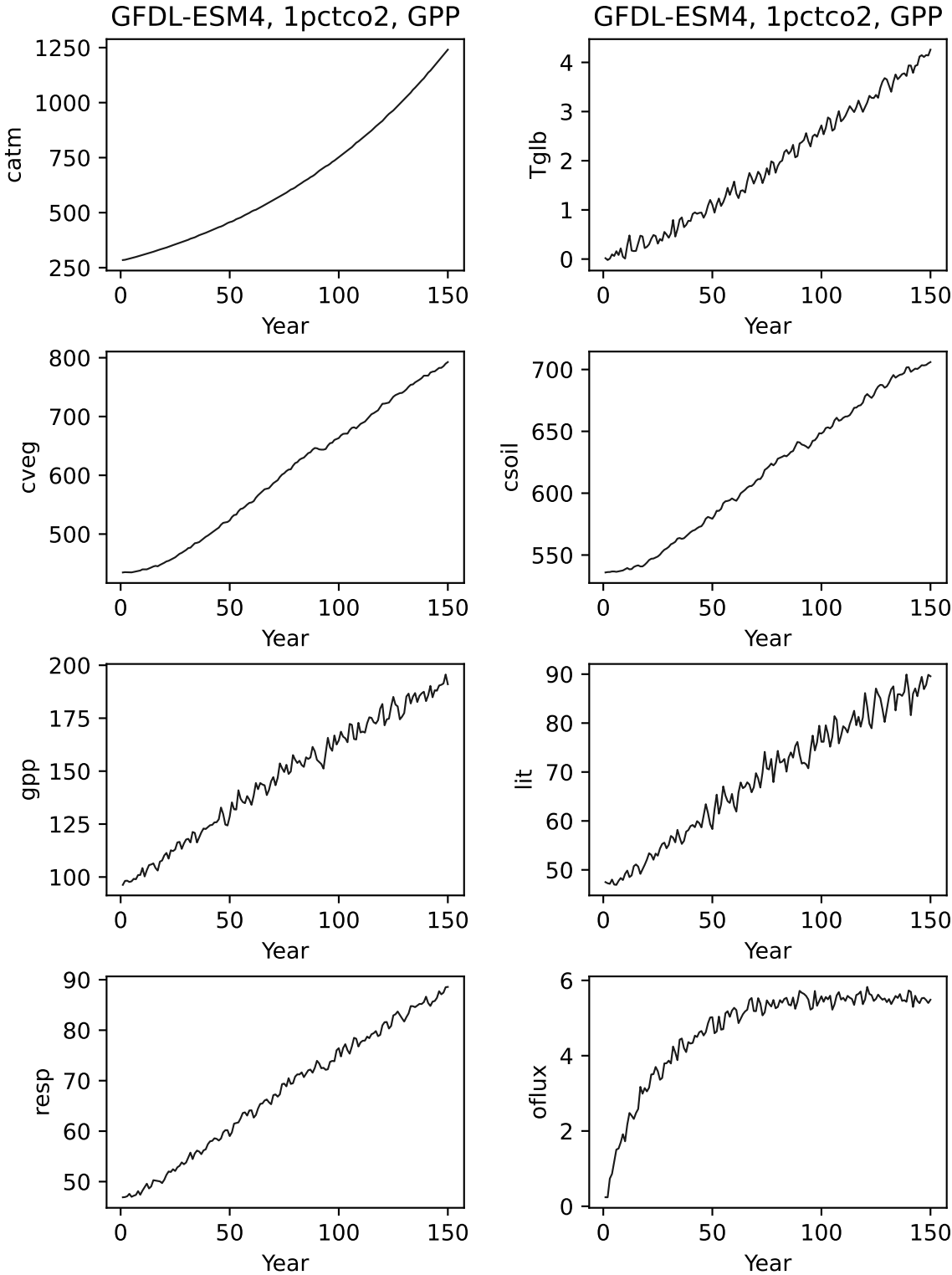
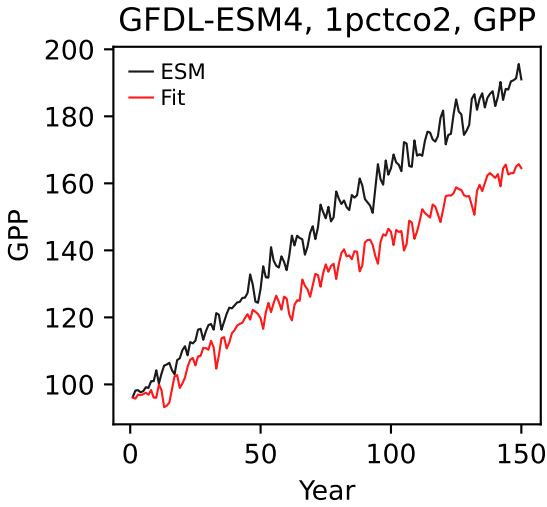
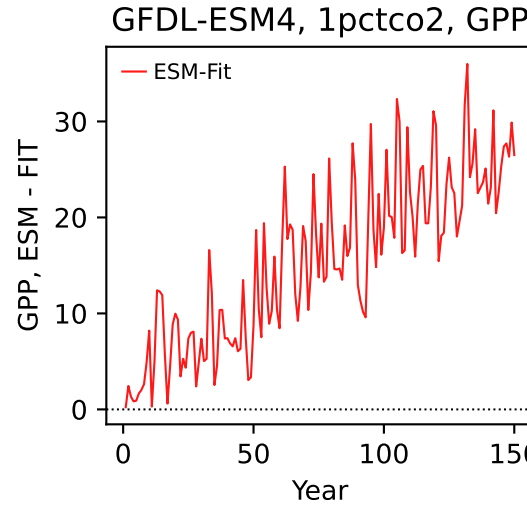
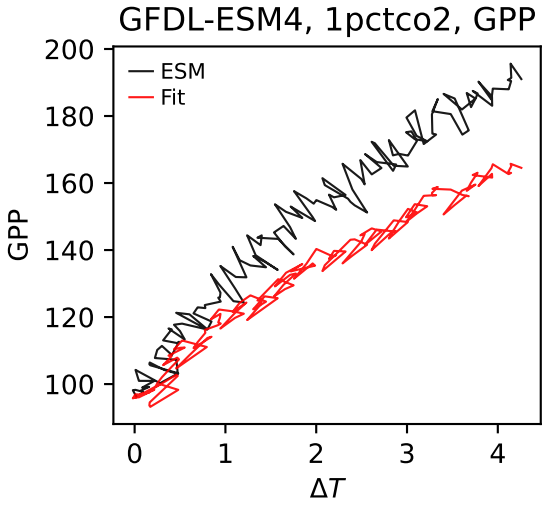
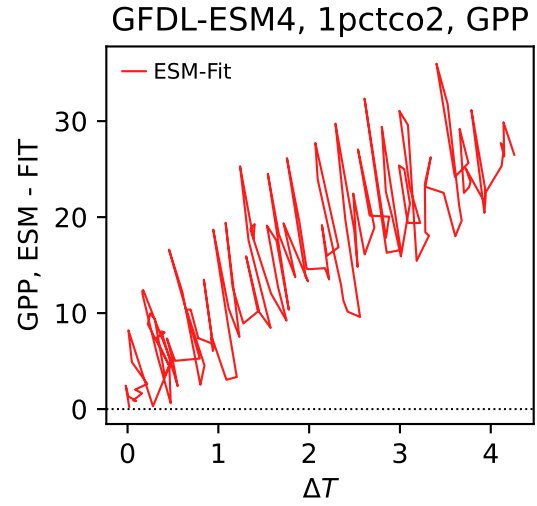
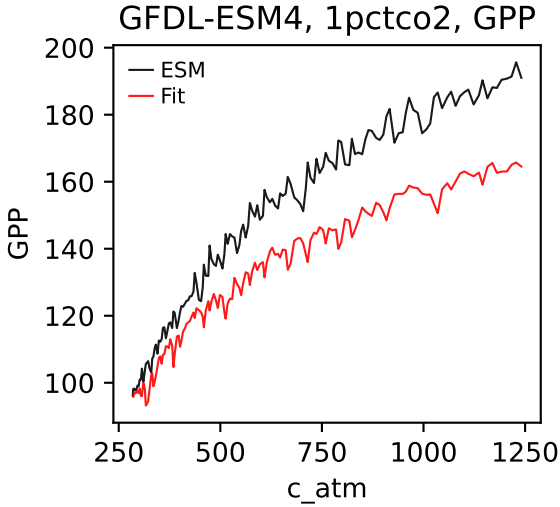

GFDL-ESM4, 1pctco2, GPP
GFDL-ESM4, 1pctco2, GPP
catm
Tglb
cveg
csoil
gpp
lit
resp
oflux
Year

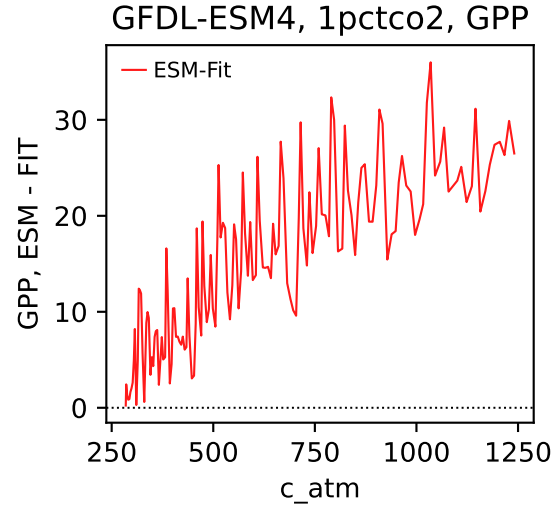

GFDL-ESM4, 1pctco2, GPP
ESM
Fit
GPP
Year

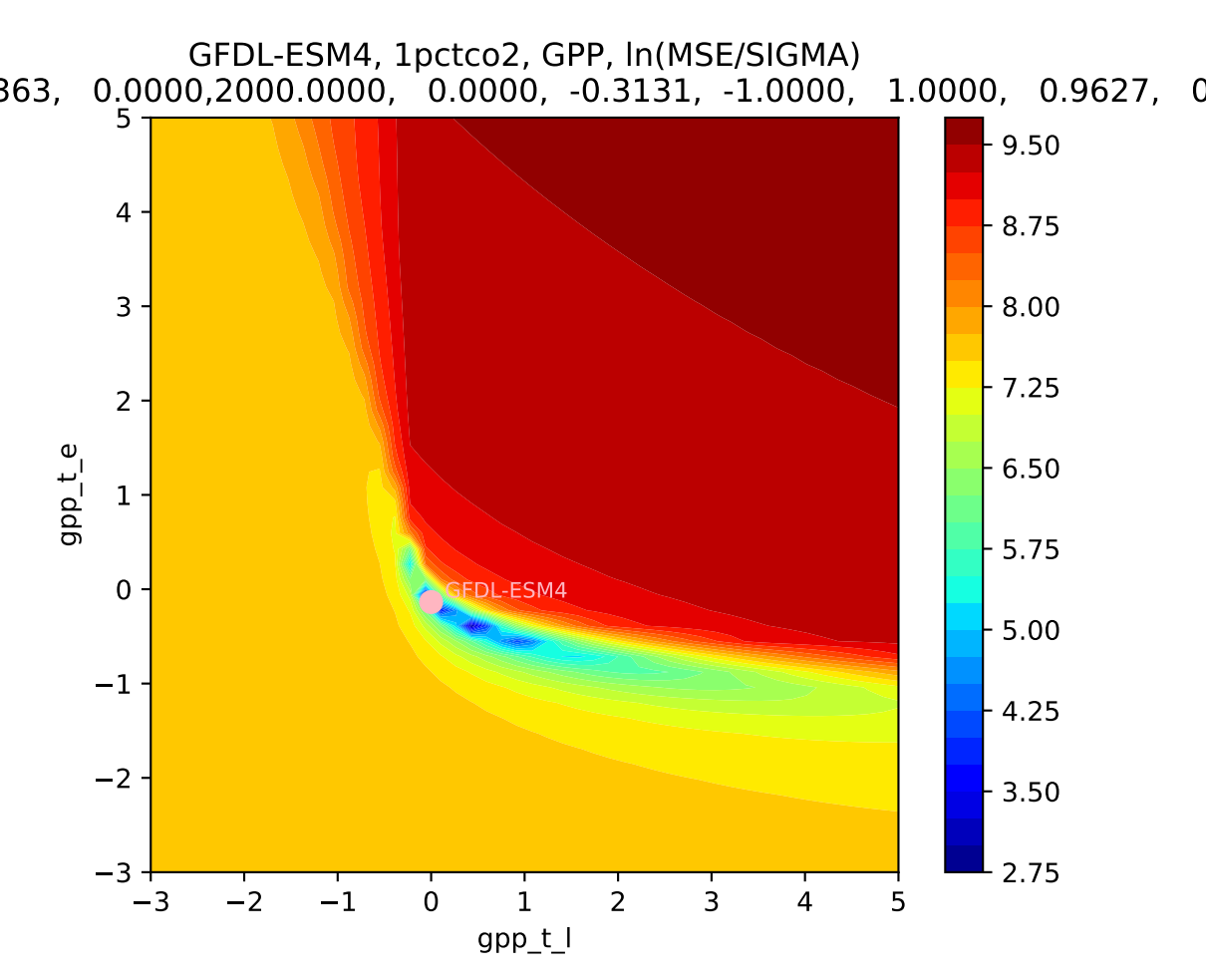

GFDL-ESM4, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
Year

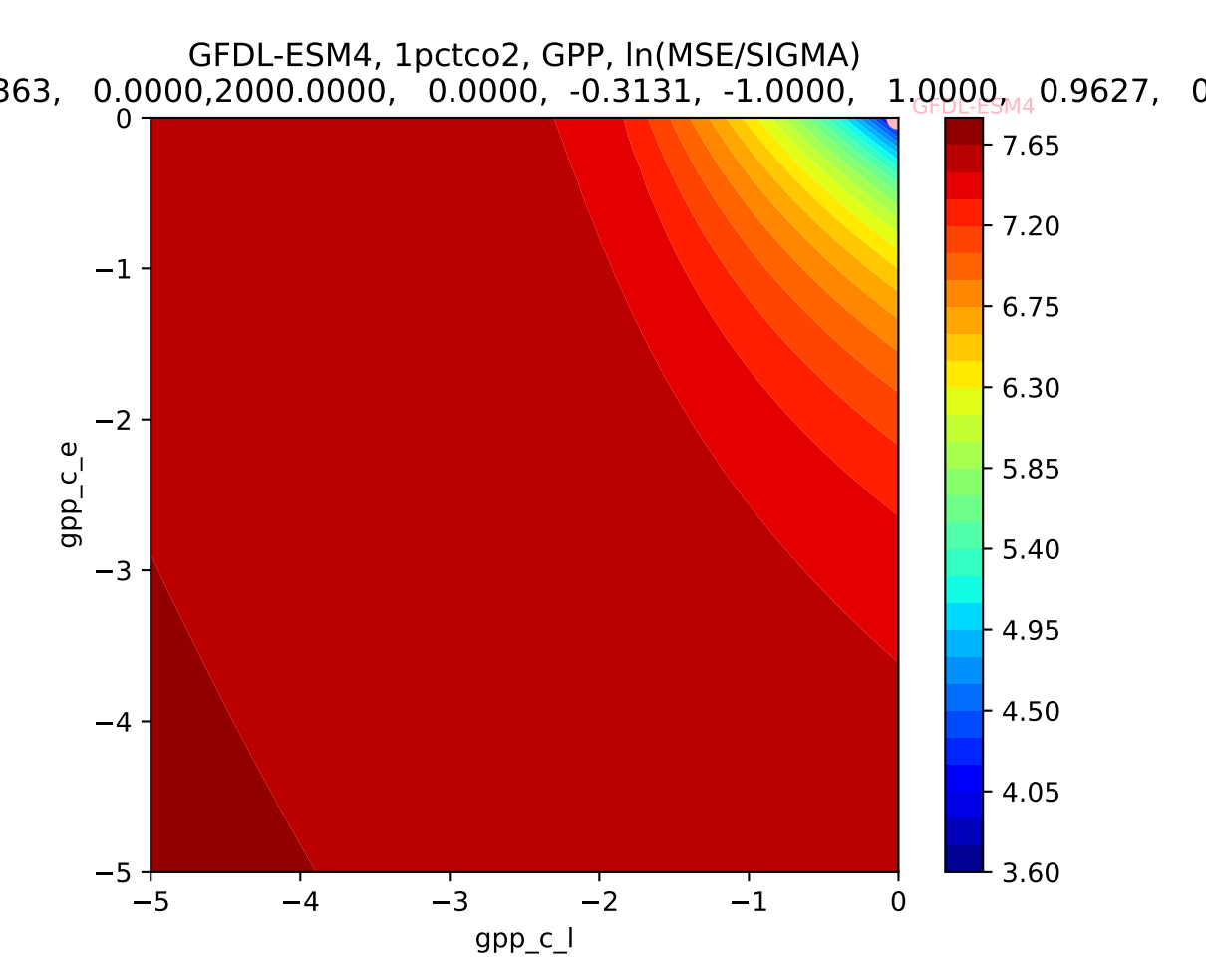

GFDL-ESM4, 1pctco2, GPP
ESM
Fit
GPP
ΔT

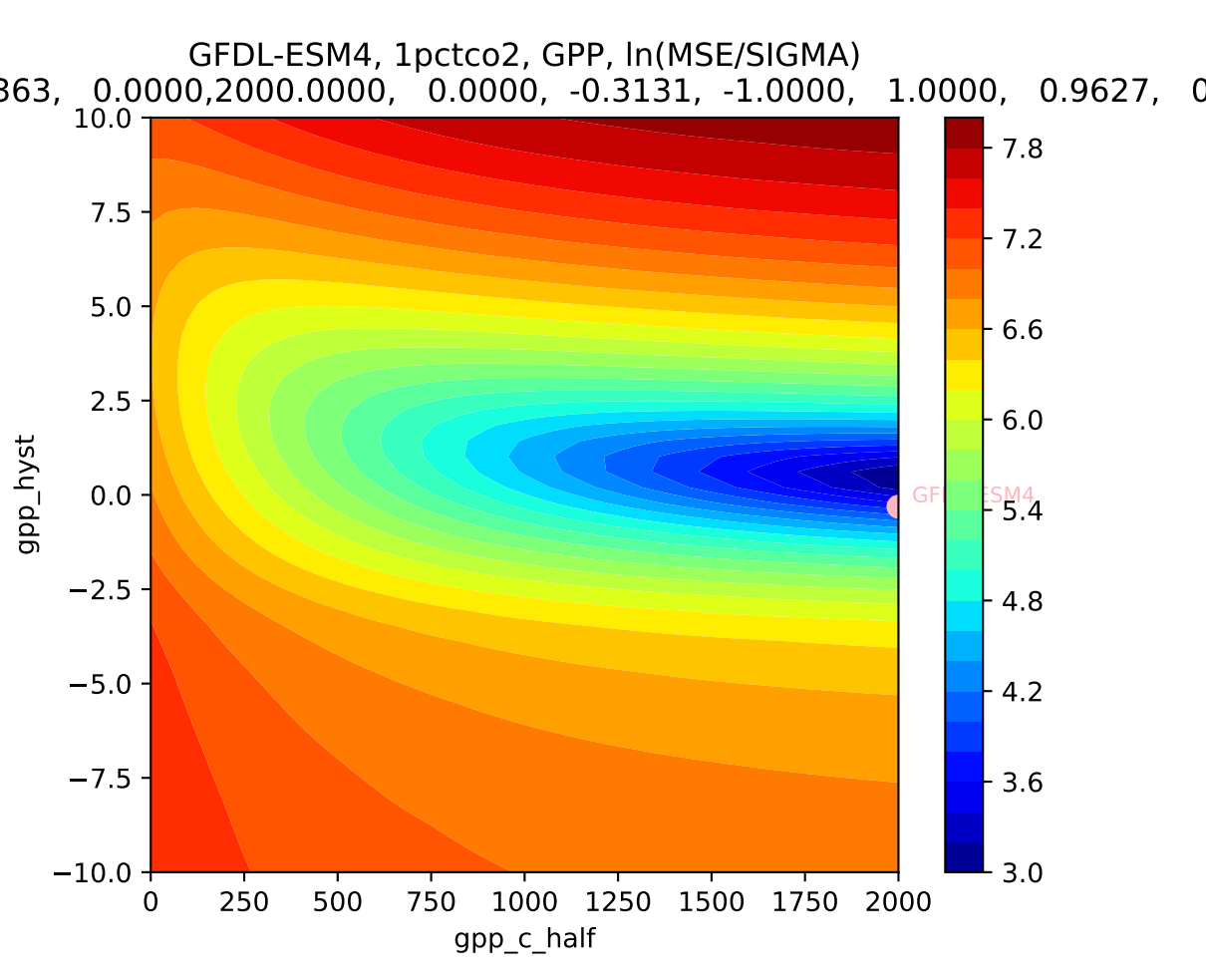

GFDL-ESM4, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

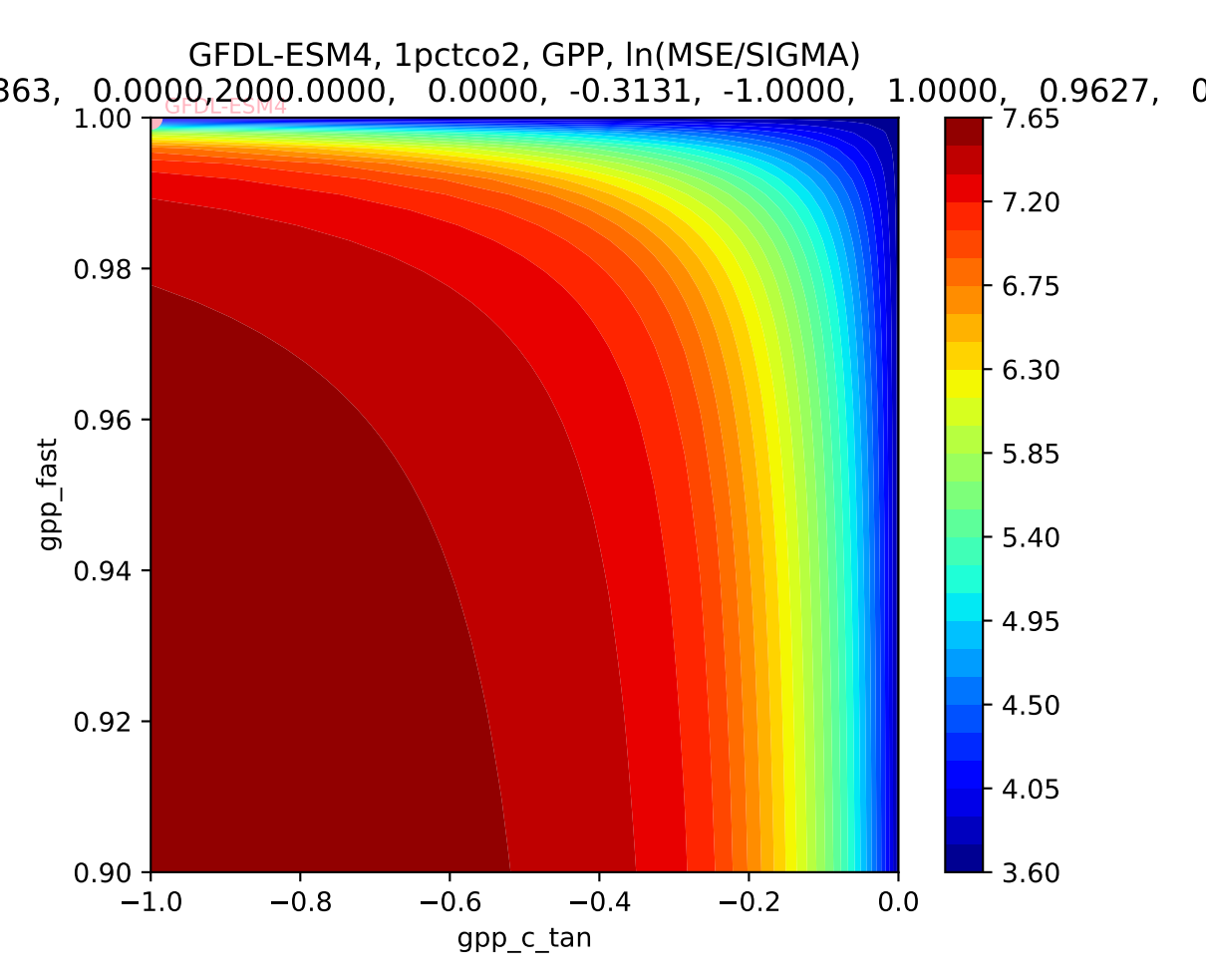

GFDL-ESM4, 1pctco2, GPP
ESM
Fit
GPP
c_atm

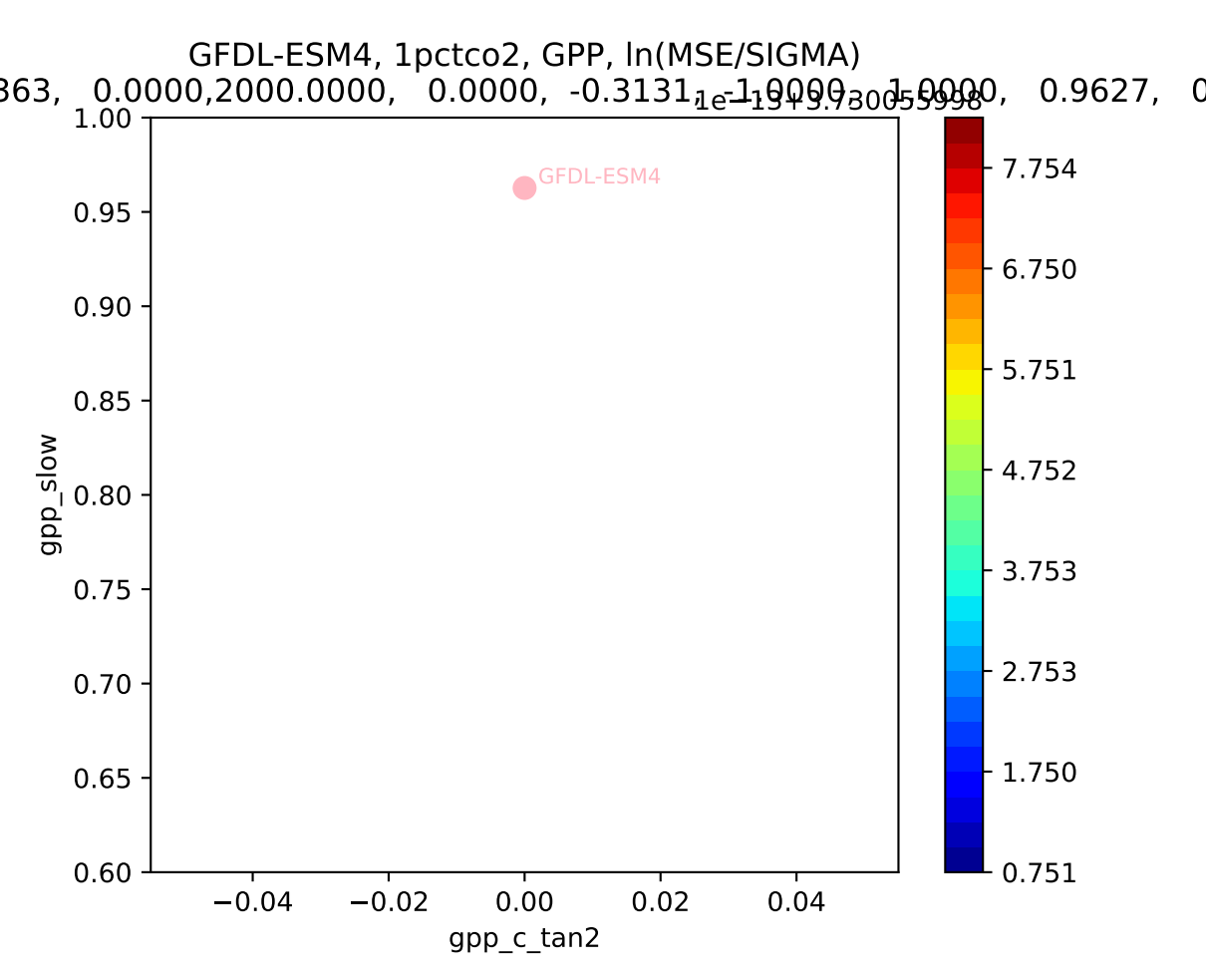

GFDL-ESM4, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

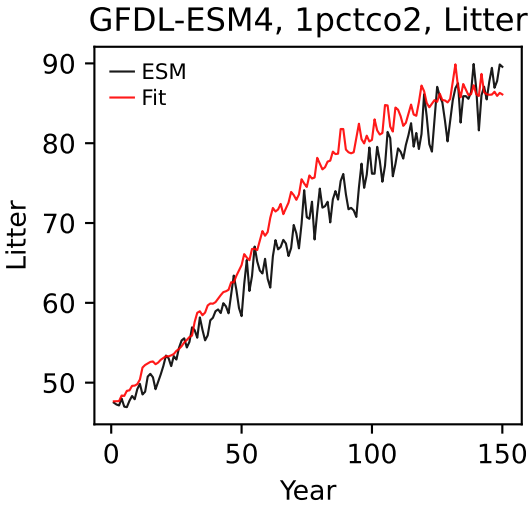

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
363, 0.0000,2000.0000, 0.0000, -0.3131, -1.0000, 1.0000, 0.9627, 0
GFDL-ESM4
gpp_t_e
gpp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
9.50
8.75
8.00
7.25
6.50
5.75
5.00
4.25
3.50
2.75

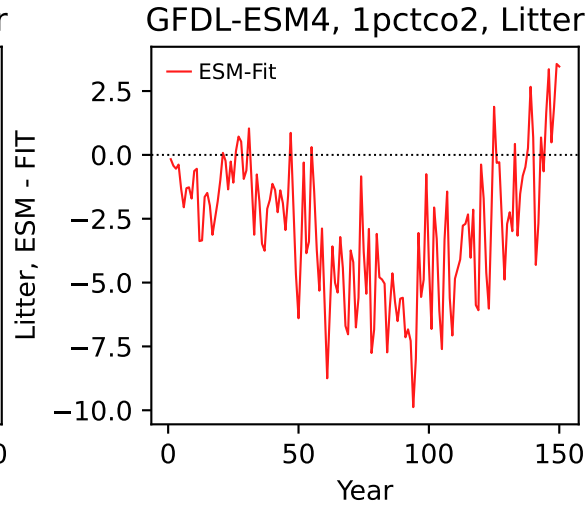

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
363, 0.0000,2000.0000, 0.0000, -0.3131, -1.0000, 1.0000, 0.9627, 0
GFDL-ESM4
gpp_c_e
gpp_c_l
0
−1
−2
−3
−4
−5
7.65
7.20
6.75
6.30
5.85
5.40
4.95
4.50
4.05
3.60

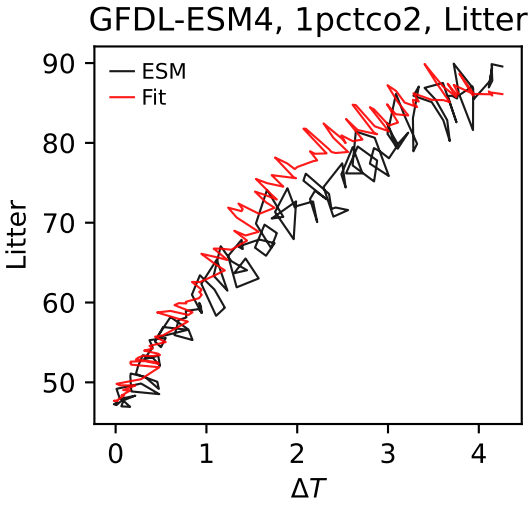

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
363, 0.0000,2000.0000, 0.0000, -0.3131, -1.0000, 1.0000, 0.9627, 0
gpp_hyst
gpp_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
7.8
7.2
6.6
6.0
5.4
4.8
4.2
3.6
3.0

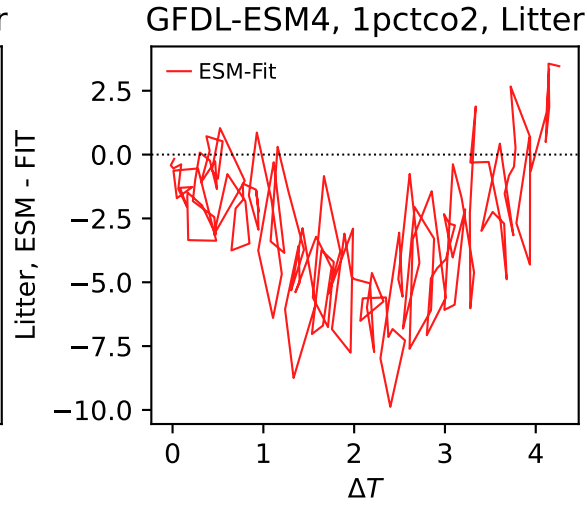

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
363, 0.0000,2000.0000, 0.0000, -0.3131, -1.0000, 1.0000, 0.9627, 0
GFDL-ESM4
1.00
0.98
0.96
0.94
0.92
0.90
gpp_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
gpp_c_tan
7.65
7.20
6.75
6.30
5.85
5.40
4.95
4.50
4.05
3.60

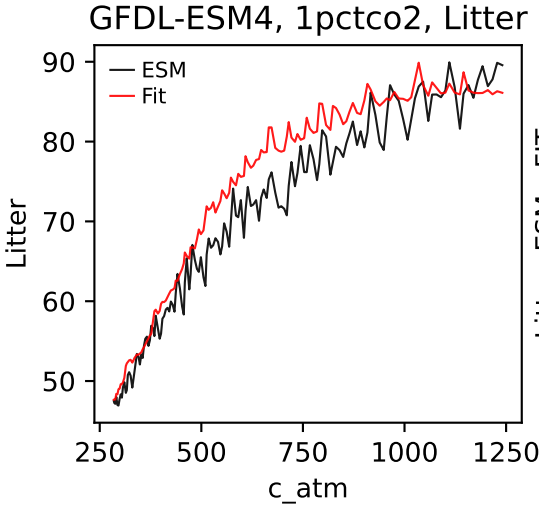

GFDL-ESM4, 1pctco2, GPP, ln(MSE/SIGMA)
363, 0.0000,2000.0000, 0.0000, -0.3131, -1.0000, 1.0000, 0.9627, 0
1e−15+3.730055998
GFDL-ESM4
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
gpp_slow
−0.04
−0.02
0.00
0.02
0.04
gpp_c_tan2
7.754
6.750
5.751
4.752
3.753
2.753
1.750
0.751

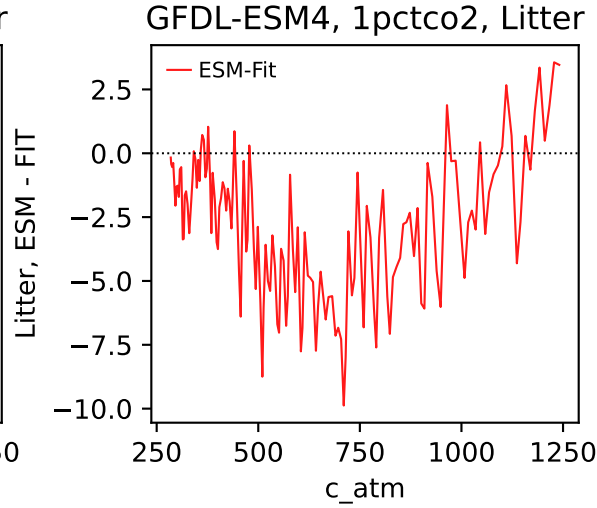

GFDL-ESM4, 1pctco2, Litter
ESM
Fit
Litter
Year

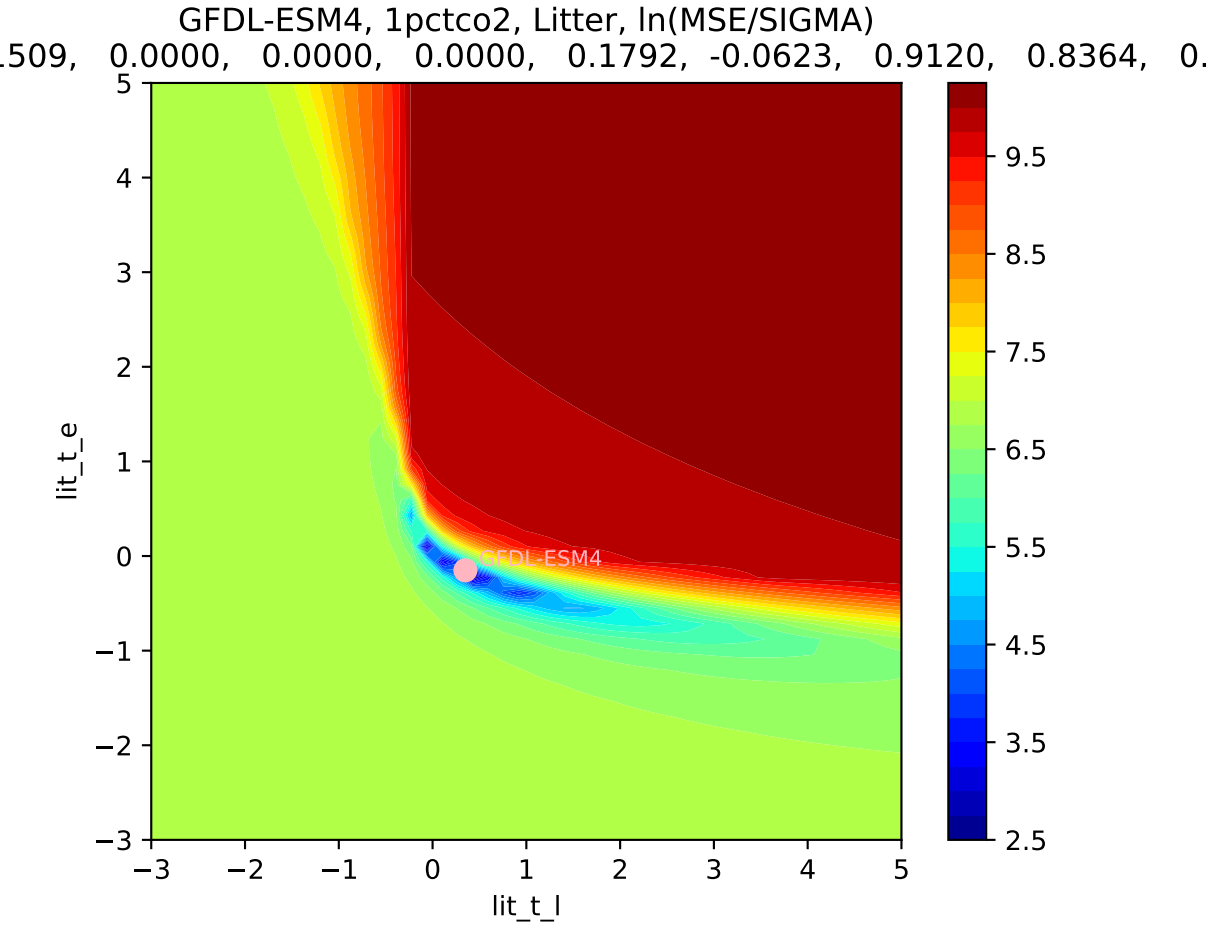

GFDL-ESM4, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
Year

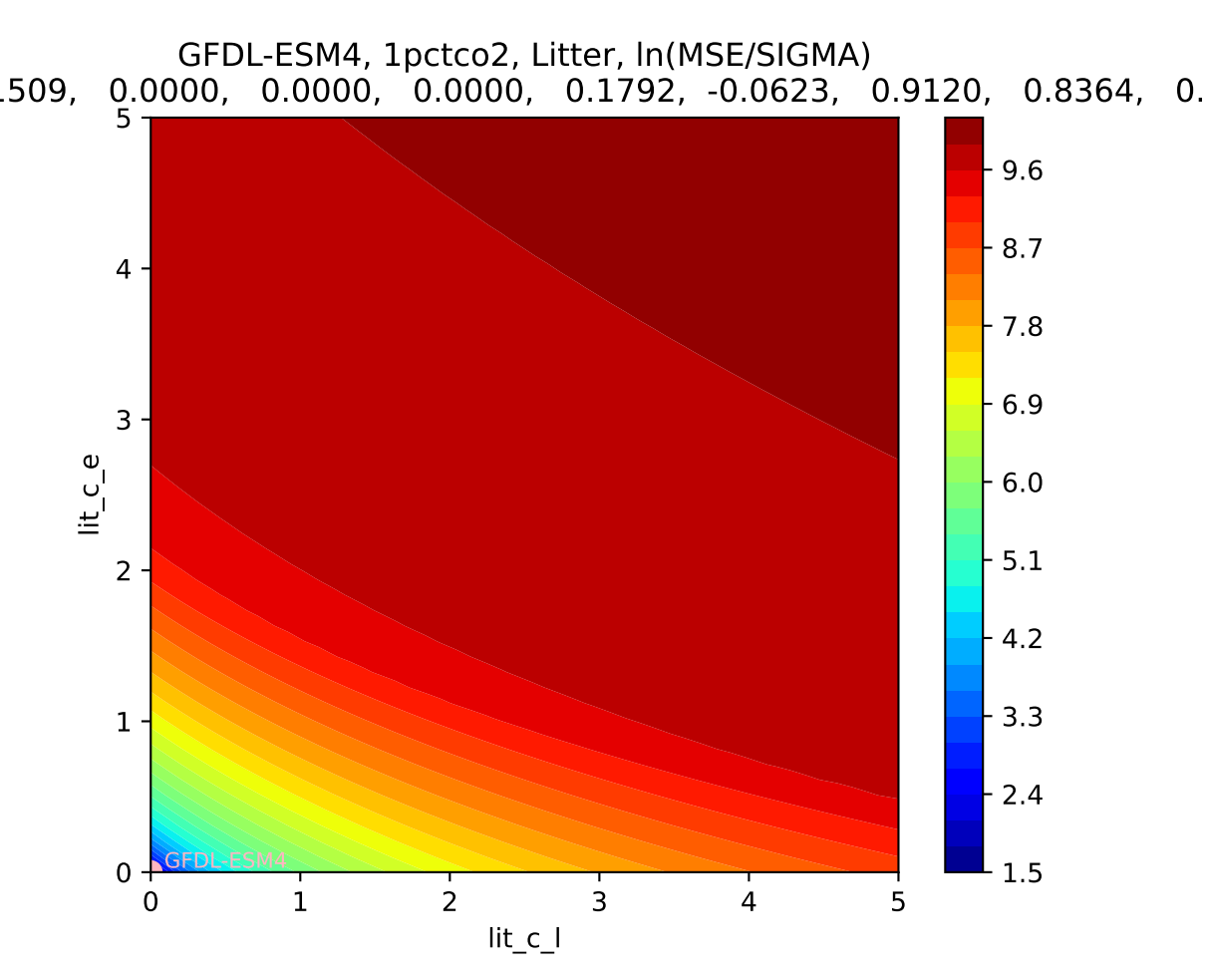

GFDL-ESM4, 1pctco2, Litter
ESM
Fit
Litter
ΔT

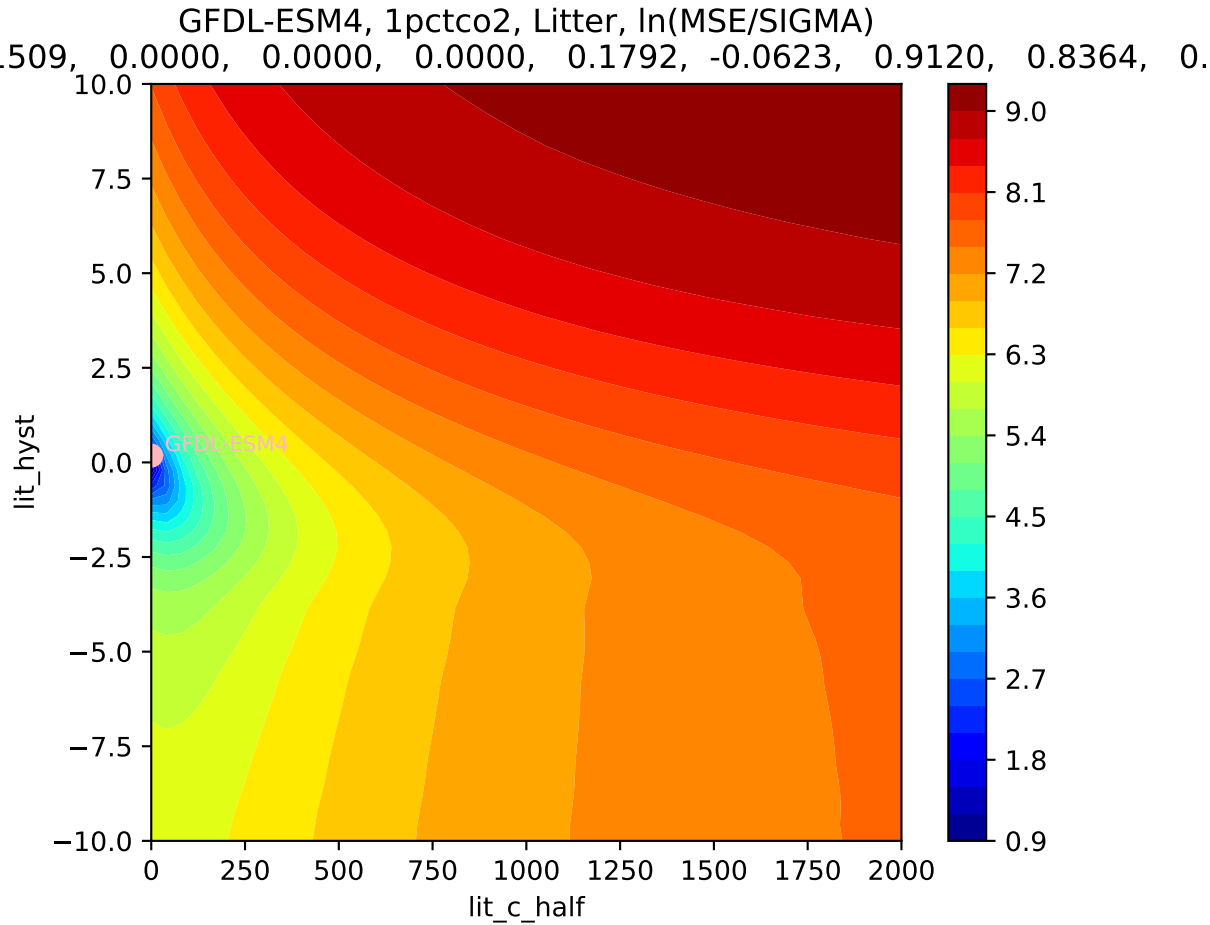

GFDL-ESM4, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
ΔT

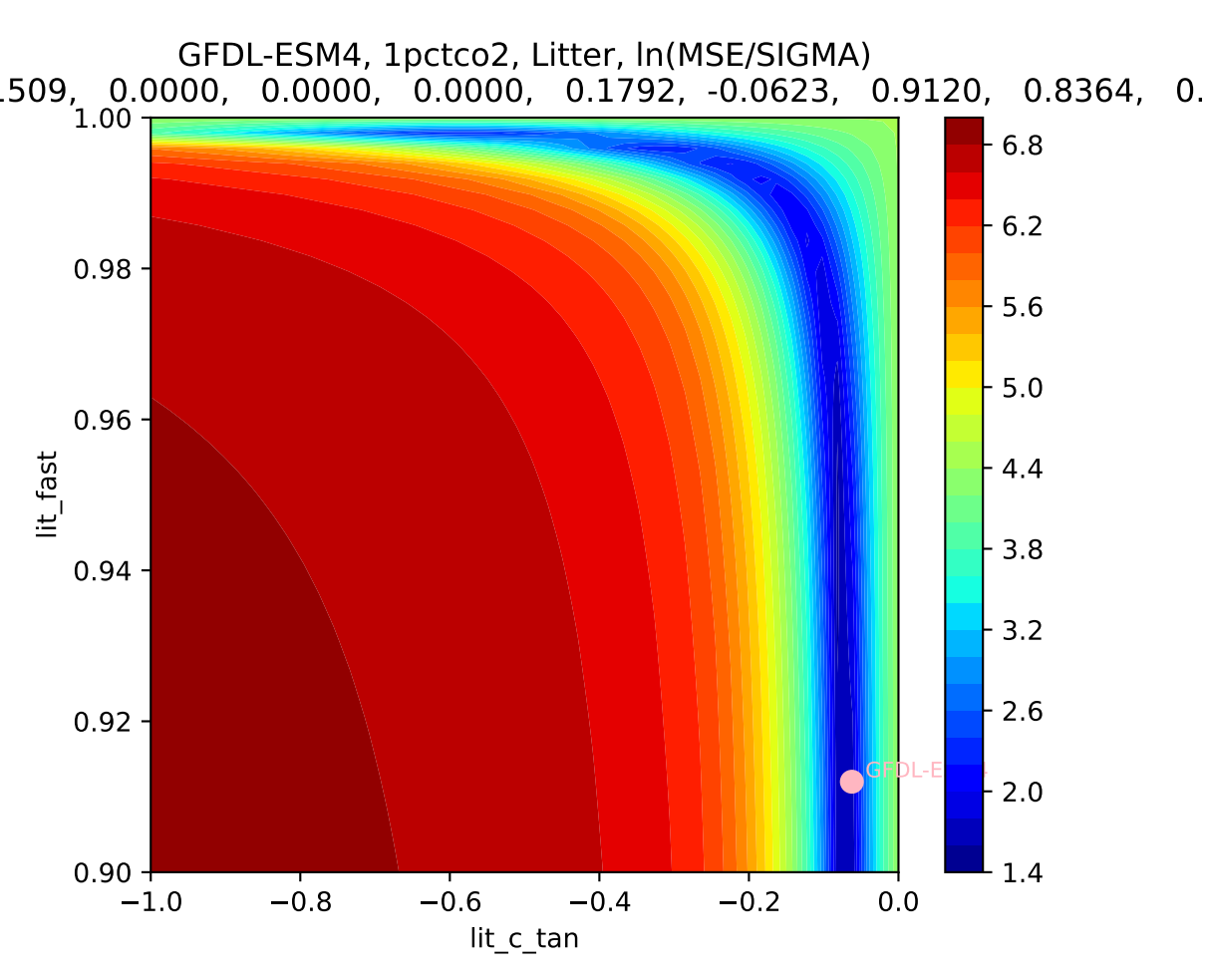

GFDL-ESM4, 1pctco2, Litter
ESM
Fit
Litter
c_atm

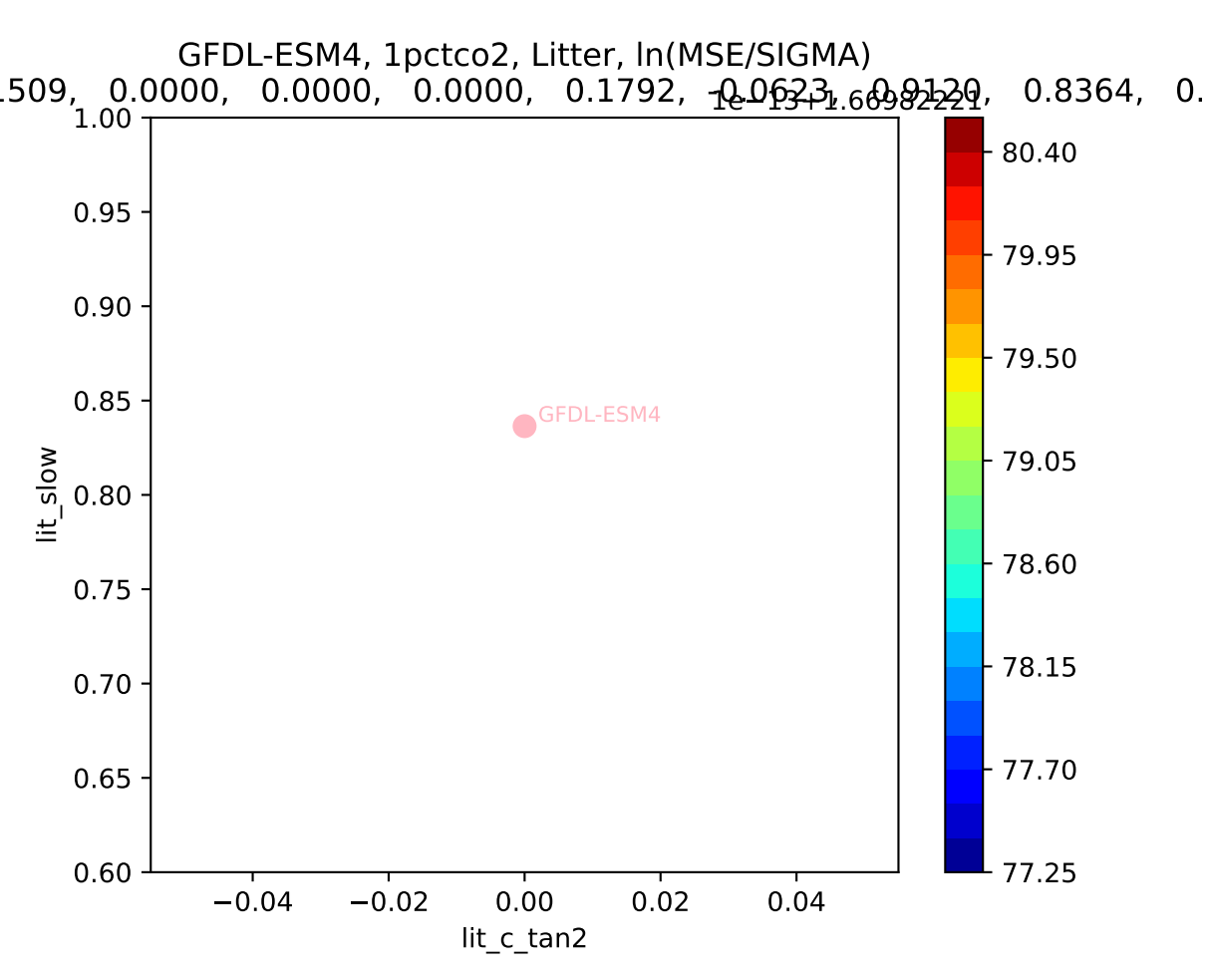

GFDL-ESM4, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
c_atm

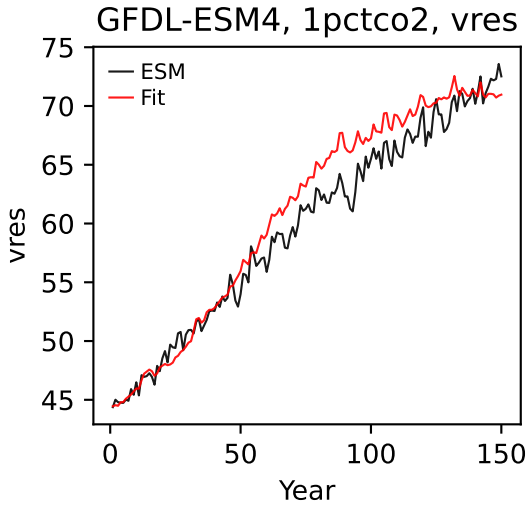

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
1509, 0.0000, 0.0000, 0.0000, 0.1792, -0.0623, 0.9120, 0.8364, 0.
GFDL-ESM4
lit_t_e
lit_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
9.5
8.5
7.5
6.5
5.5
4.5
3.5
2.5

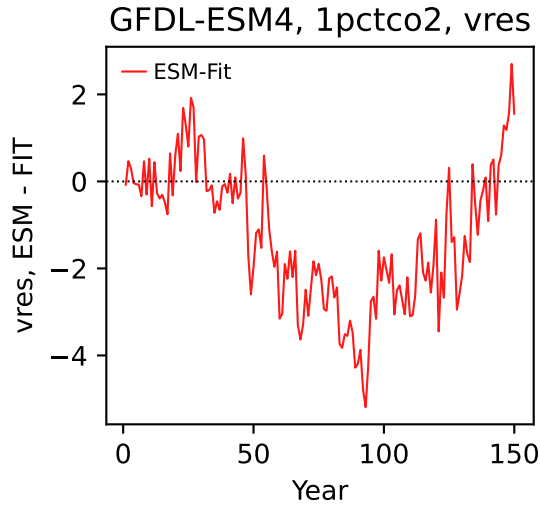

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
1509, 0.0000, 0.0000, 0.0000, 0.1792, -0.0623, 0.9120, 0.8364, 0.
lit_c_e
lit_c_l
0
1
2
3
4
5
9.6
8.7
7.8
6.9
6.0
5.1
4.2
3.3
2.4
1.5
GFDL-ESM4

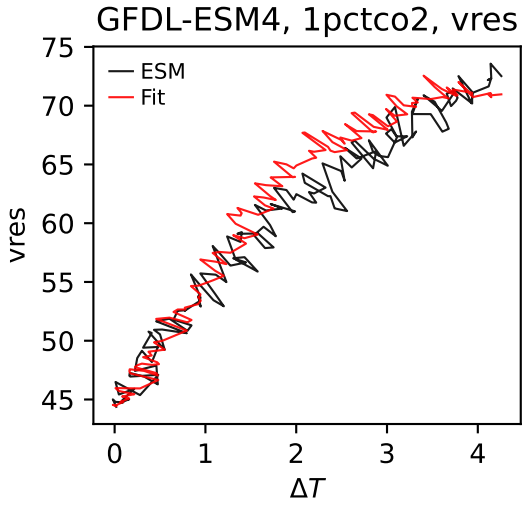

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
1509, 0.0000, 0.0000, 0.0000, 0.1792, -0.0623, 0.9120, 0.8364, 0.
GFDL-ESM4
lit_hyst
lit_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8
0.9

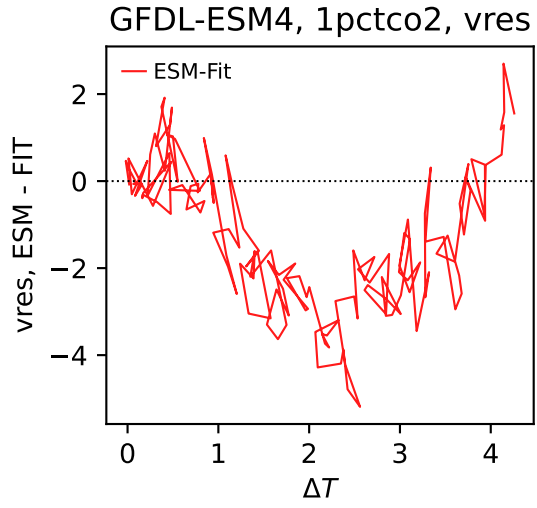

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
1509, 0.0000, 0.0000, 0.0000, 0.1792, -0.0623, 0.9120, 0.8364, 0.
1.00
0.98
0.96
0.94
0.92
0.90
lit_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
lit_c_tan
6.8
6.2
5.6
5.0
4.4
3.8
3.2
2.6
2.0
1.4

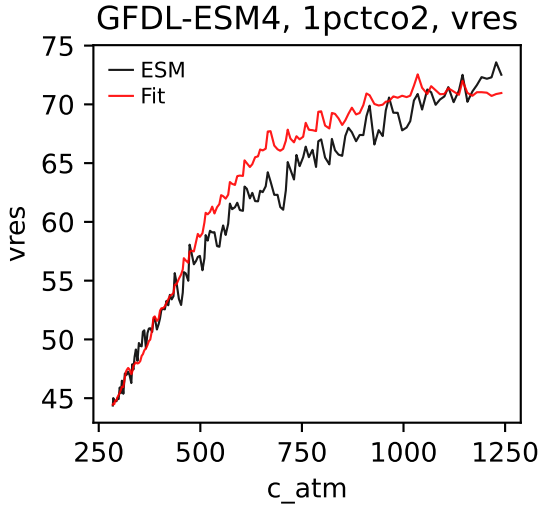

GFDL-ESM4, 1pctco2, Litter, ln(MSE/SIGMA)
1509, 0.0000, 0.0000, 0.0000, 0.1792, −0.0623, 0.9120, 0.8364, 0.
1e−13+1.66982221
GFDL-ESM4
lit_slow
lit_c_tan2
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
−0.04
−0.02
0.00
0.02
0.04
80.40
79.95
79.50
79.05
78.60
78.15
77.70
77.25

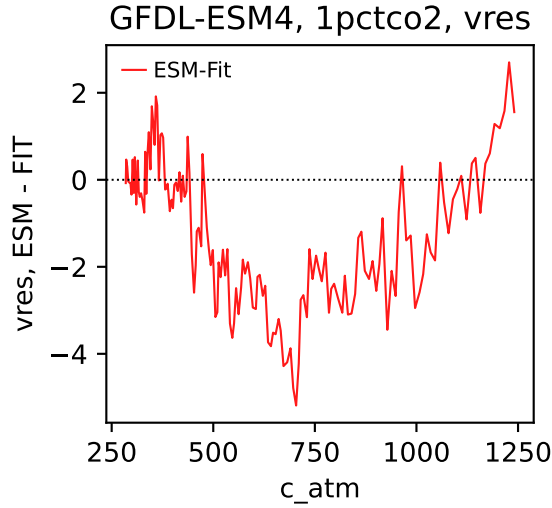

GFDL-ESM4, 1pctco2, vres
ESM
Fit
vres
Year

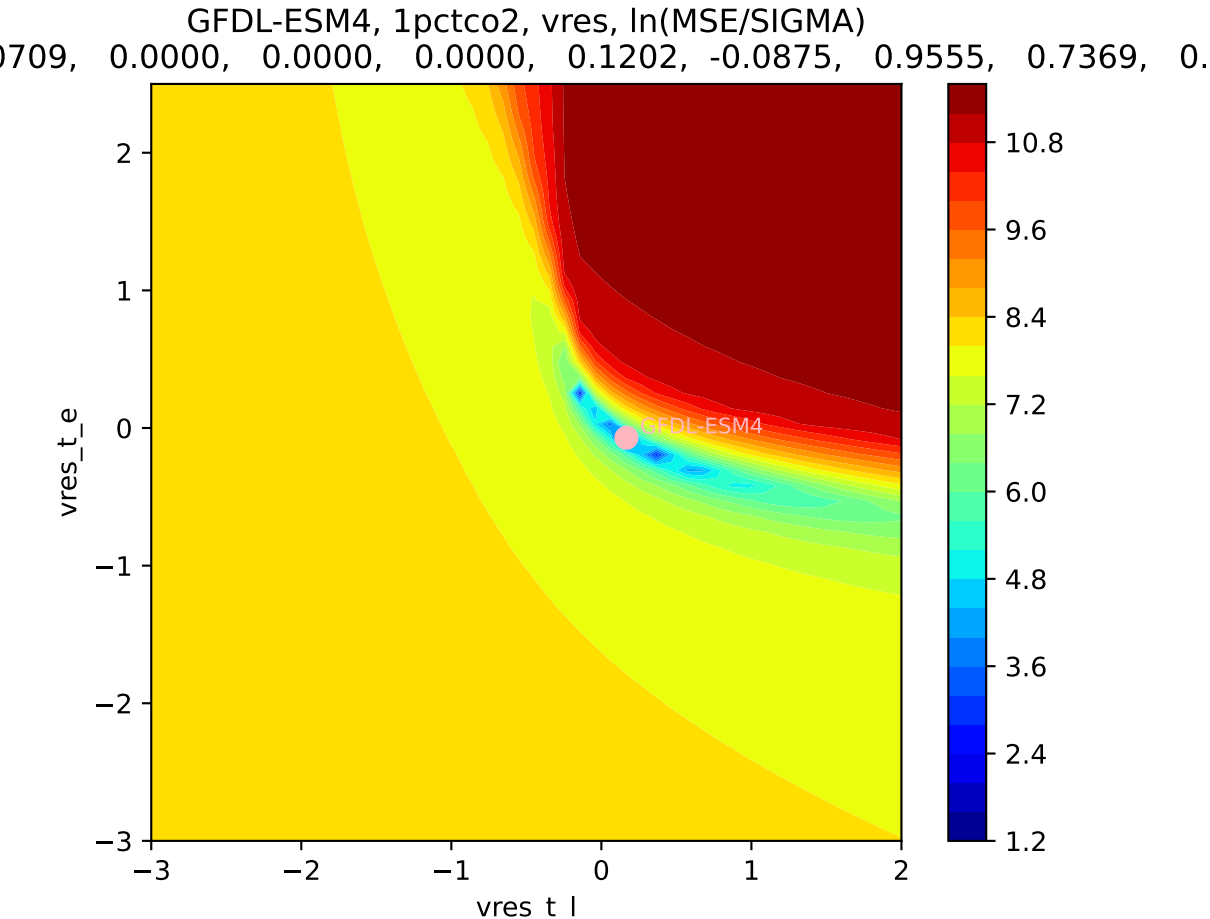

GFDL-ESM4, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
Year

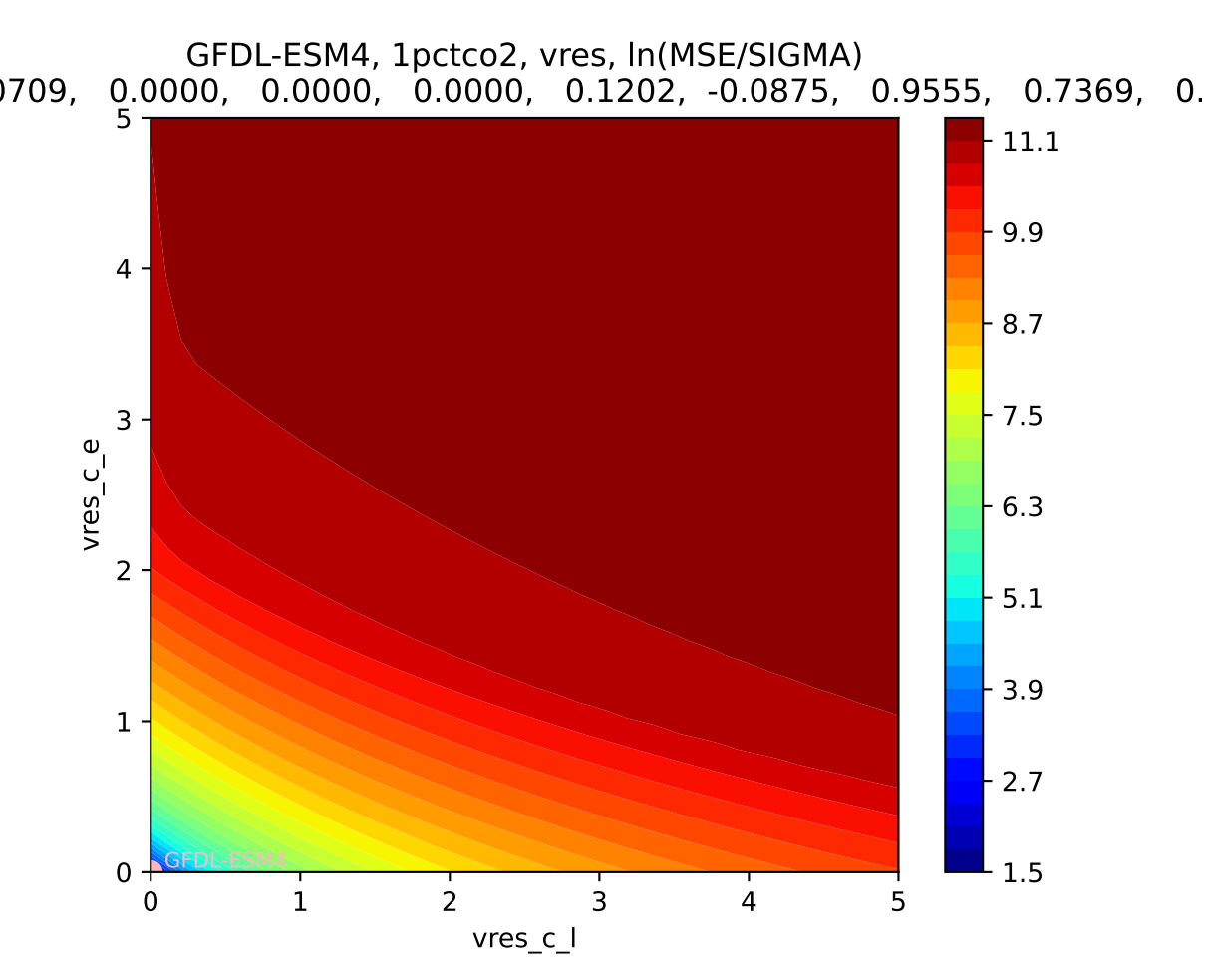

GFDL-ESM4, 1pctco2, vres
ESM
Fit
vres
ΔT

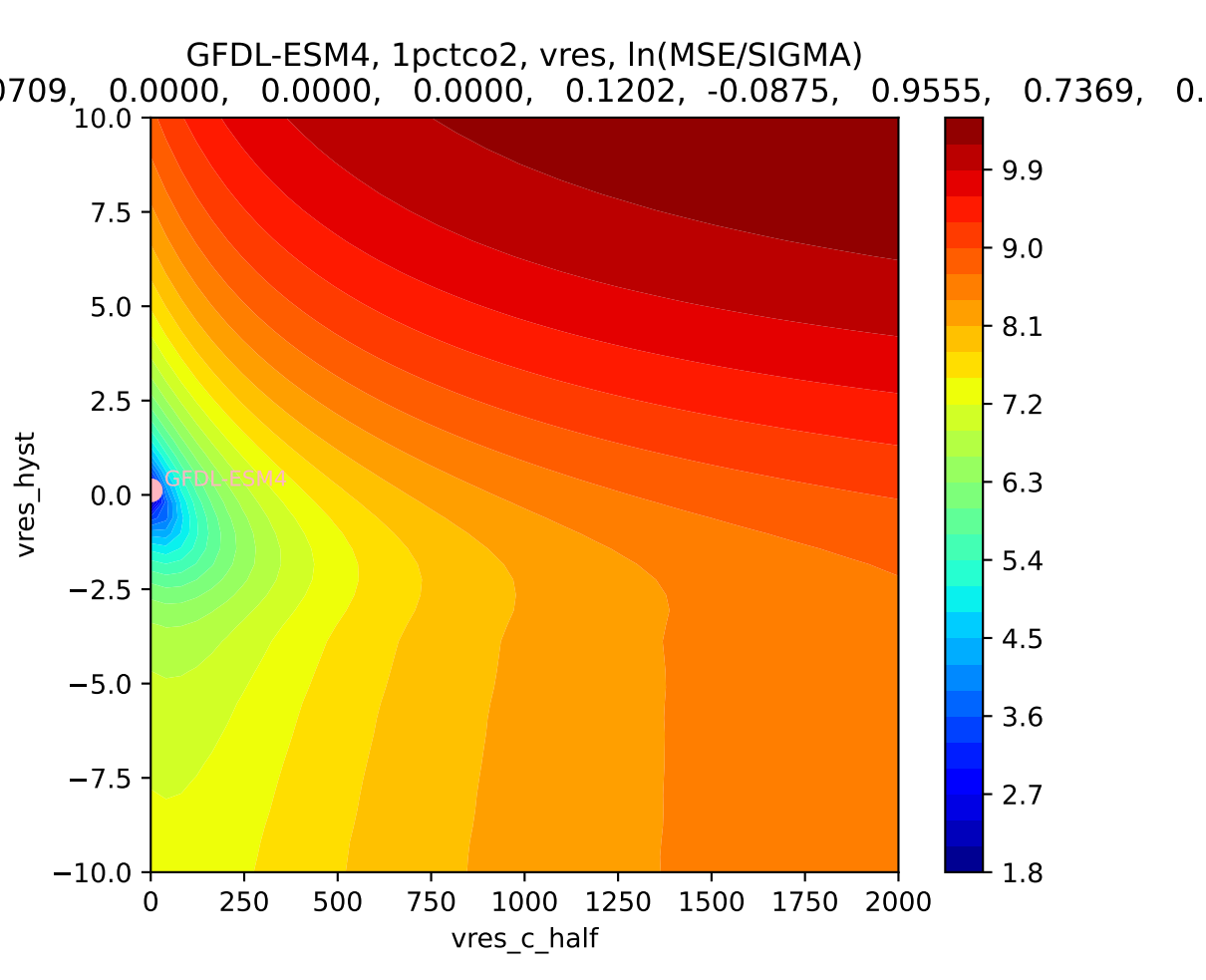

GFDL-ESM4, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
ΔT

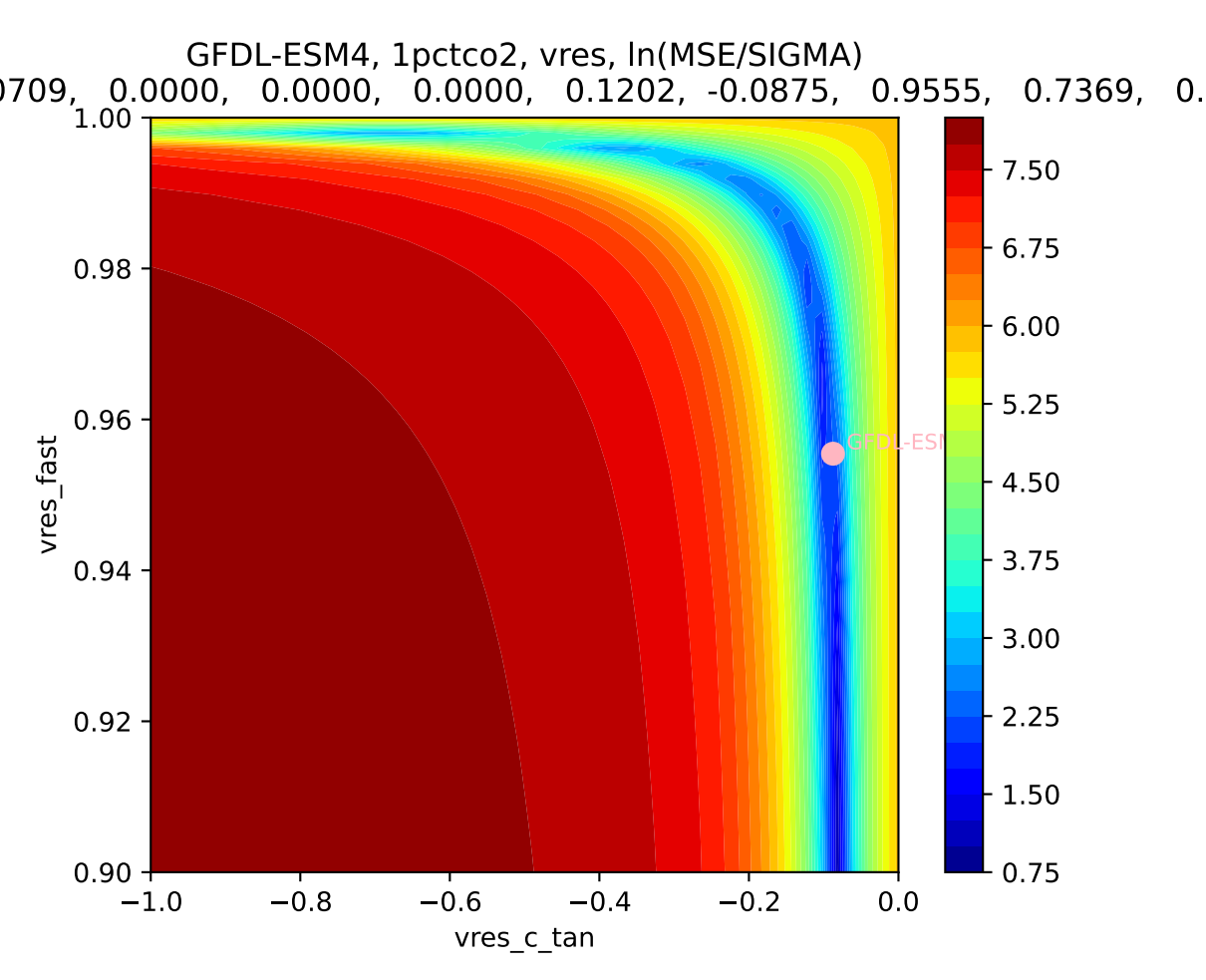

GFDL-ESM4, 1pctco2, vres
ESM
Fit
vres
c_atm

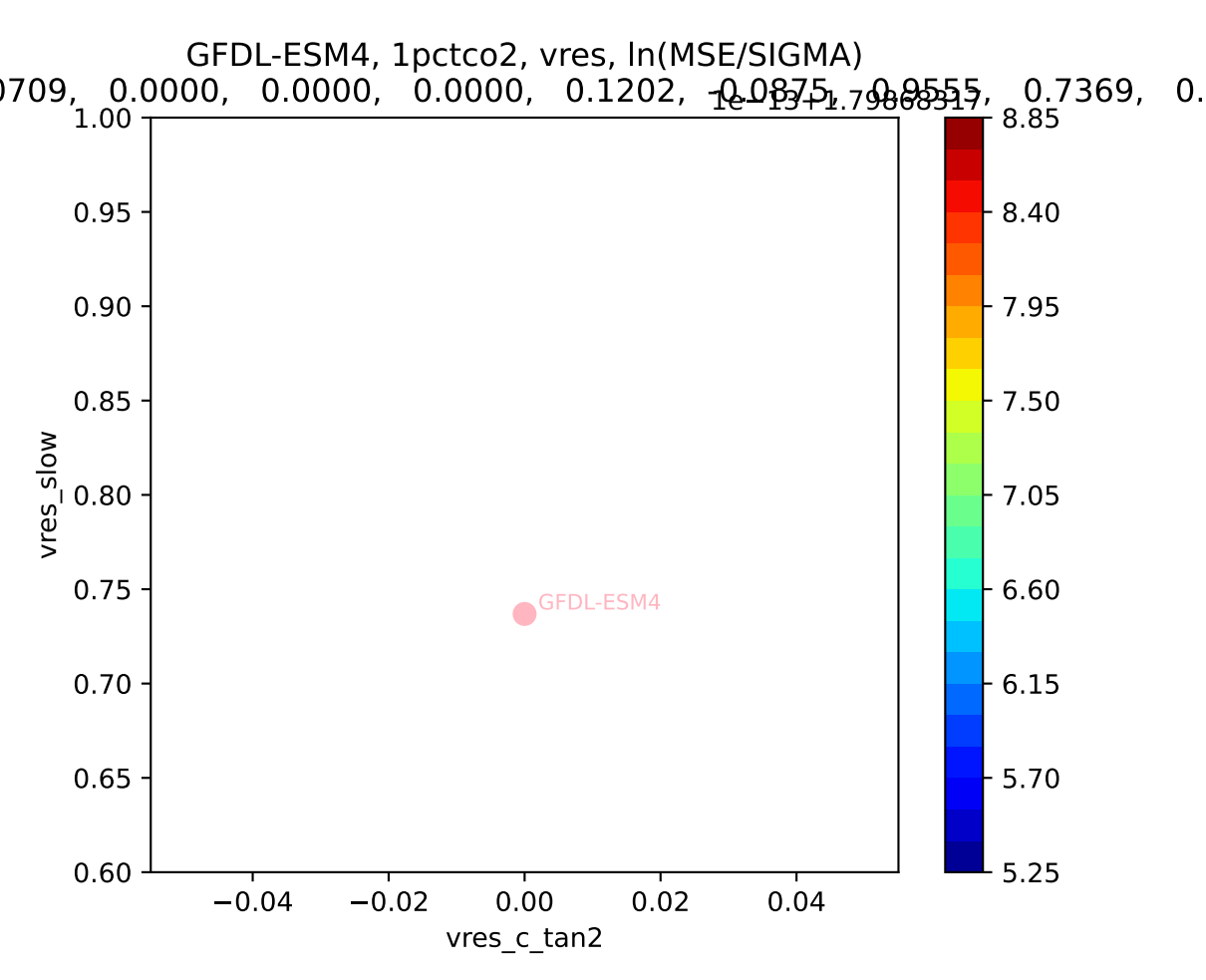

GFDL-ESM4, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
c_atm

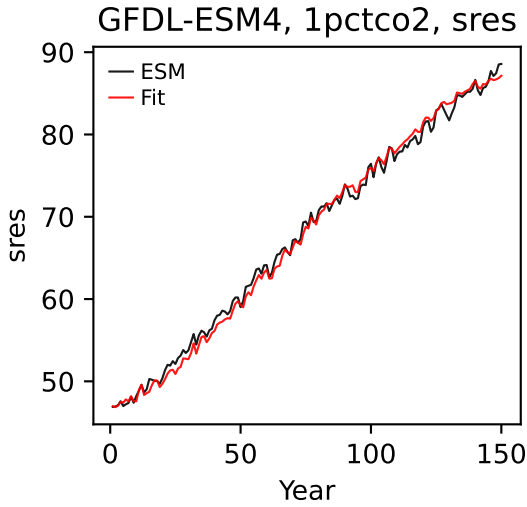

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
0709, 0.0000, 0.0000, 0.0000, 0.1202, -0.0875, 0.9555, 0.7369, 0.
GFDL-ESM4
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
10.8
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2

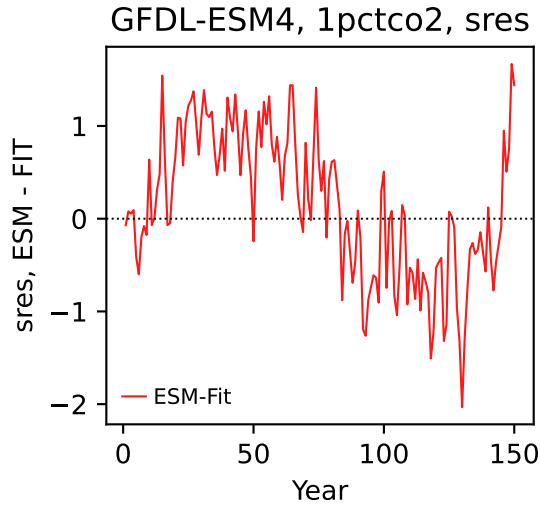

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
0709, 0.0000, 0.0000, 0.0000, 0.1202, -0.0875, 0.9555, 0.7369, 0.
vres_c_e
vres_c_l
GFDL-ESM4
0
1
2
3
4
5
11.1
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5

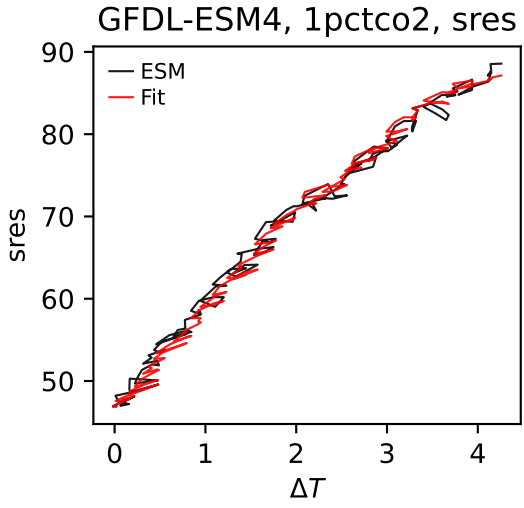

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
0709, 0.0000, 0.0000, 0.0000, 0.1202, -0.0875, 0.9555, 0.7369, 0.
GFDL-ESM4
vres_hyst
vres_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
9.9
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8

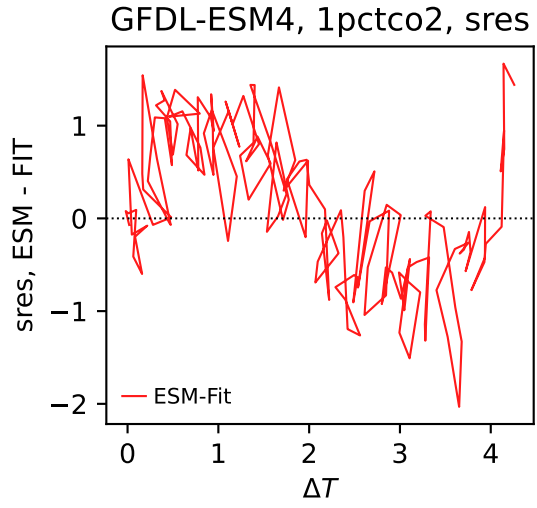

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
0709, 0.0000, 0.0000, 0.0000, 0.1202, -0.0875, 0.9555, 0.7369, 0.
1.00
0.98
0.96
0.94
0.92
0.90
vres_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
vres_c_tan
7.50
6.75
6.00
5.25
4.50
3.75
3.00
2.25
1.50
0.75

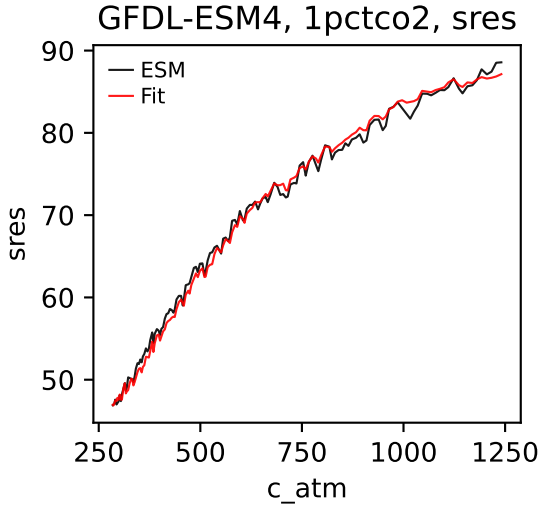

GFDL-ESM4, 1pctco2, vres, ln(MSE/SIGMA)
0709, 0.0000, 0.0000, 0.0000, 0.1202, −0.0875, 0.9555, 0.7369, 0.
1e−13+1.7986831
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
vres_slow
GFDL-ESM4
−0.04
−0.02
0.00
0.02
0.04
vres_c_tan2
8.85
8.40
7.95
7.50
7.05
6.60
6.15
5.70
5.25

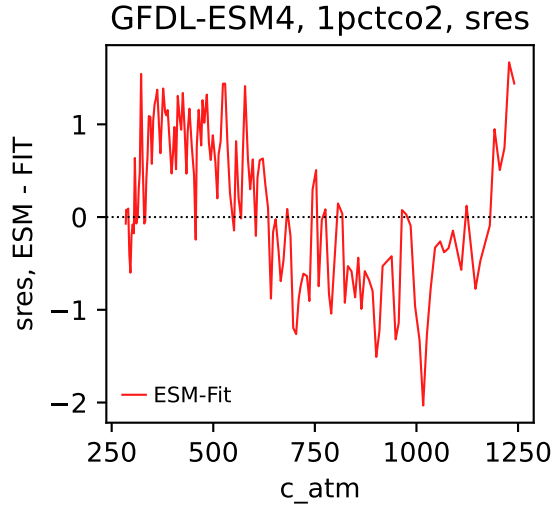

GFDL-ESM4, 1pctco2, sres
ESM
Fit
sres
Year

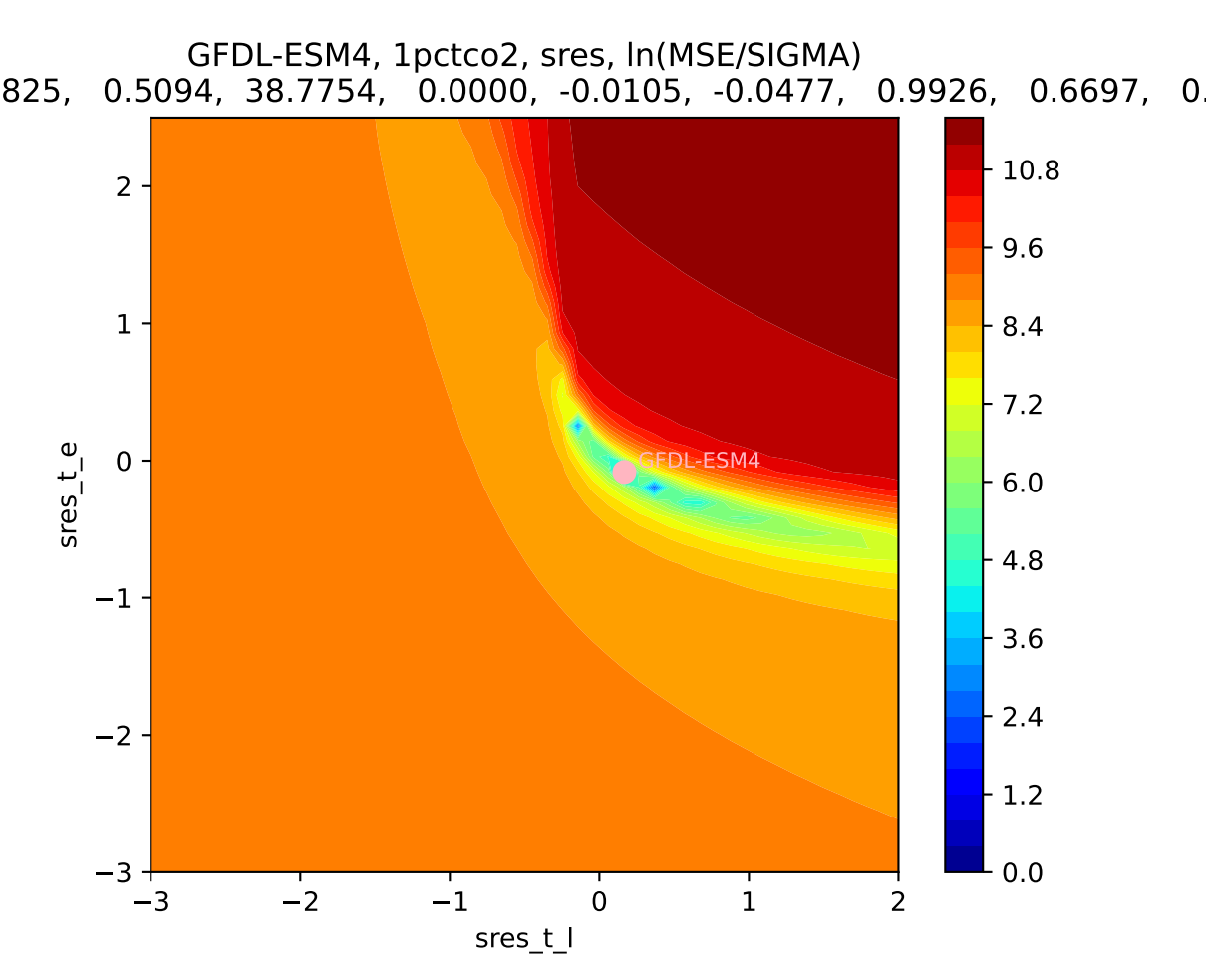

GFDL-ESM4, 1pctco2, sres
sres, ESM - FIT
ESM-Fit
Year

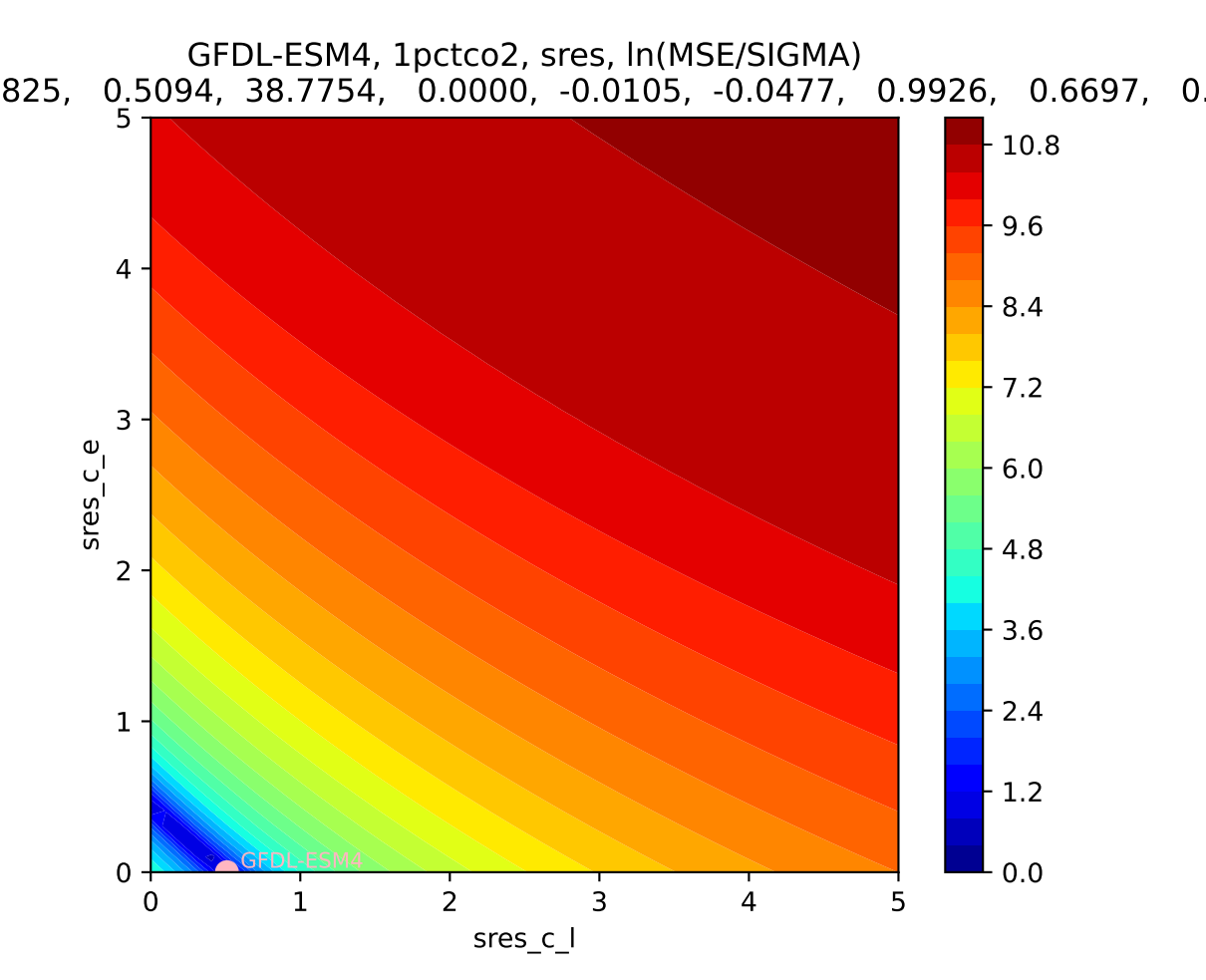

GFDL-ESM4, 1pctco2, sres
ESM
Fit
sres
ΔT

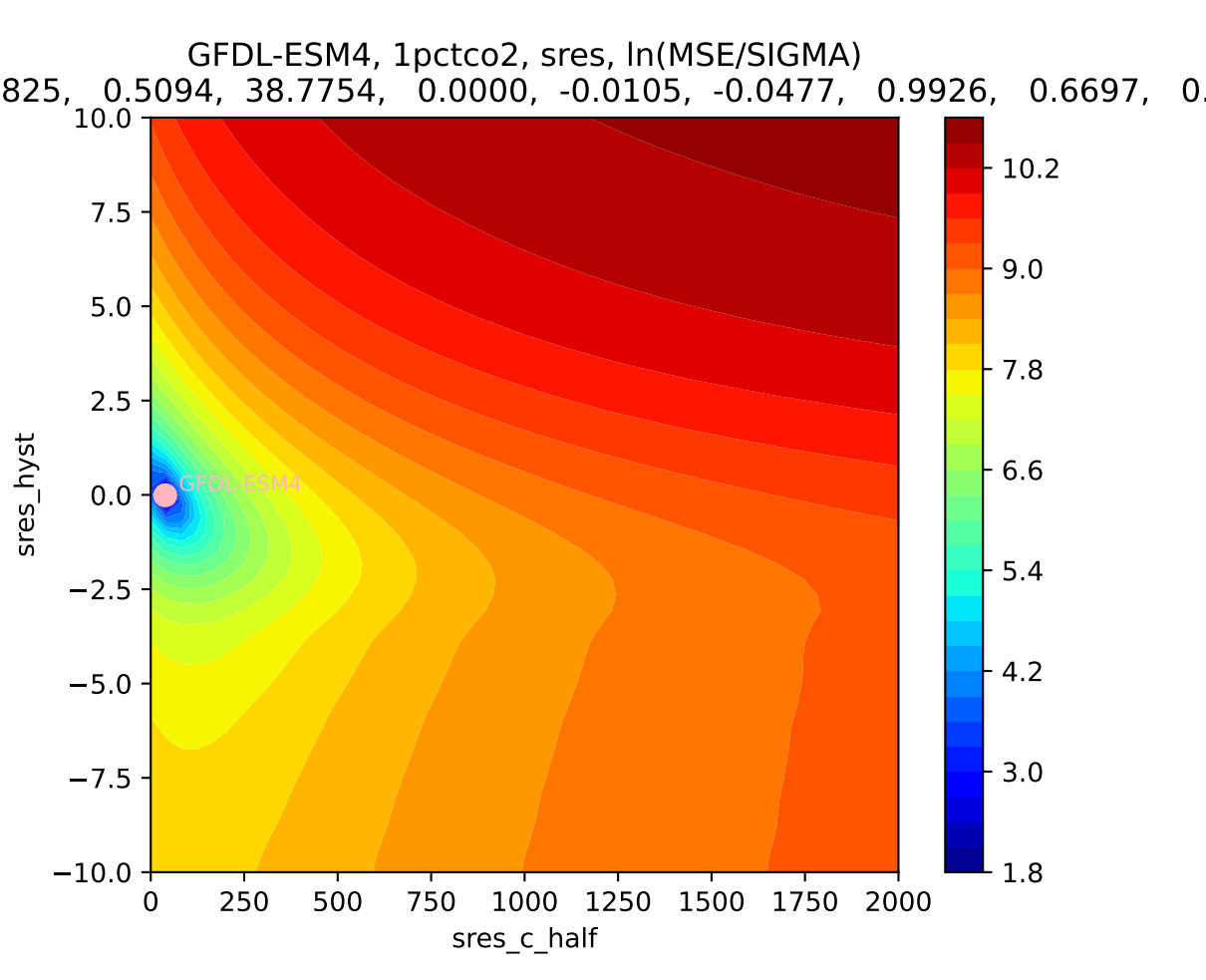

GFDL-ESM4, 1pctco2, sres
sres, ESM - FIT
ESM-Fit
ΔT

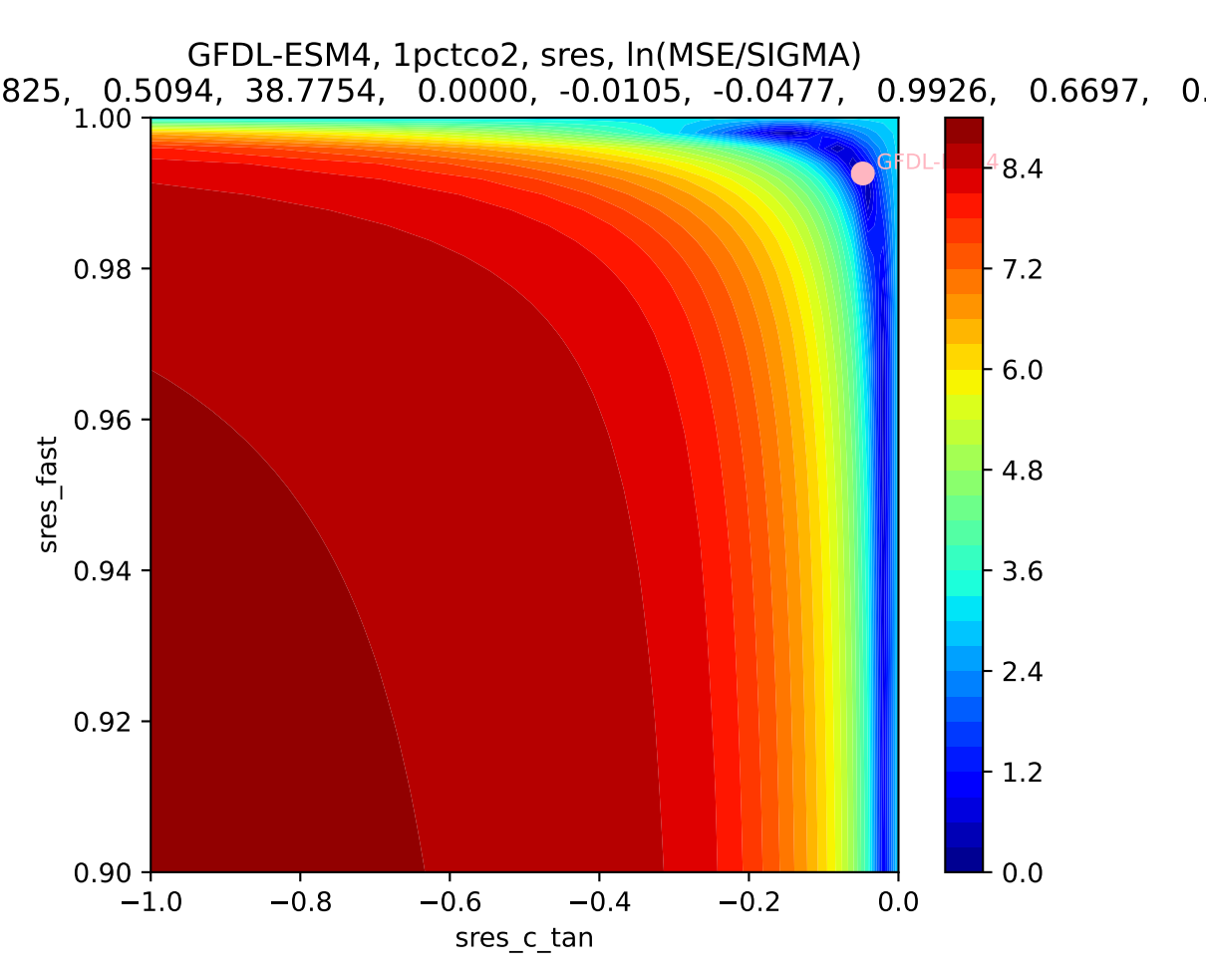

GFDL-ESM4, 1pctco2, sres
ESM
Fit
sres
c_atm

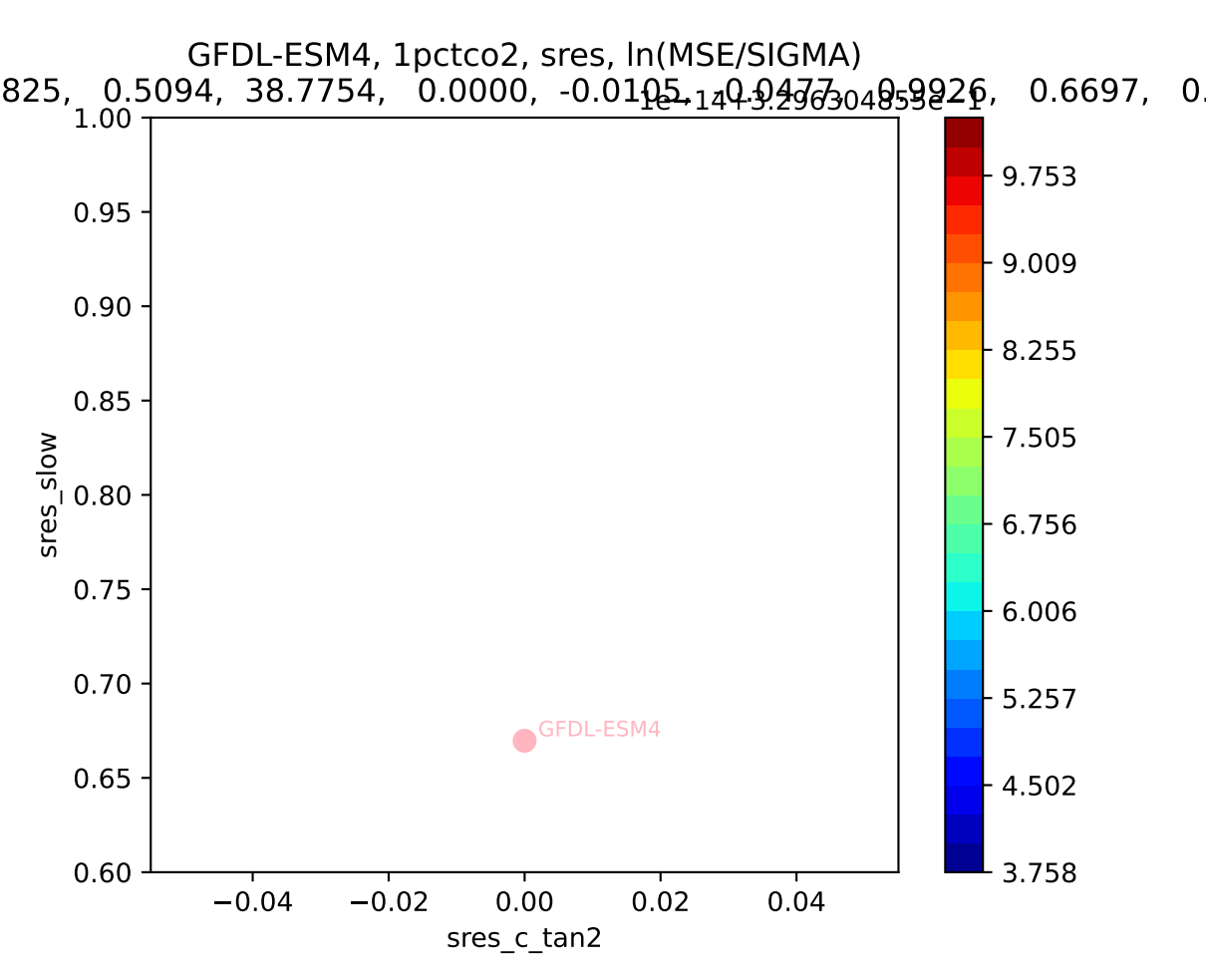

GFDL-ESM4, 1pctco2, sres
sres, ESM - FIT
ESM-Fit
c_atm

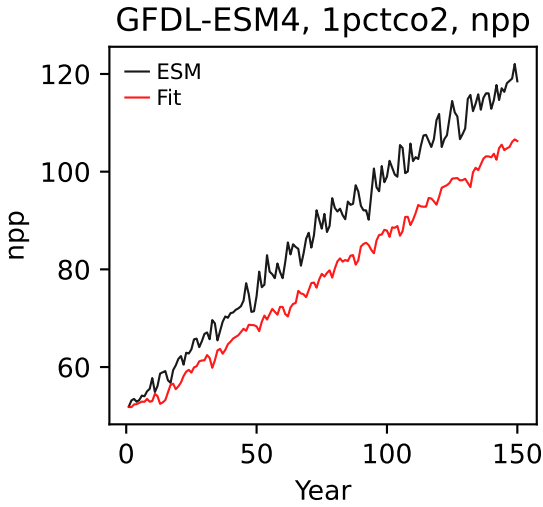

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
825, 0.5094, 38.7754, 0.0000, -0.0105, -0.0477, 0.9926, 0.6697, 0.
GFDL-ESM4
sres_t_e
sres_t_l
2
1
0
−1
−2
−3
10.8
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

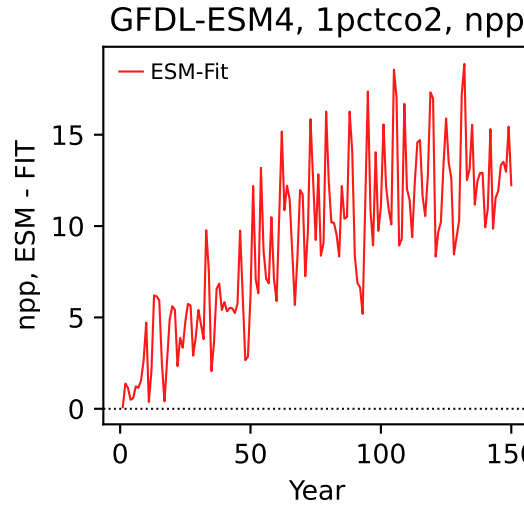

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
825, 0.5094, 38.7754, 0.0000, -0.0105, -0.0477, 0.9926, 0.6697, 0.
sres_c_e
sres_c_l
GFDL-ESM4
0
1
2
3
4
5
10.8
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

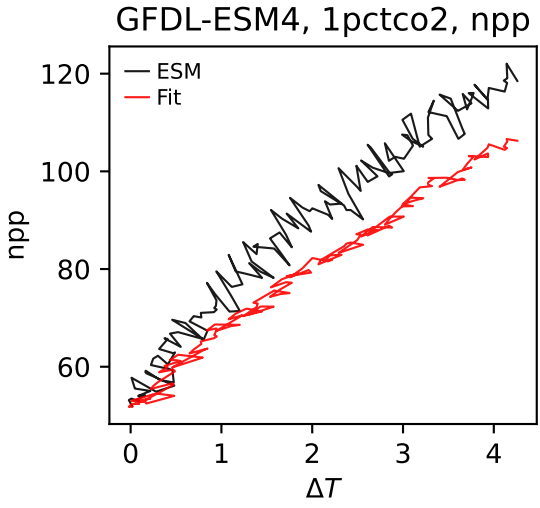

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
825, 0.5094, 38.7754, 0.0000, -0.0105, -0.0477, 0.9926, 0.6697, 0.
GFDL-ESM4
sres_hyst
sres_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
10.2
9.0
7.8
6.6
5.4
4.2
3.0
1.8

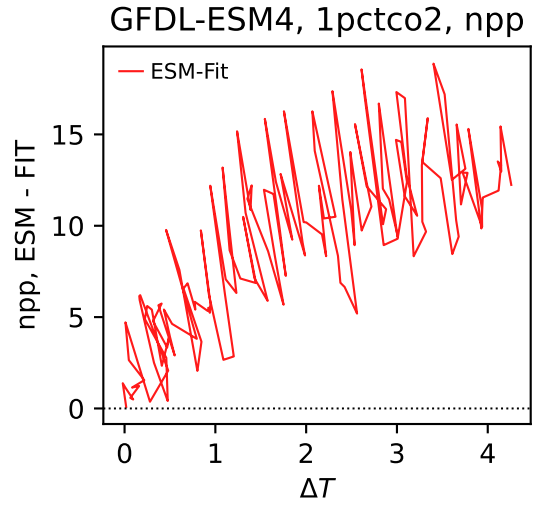

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
825, 0.5094, 38.7754, 0.0000, -0.0105, -0.0477, 0.9926, 0.6697, 0.
GFDL-ESM4
1.00
0.98
0.96
0.94
0.92
0.90
sres_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
sres_c_tan
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

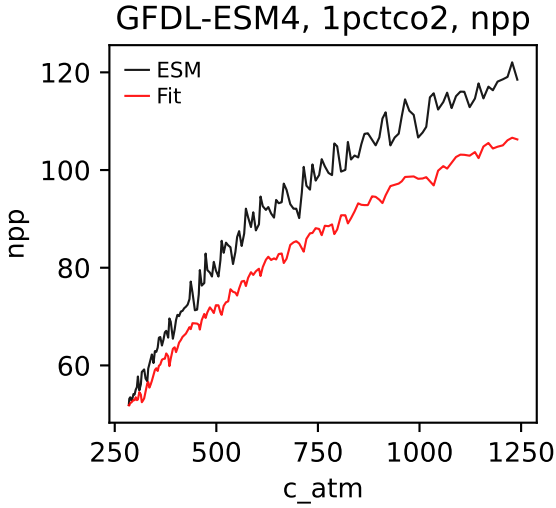

GFDL-ESM4, 1pctco2, sres, ln(MSE/SIGMA)
825, 0.5094, 38.7754, 0.0000, -0.0105, -0.0477, 0.9926, 0.6697, 0.
1e+14+3.296304853e-1
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
sres_slow
−0.04
−0.02
0.00
0.02
0.04
sres_c_tan2
GFDL-ESM4
9.753
9.009
8.255
7.505
6.756
6.006
5.257
4.502
3.758

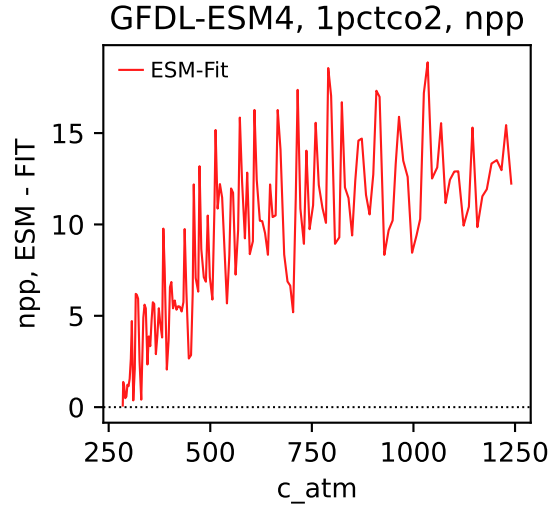

GFDL-ESM4, 1pctco2, npp
ESM
Fit
npp
Year

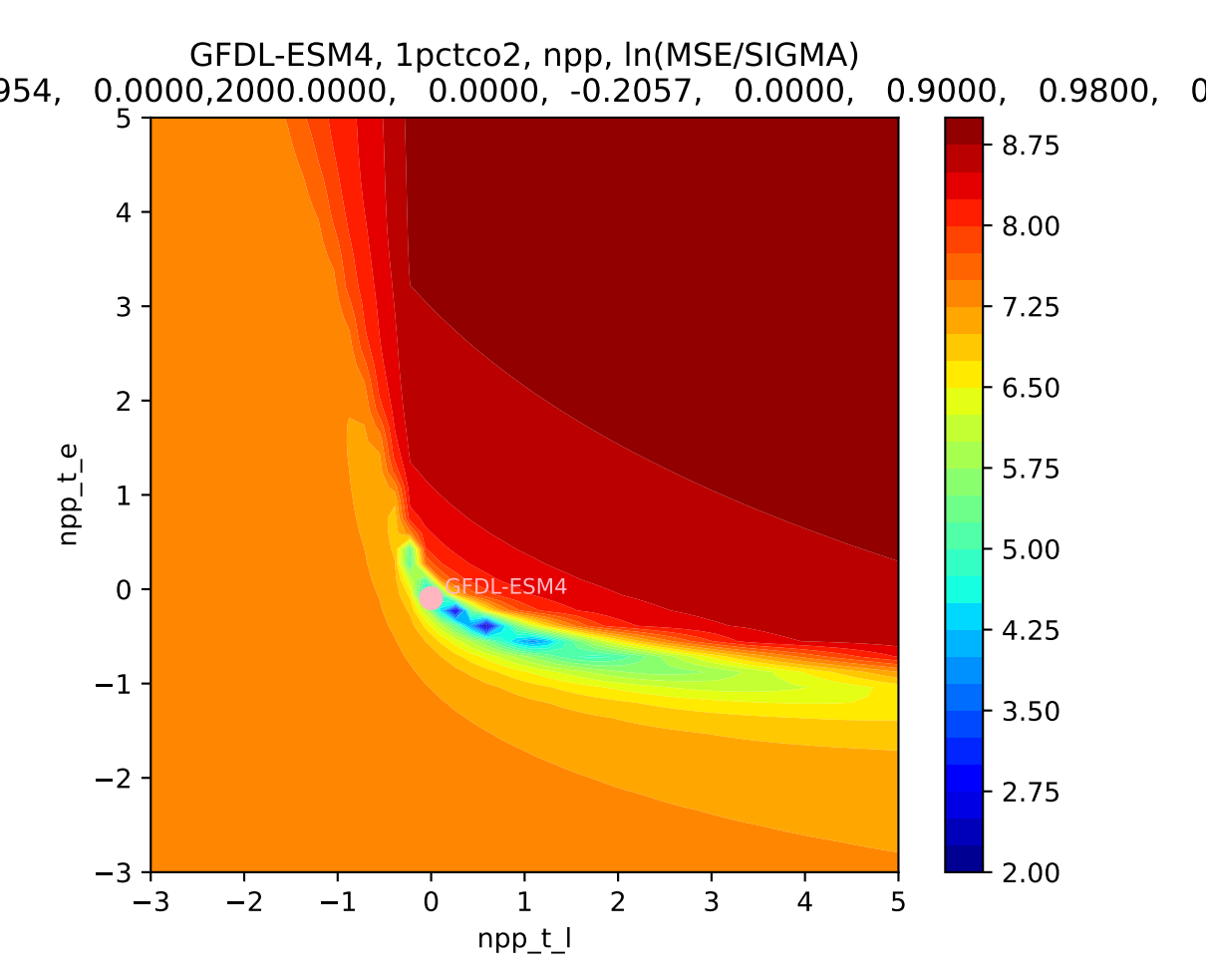

GFDL-ESM4, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
Year


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)
954, 0.0000,2000.0000, 0.0000, -0.2057, 0.0000, 0.9000, 0.9800, 0
GFDL-ESM4
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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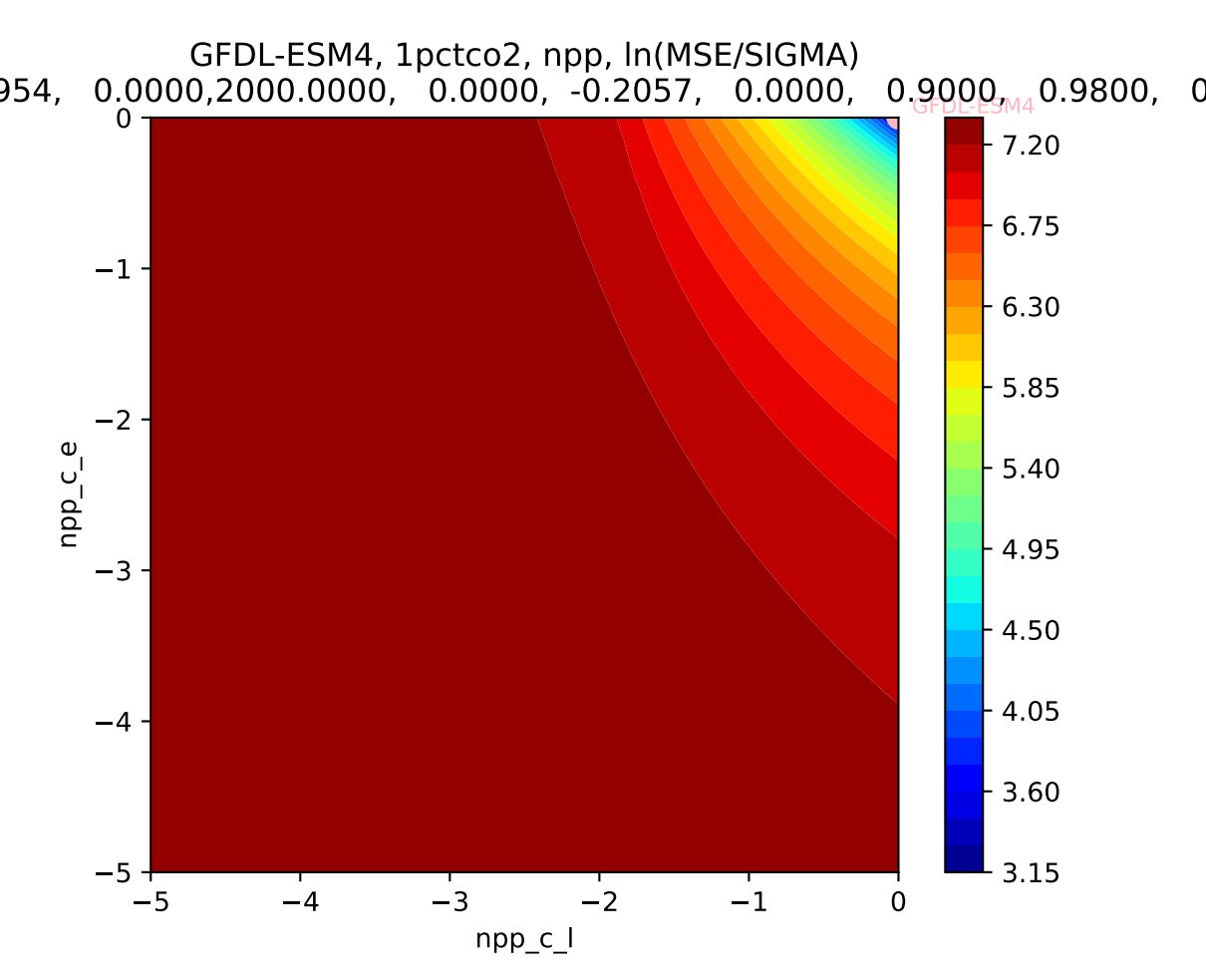
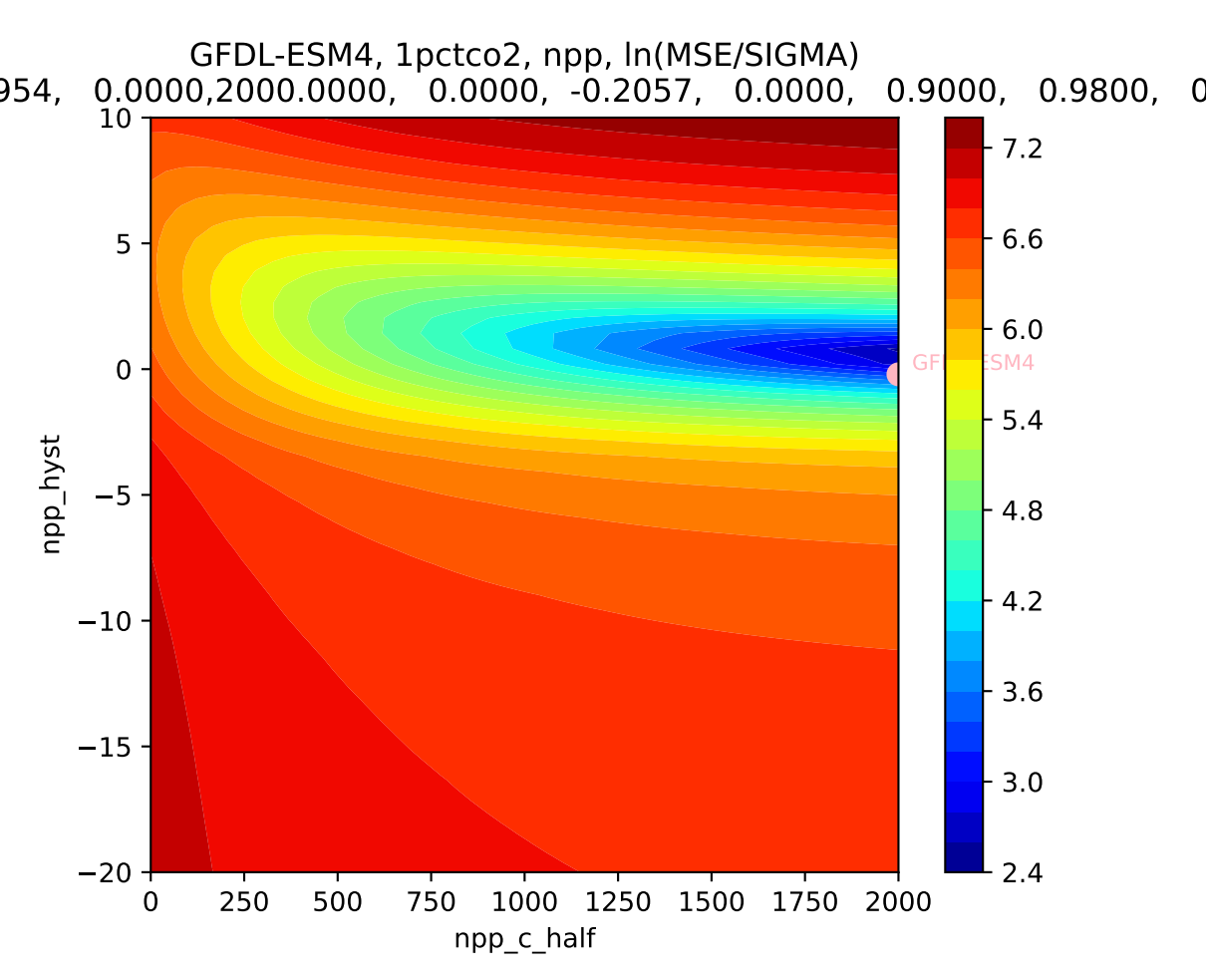
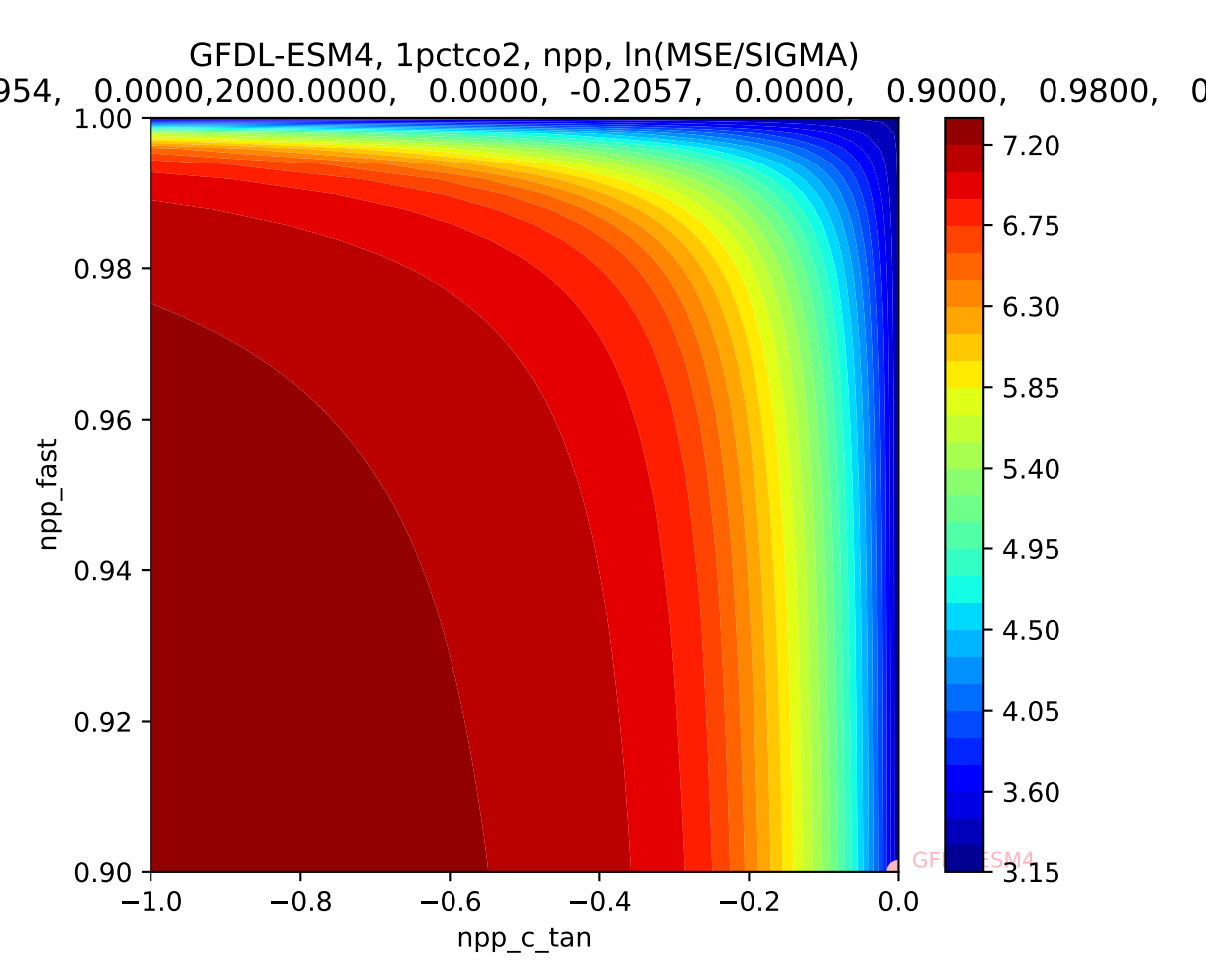
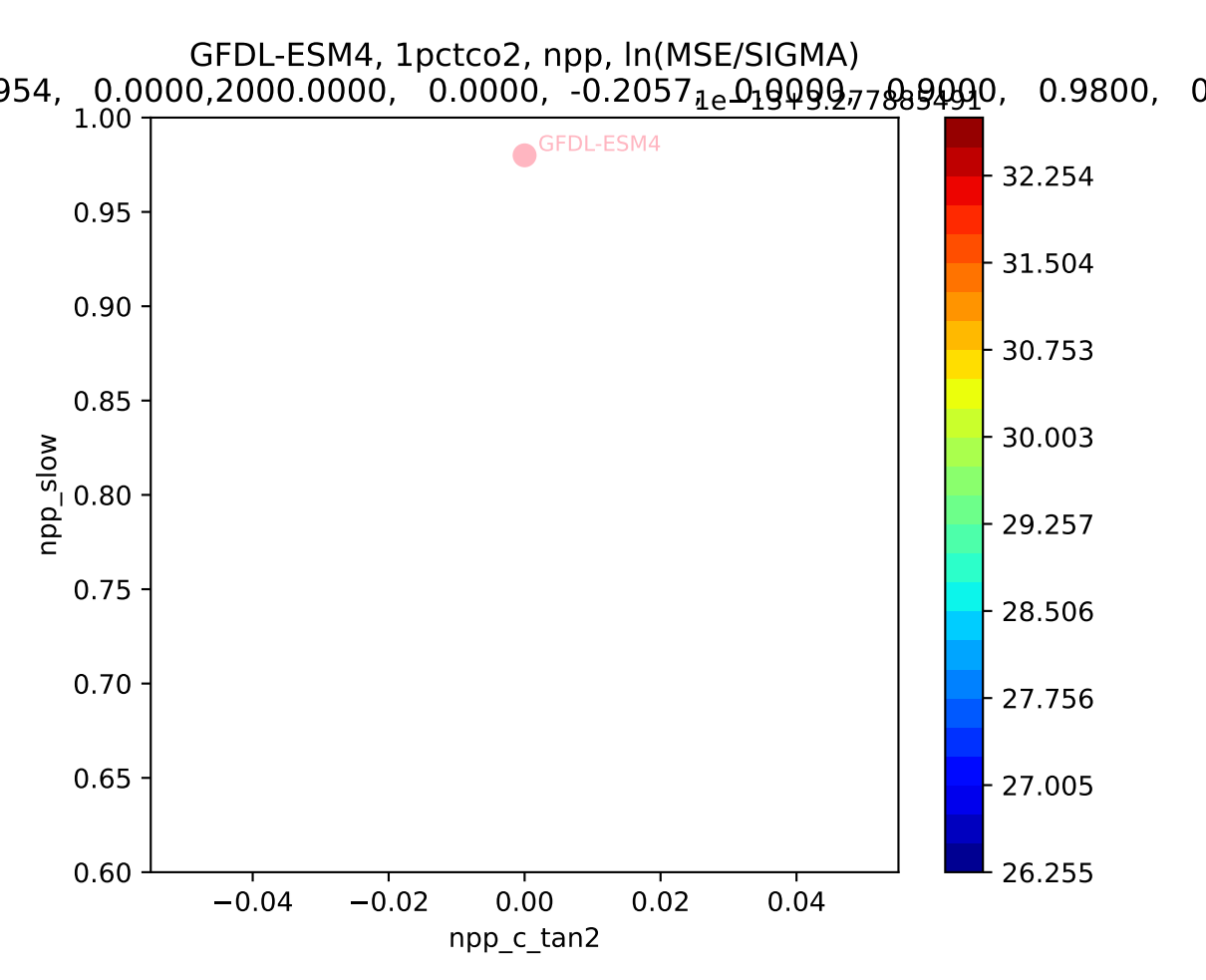
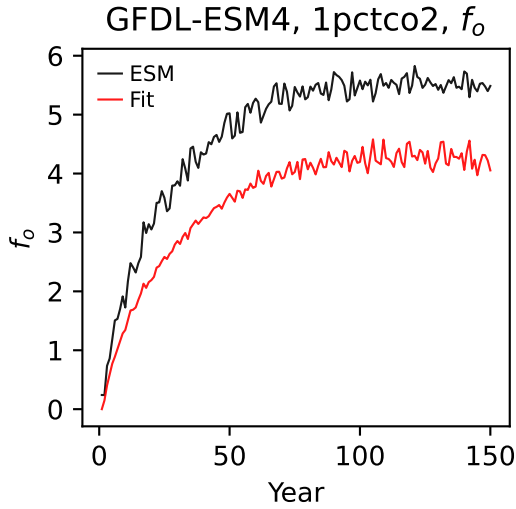
3.50
2.75
2.00

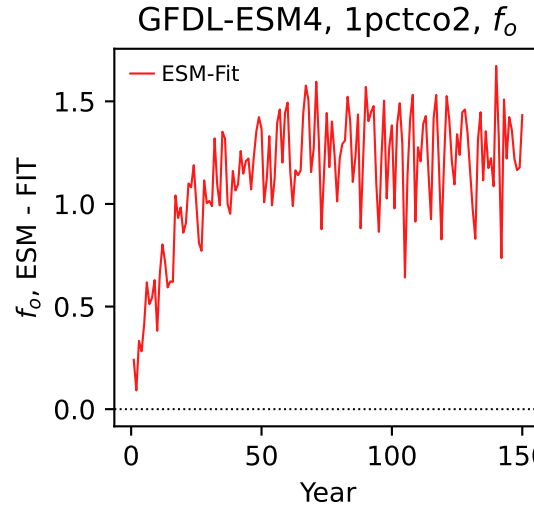

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
954, 0.0000,2000.0000, 0.0000, -0.2057, 0.0000, 0.9000, 0.9800, 0
GFDL-ESM4
7.20
6.75
6.30
5.85
5.40
4.95
4.50
4.05
3.60
3.15
npp_c_e
npp_c_l
0
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
0

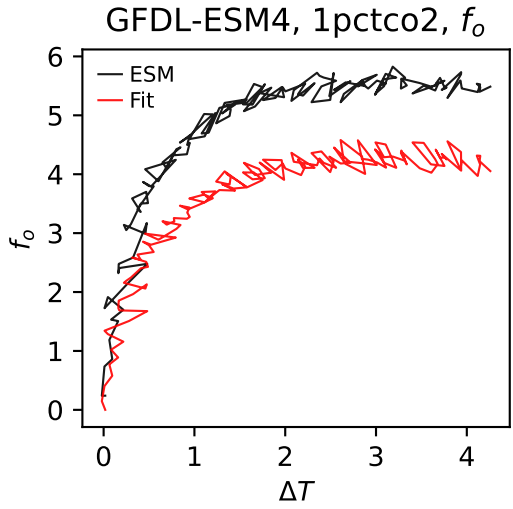

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
954, 0.0000,2000.0000, 0.0000, -0.2057, 0.0000, 0.9000, 0.9800, 0
10
5
0
−5
−10
−15
−20
npp_hyst
0
250
500
750
1000
1250
1500
1750
2000
npp_c_half
7.2
6.6
6.0
5.4
4.8
4.2
3.6
3.0
2.4

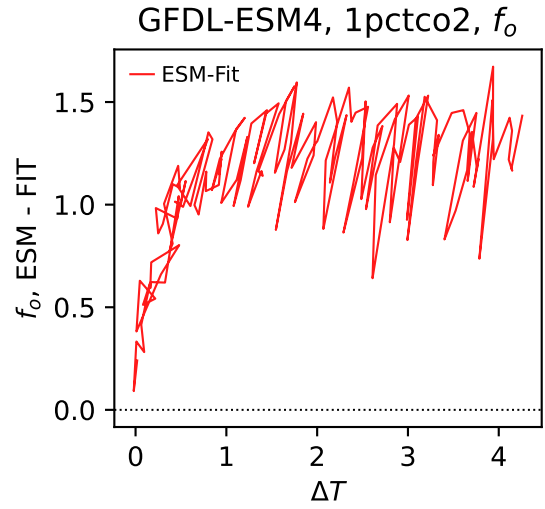

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
954, 0.0000,2000.0000, 0.0000, -0.2057, 0.0000, 0.9000, 0.9800, 0
1.00
0.98
0.96
0.94
0.92
0.90
npp_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
npp_c_tan
7.20
6.75
6.30
5.85
5.40
4.95
4.50
4.05
3.60
3.15

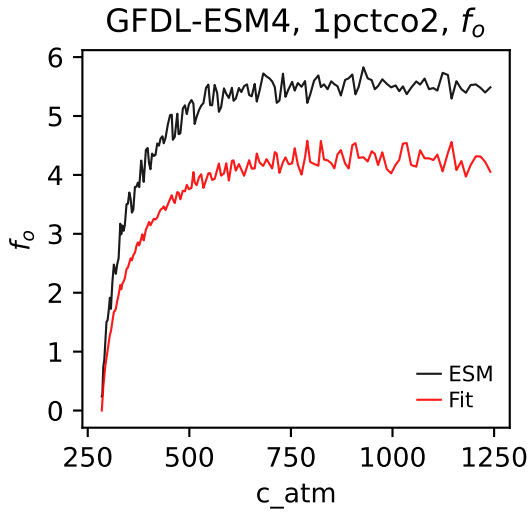

GFDL-ESM4, 1pctco2, npp, ln(MSE/SIGMA)
954, 0.0000,2000.0000, 0.0000, -0.2057, 0.0000, 0.9000, 0.9800, 0
1e−15+3.27885491
GFDL-ESM4
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
npp_slow
−0.04
−0.02
0.00
0.02
0.04
npp_c_tan2
32.254
31.504
30.753
30.003
29.257
28.506
27.756
27.005
26.255

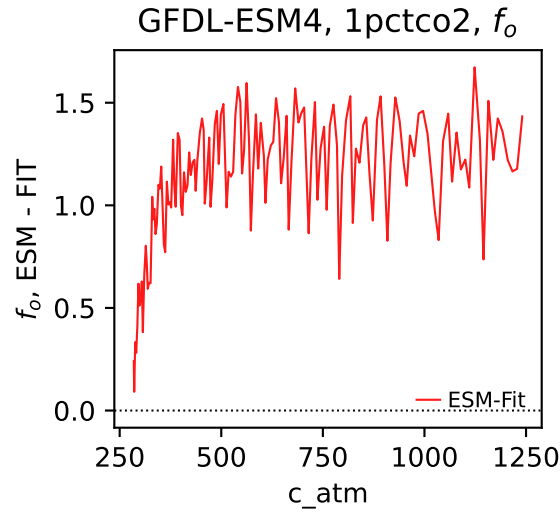

GFDL-ESM4, 1pctco2, f_o
ESM
Fit
f_o
Year

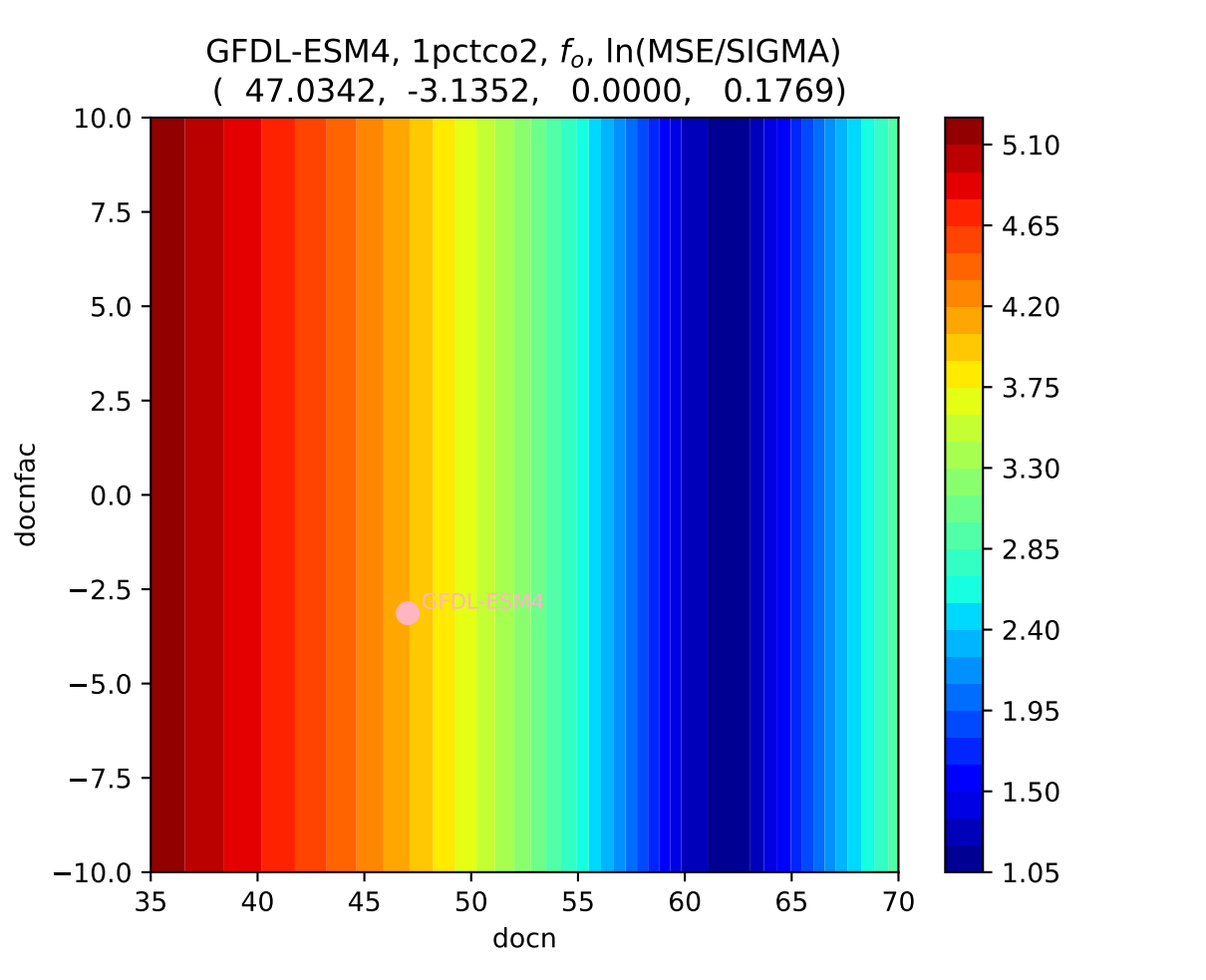

GFDL-ESM4, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
Year

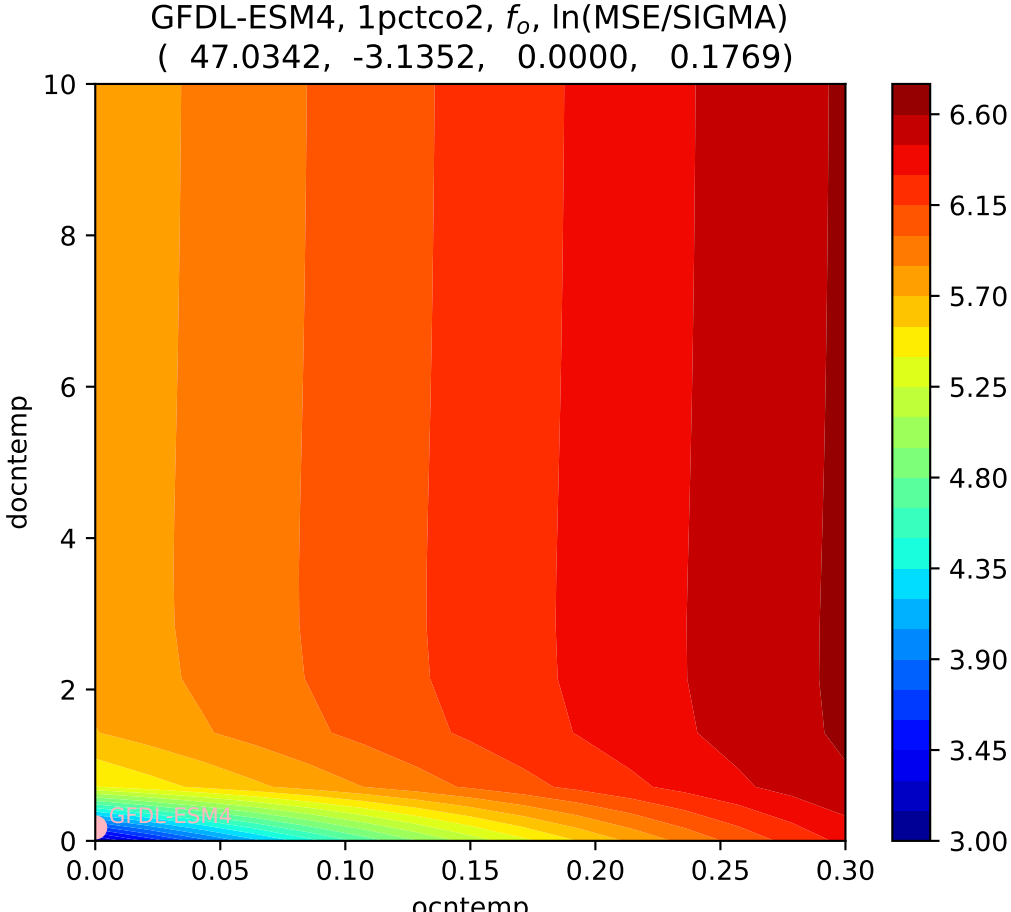

GFDL-ESM4, 1pctco2, f_o
ESM
Fit
f_o
ΔT


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)
(47.0342, -3.1352, 0.0000, 0.1769)
GFDL-ESM4
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
5.10
4.65
4.20
3.75
3.30
2.85
2.40
1.95
1.50
1.05


GFDL-ESM4, 1pctco2, f_o, ln(MSE/SIGMA)
(47.0342, -3.1352, 0.0000, 0.1769)
docntemp
ocntemp
GFDL-ESM4
0
2
4
6
8
10
0.00
0.05
0.10
0.15
0.20
0.25
0.30
6.60
6.15
5.70
5.25
4.80
4.35
3.90
3.45
3.00