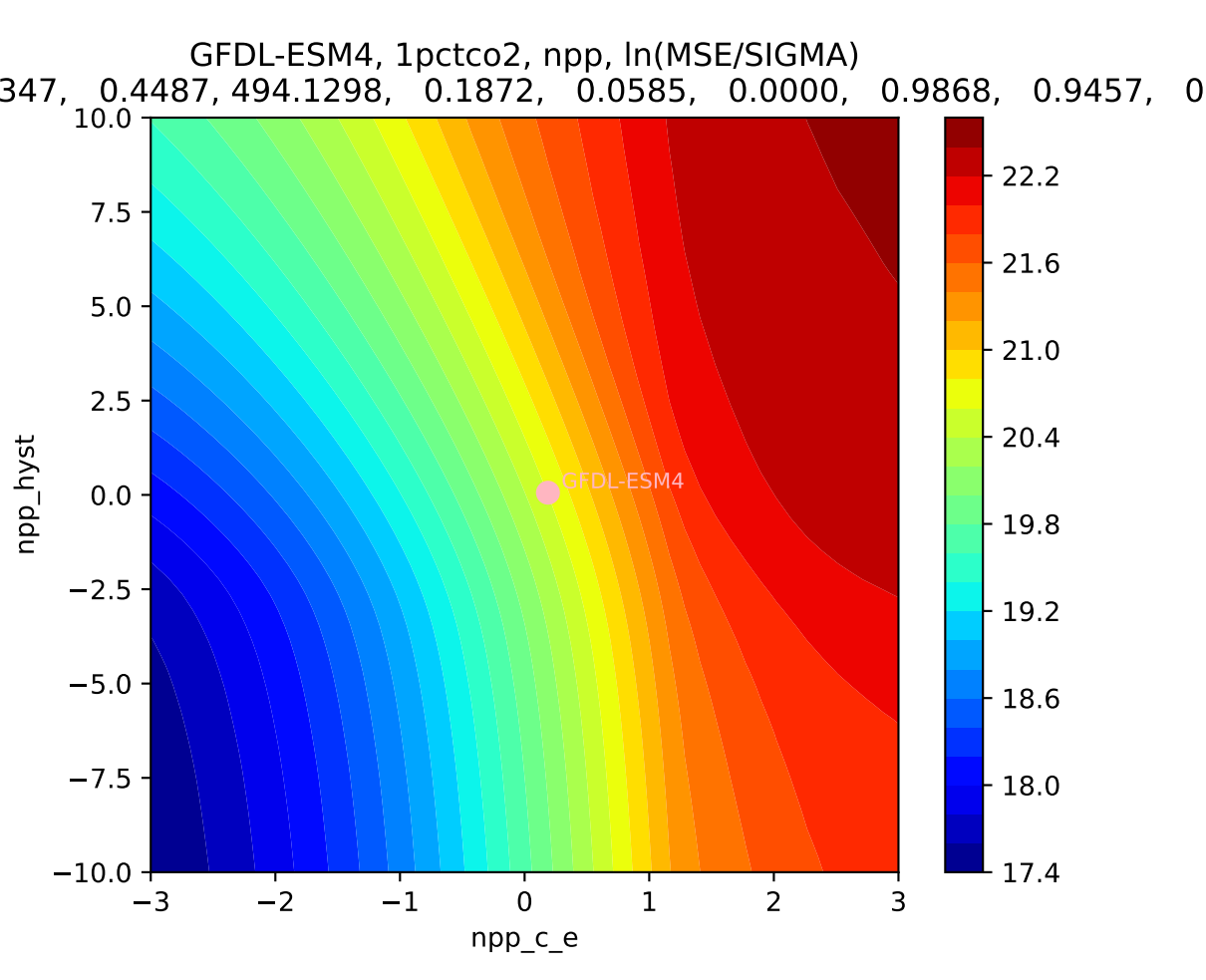

GFDL-ESM4, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
ΔT

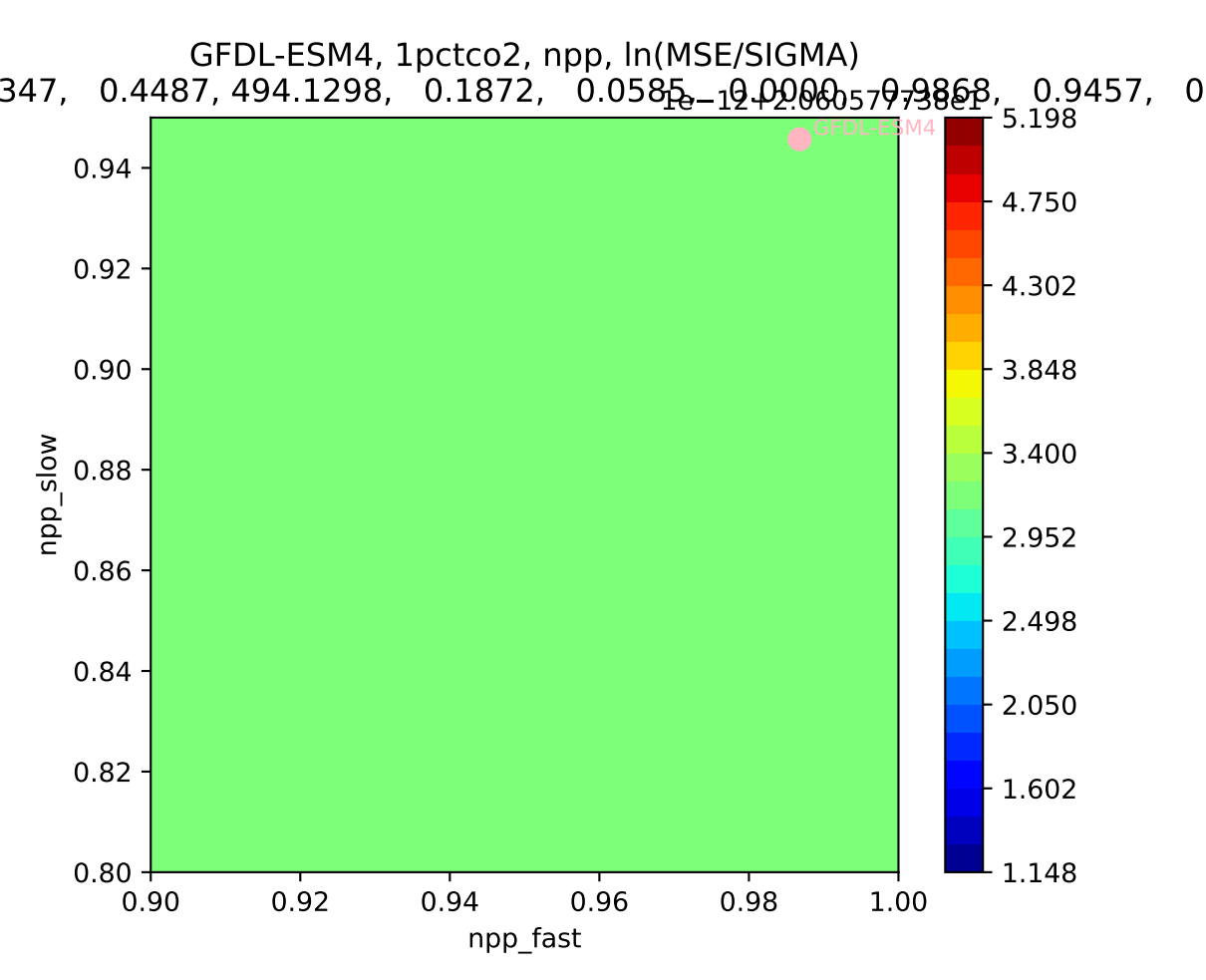

GFDL-ESM4, 1pctco2, npp
ESM
Fit
npp
c_atm

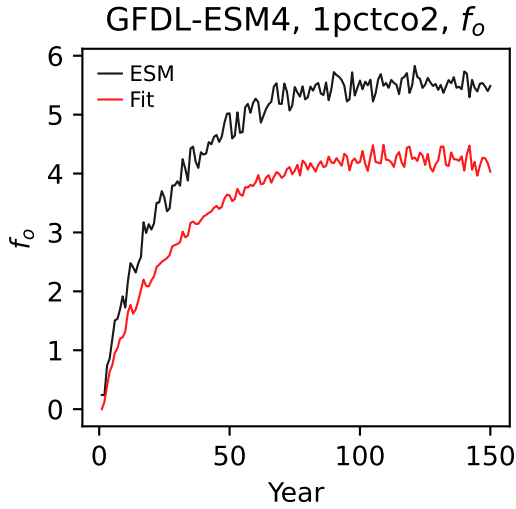

GFDL-ESM4, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
c_atm

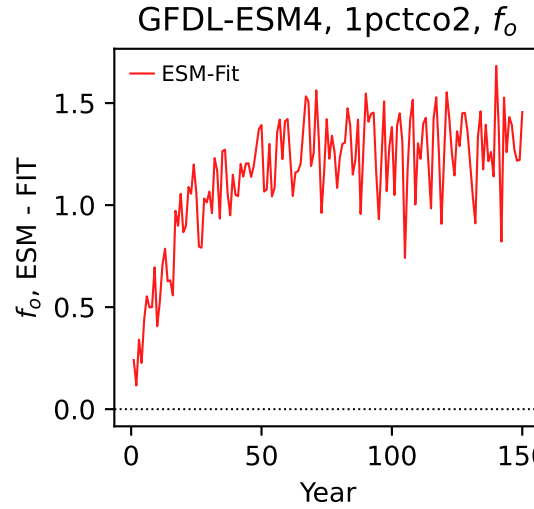

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
347, 0.4487, 494.1298, 0.1872, 0.0585, 0.0000, 0.9868, 0.9457, 0
GFDL-ESM4
npp_t_e
npp_t_l
4
3
2
1
0
−1
−2
−3
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
22.0
21.2
20.4
19.6
18.8
18.0
17.2
16.4

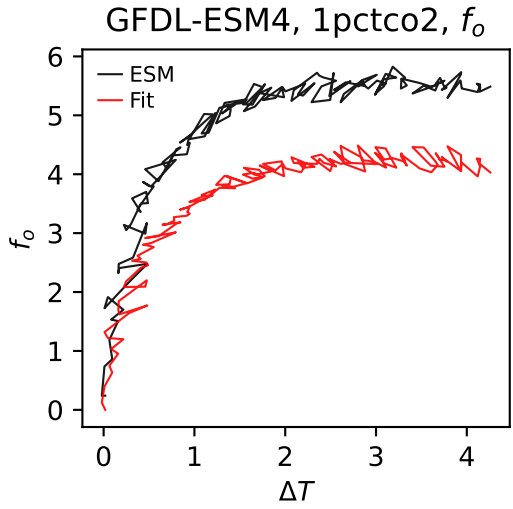

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
347, 0.4487, 494.1298, 0.1872, 0.0585, 0.0000, 0.9868, 0.9457, 0
2000
1750
1500
1250
1000
750
500
250
0
npp_c_half
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
npp_c_l
GFDL-ESM4
21.45
21.00
20.55
20.10
19.65
19.20
18.75
18.30
17.85
17.40

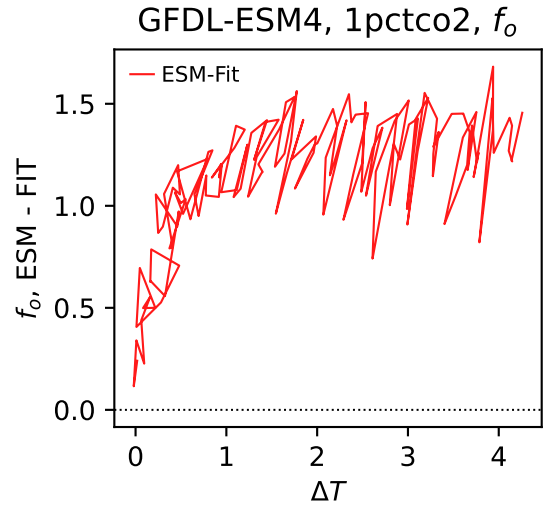

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
347, 0.4487, 494.1298, 0.1872, 0.0585, 0.0000, 0.9868, 0.9457, 0
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
npp_hyst
GFDL-ESM4
−3
−2
−1
0
1
2
3
npp_c_e
22.2
21.6
21.0
20.4
19.8
19.2
18.6
18.0
17.4

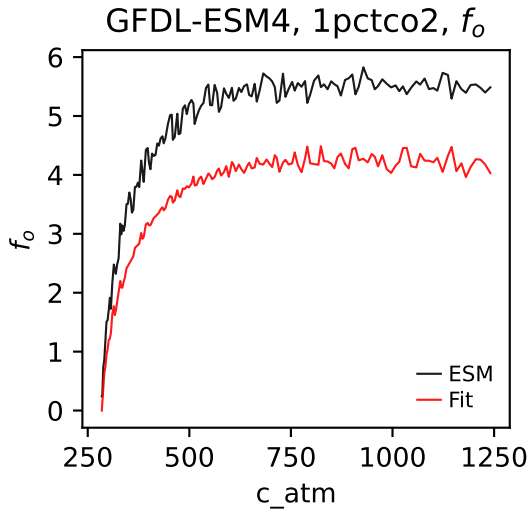

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
347, 0.4487, 494.1298, 0.1872, 0.0585, 0.0000, 0.9868, 0.9457, 0
1e−12+2.0605773861
GFDL-ESM4
5.198
4.750
4.302
3.848
3.400
2.952
2.498
2.050
1.602
1.148
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
npp_slow
0.90
0.92
0.94
0.96
0.98
1.00
npp_fast

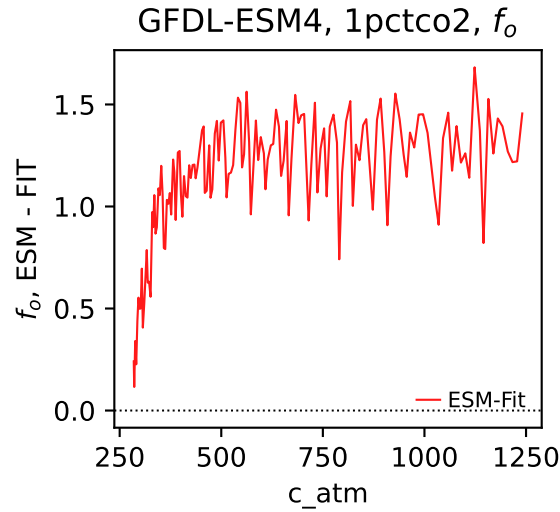

GFDL-ESM4, 1pctco2, f_o
ESM
Fit
f_o
Year

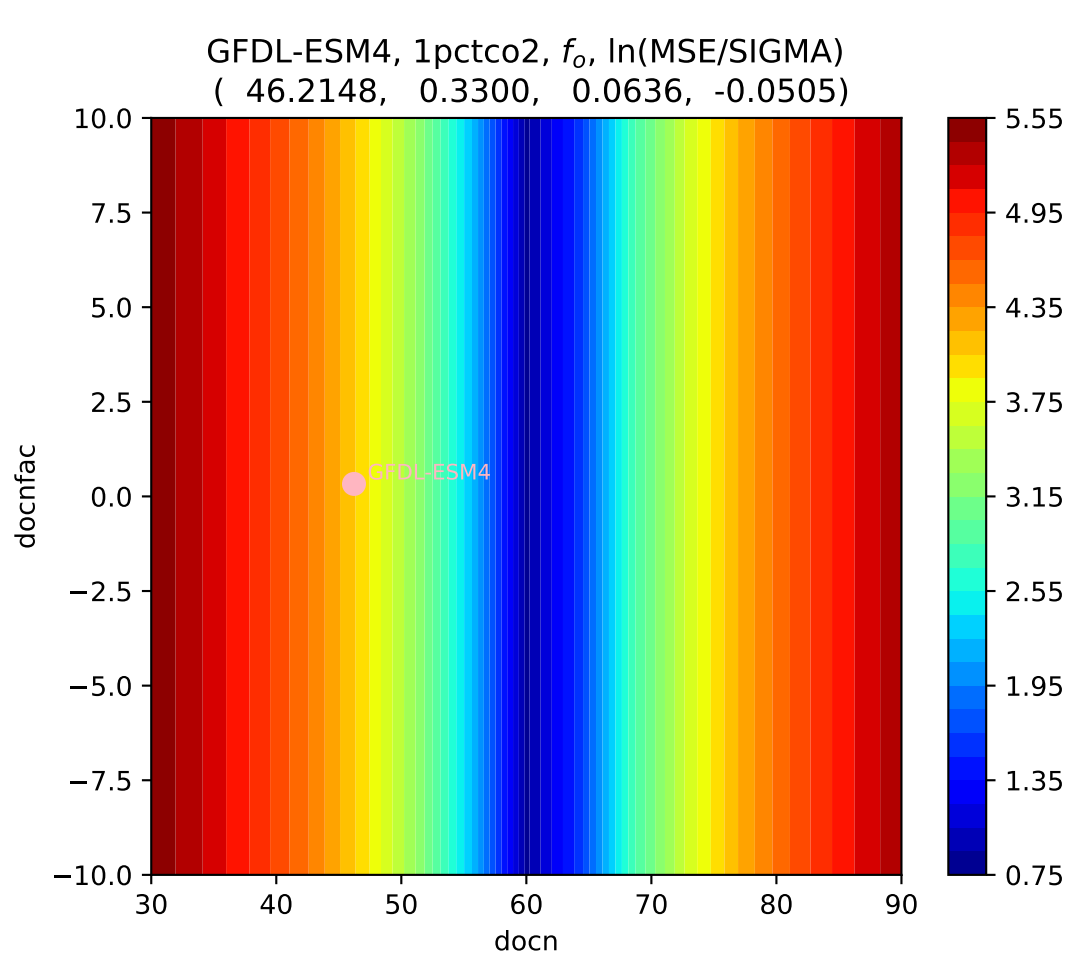

GFDL-ESM4, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
Year

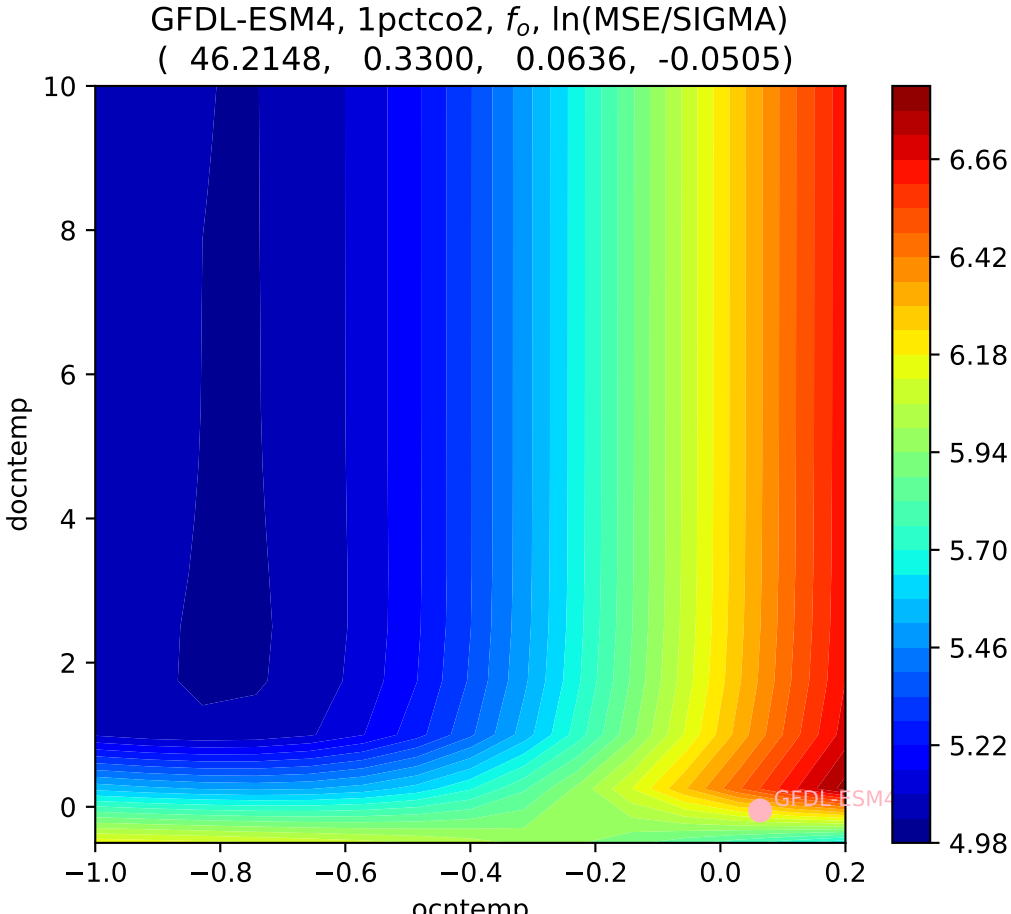

GFDL-ESM4, 1pctco2, f_o
ESM
Fit
f_o
ΔT


GFDL-ESM4, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
ΔT


GFDL-ESM4, 1pctco2, f_o
ESM
Fit
f_o
c_atm


GFDL-ESM4, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
c_atm


GFDL-ESM4, 1pctco2, f_o, ln(MSE/SIGMA)
(46.2148, 0.3300, 0.0636, -0.0505)
GFDL-ESM4
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
5.55
4.95
4.35
3.75
3.15
2.55
1.95
1.35
0.75


GFDL-ESM4, 1pctco2, f_o, ln(MSE/SIGMA)
(46.2148, 0.3300, 0.0636, -0.0505)
10
8
6
4
2
0
docntemp
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
ocntemp
6.66
6.42
6.18
5.94
5.70
5.46
5.22
4.98
GFDL-ESM4