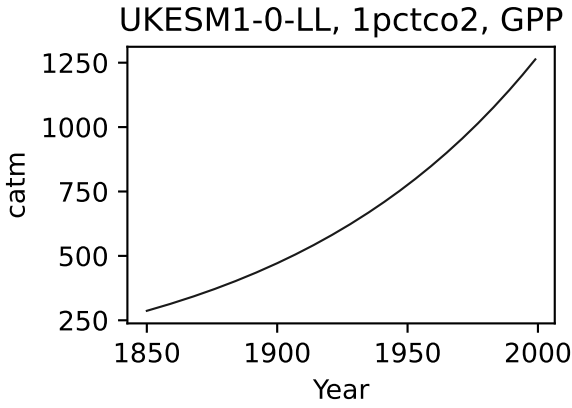
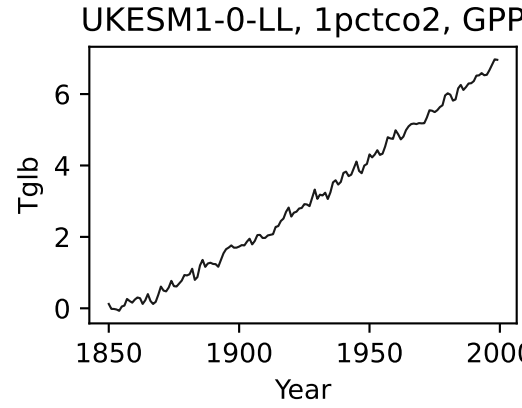
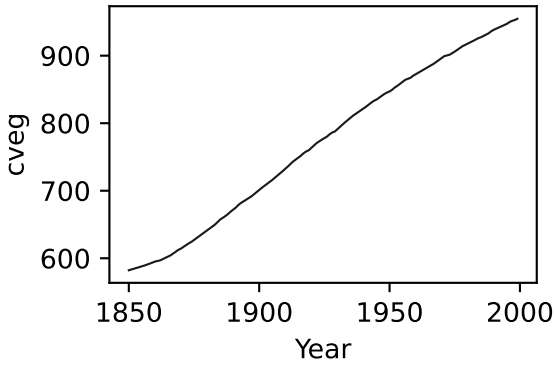
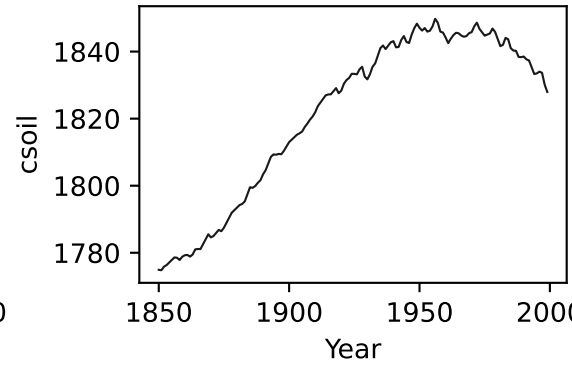
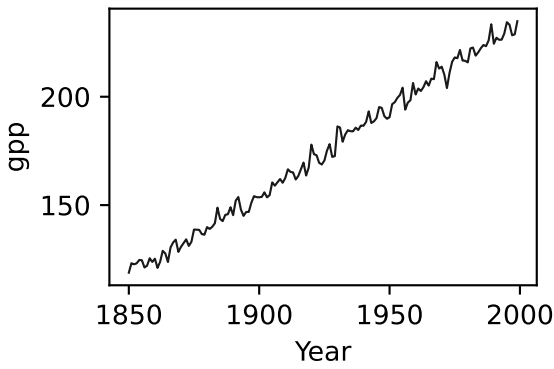
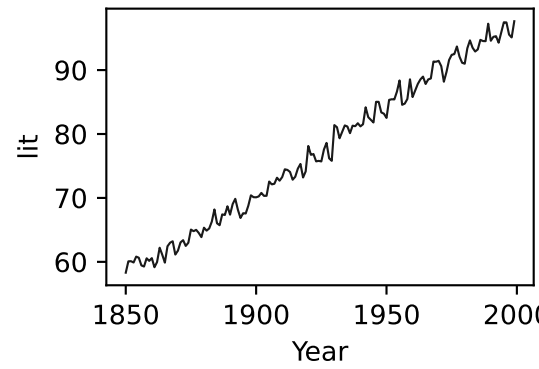

UKESM1-0-LL, 1pctco2, GPP
catm
1250
1000
750
500
250
1850
1900
1950
2000
Year

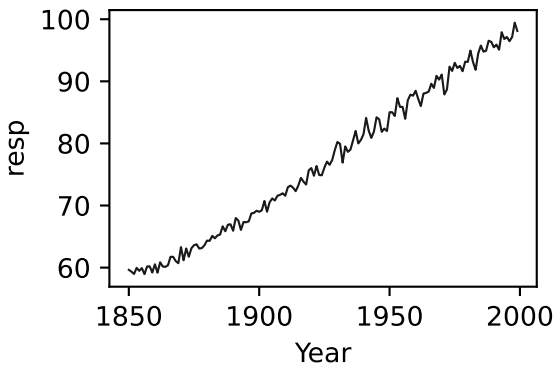

UKESM1-0-LL, 1pctco2, GPP
Tglb
6
4
2
0
1850
1900
1950
2000
Year

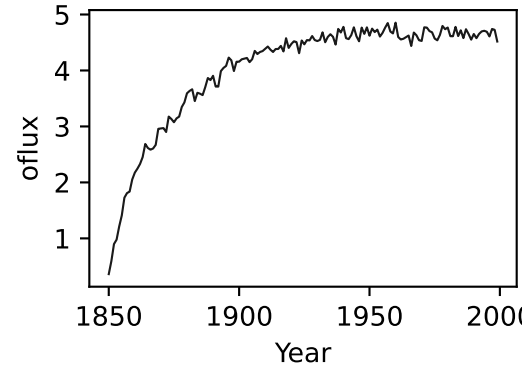

cveg
900
800
700
600
1850
1900
1950
2000
Year

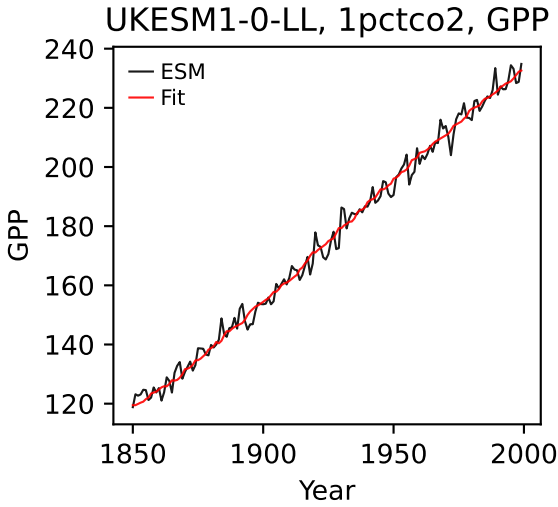

csoil
1840
1820
1800
1780
1850
1900
1950
2000
Year

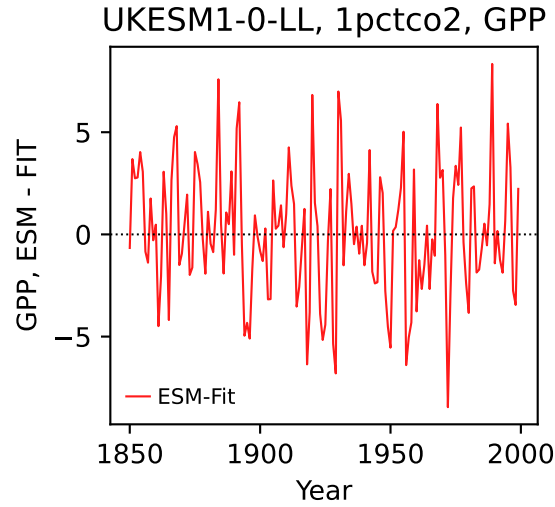

gpp
200
150
1850
1900
1950
2000
Year

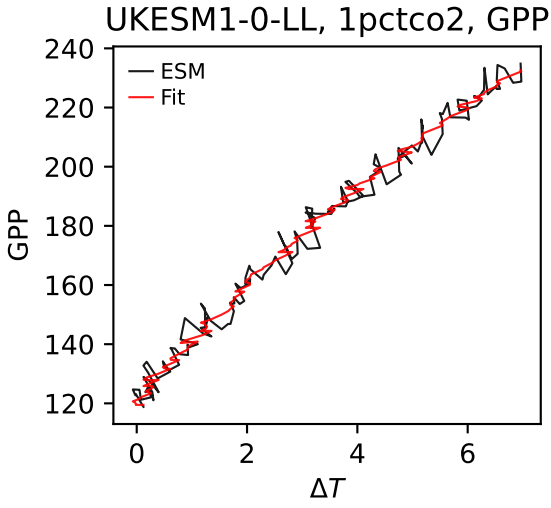

lit
90
80
70
60
1850
1900
1950
2000
Year

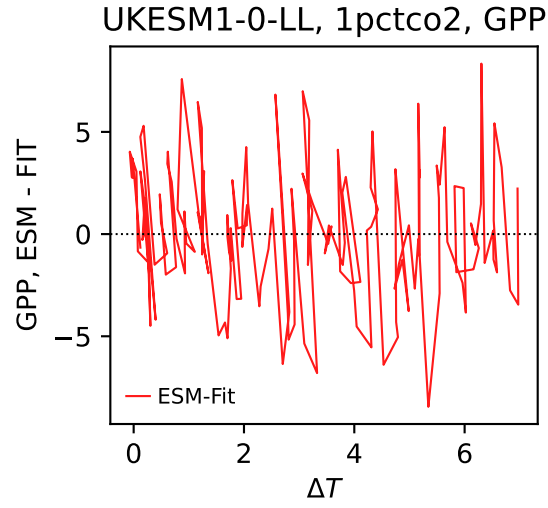

resp
100
90
80
70
60
1850
1900
1950
2000
Year

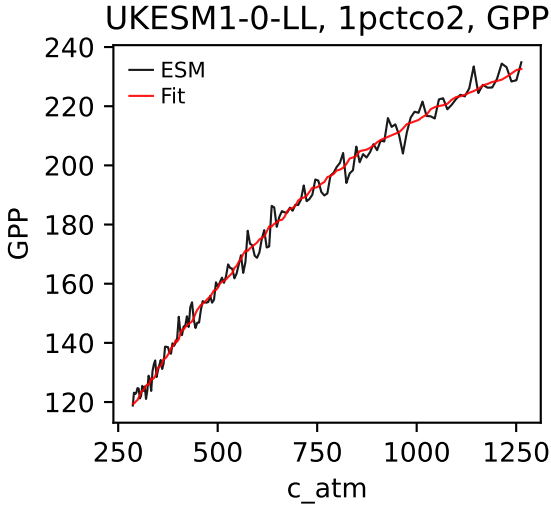

oflux
5
4
3
2
1
1850
1900
1950
2000
Year

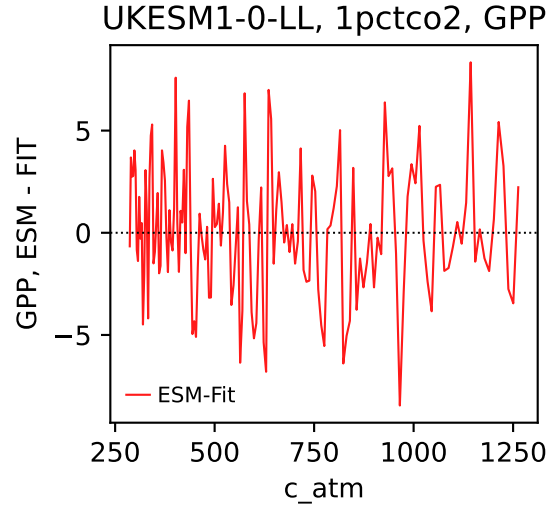

UKESM1-0-LL, 1pctco2, GPP
ESM
Fit
GPP
Year

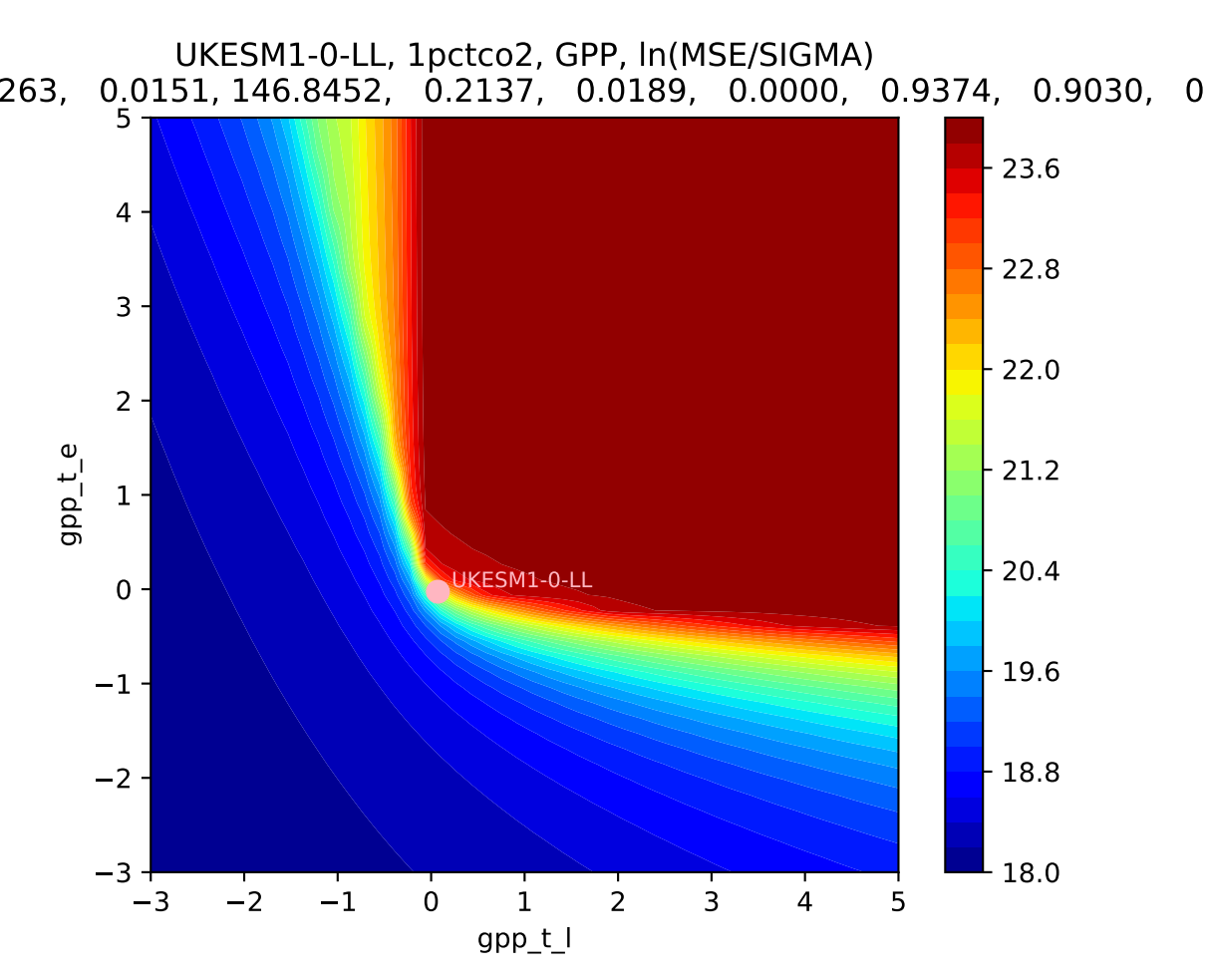

UKESM1-0-LL, 1pctco2, GPP
GPP, ESM - FIT
ESM-Fit
Year

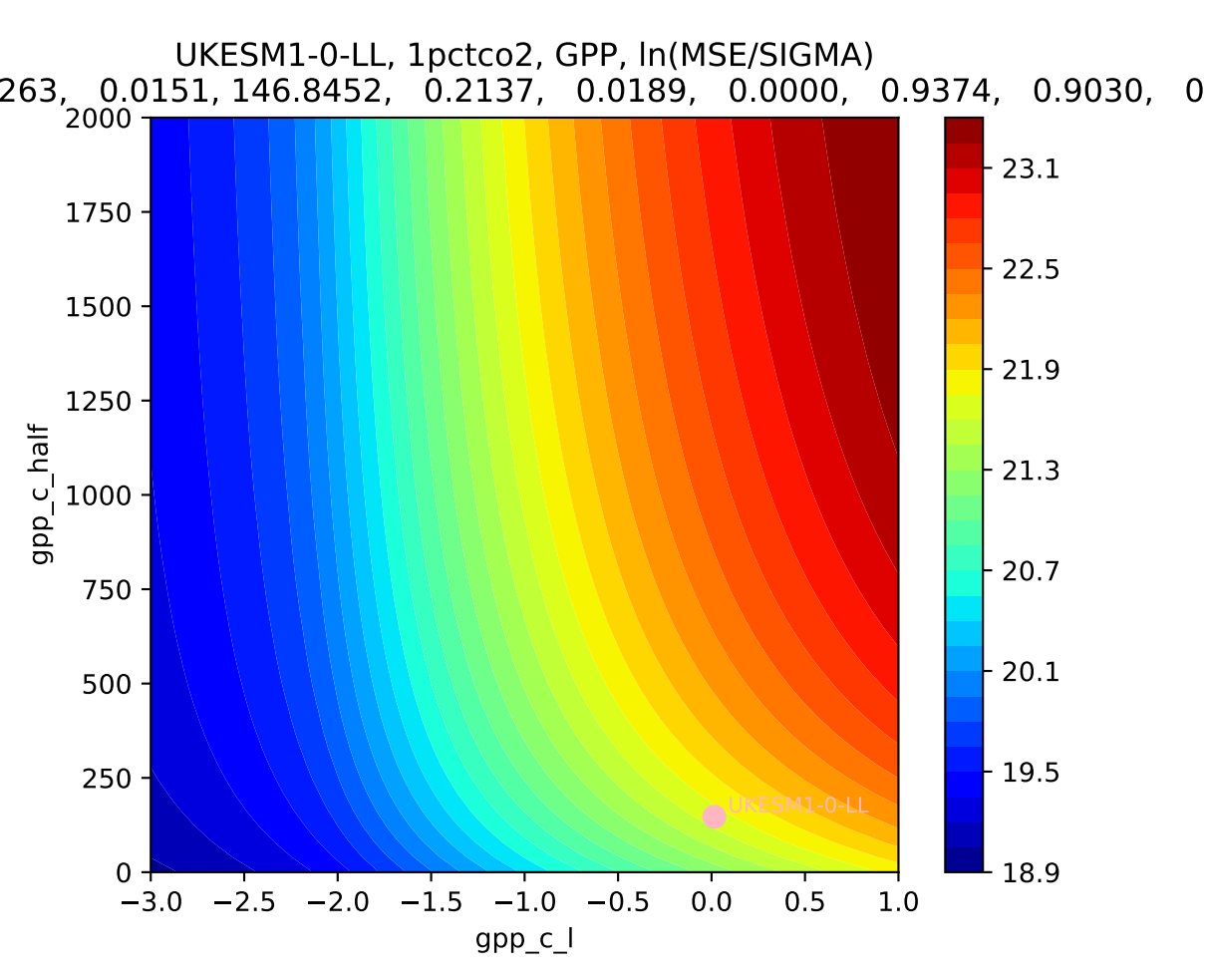

UKESM1-0-LL, 1pctco2, GPP
ESM
Fit
GPP
ΔT

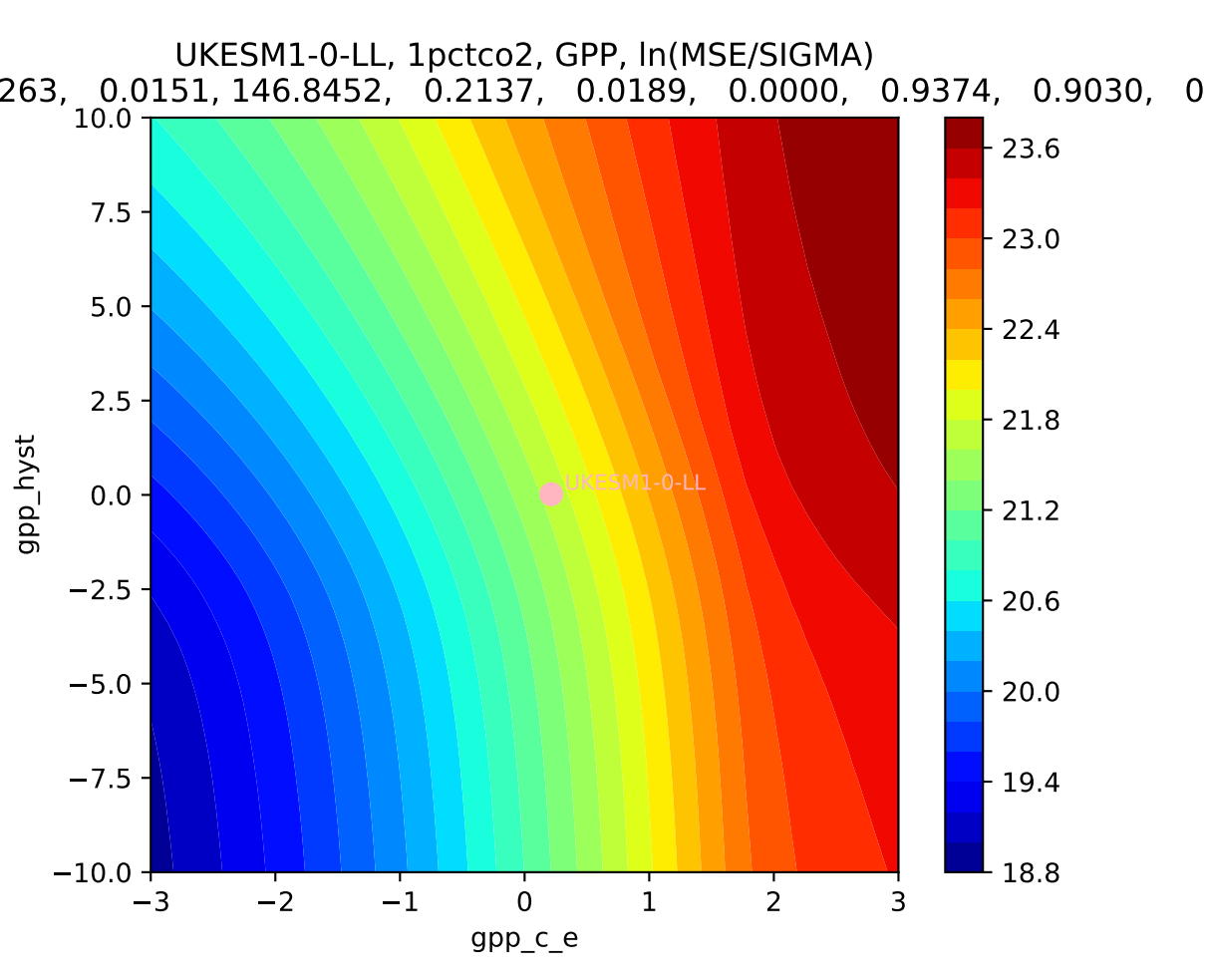

UKESM1-0-LL, 1pctco2, GPP
GPP, ESM - FIT
ESM-Fit
ΔT

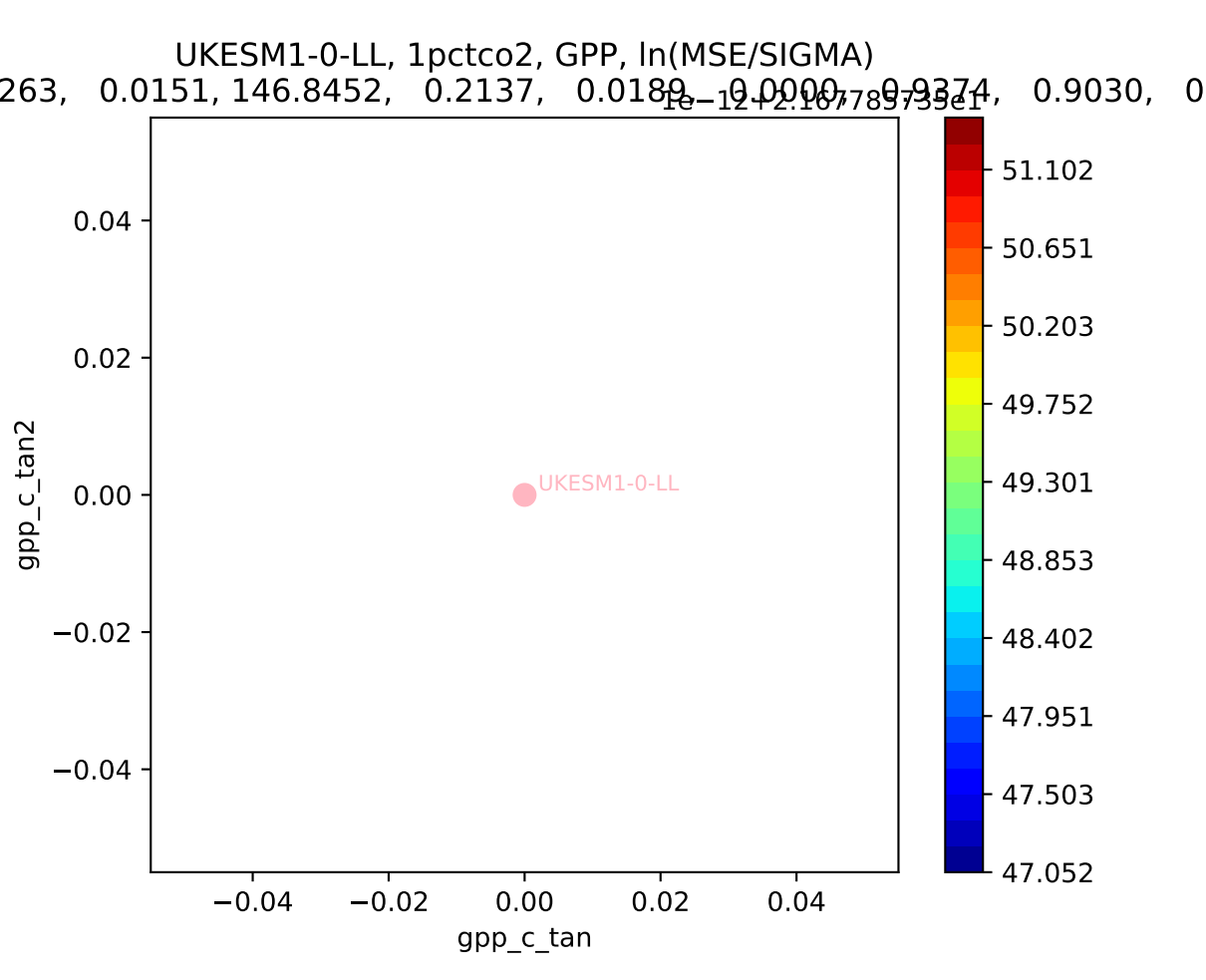

UKESM1-0-LL, 1pctco2, GPP
ESM
Fit
GPP
c_atm

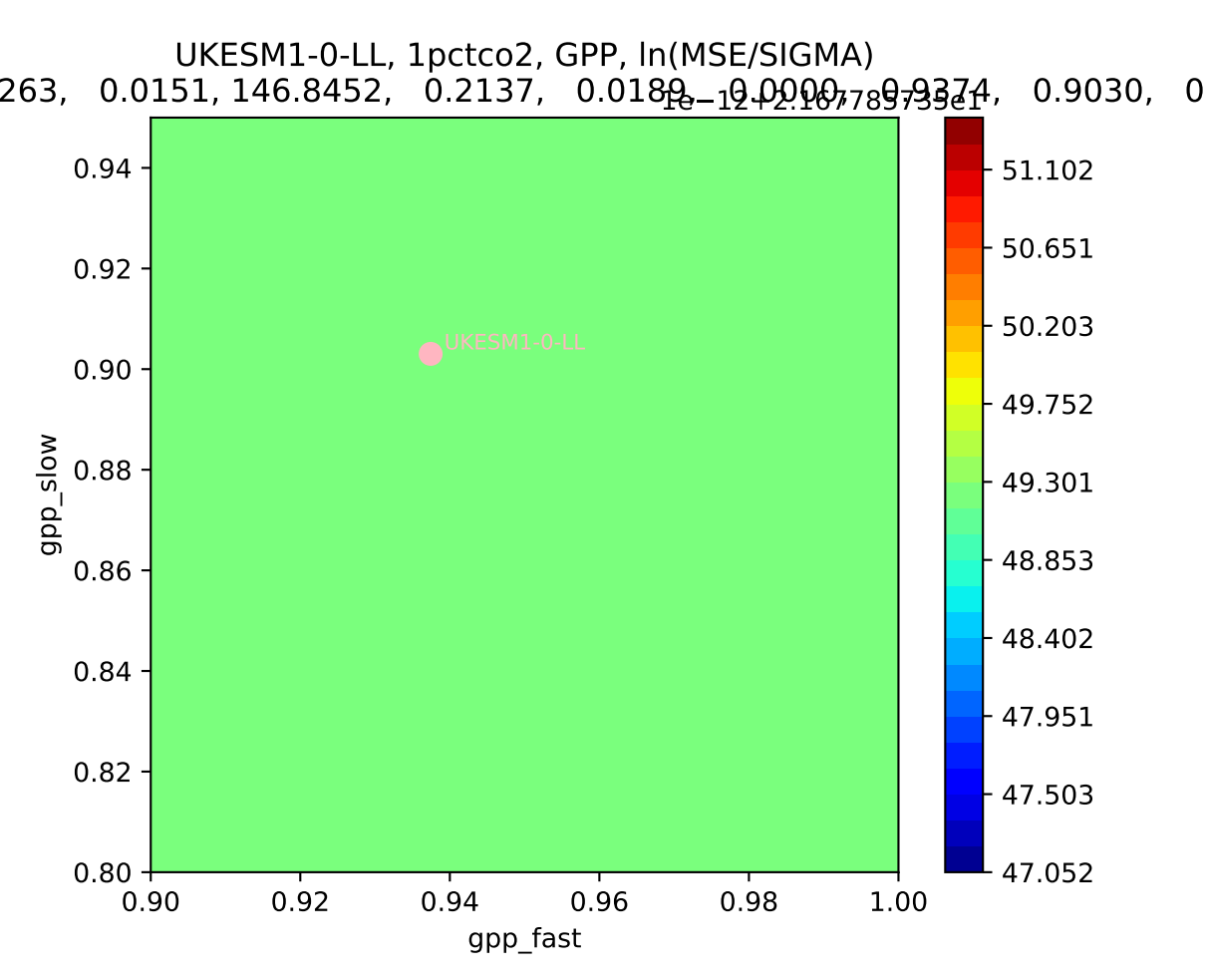

UKESM1-0-LL, 1pctco2, GPP
GPP, ESM - FIT
ESM-Fit
c_atm

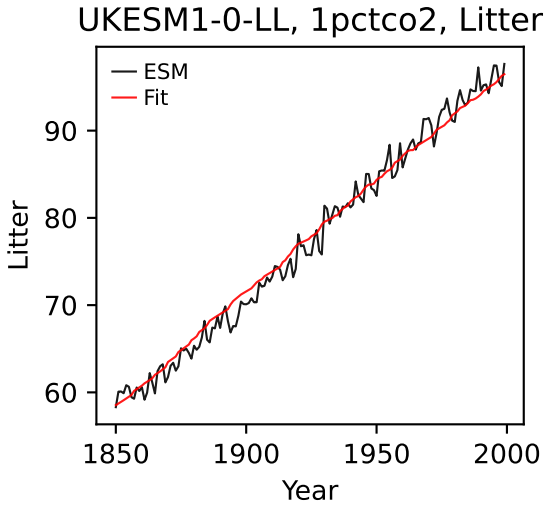

UKESM1-0-LL, 1pctco2, GPP, ln(MSE/SIGMA)
263, 0.0151, 146.8452, 0.2137, 0.0189, 0.0000, 0.9374, 0.9030, 0
UKESM1-0-LL
gpp_t_e
gpp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
23.6
22.8
22.0
21.2
20.4
19.6
18.8
18.0

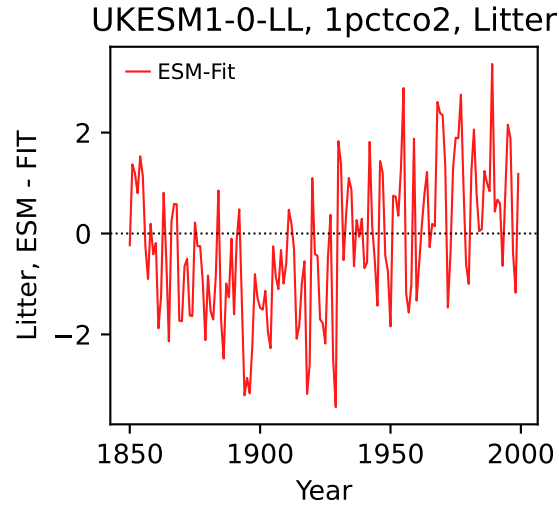

UKESM1-0-LL, 1pctco2, GPP, ln(MSE/SIGMA)
263, 0.0151, 146.8452, 0.2137, 0.0189, 0.0000, 0.9374, 0.9030, 0
gpp_c_half
gpp_c_l
2000
1750
1500
1250
1000
750
500
250
0
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
23.1
22.5
21.9
21.3
20.7
20.1
19.5
18.9
UKESM1-0-LL

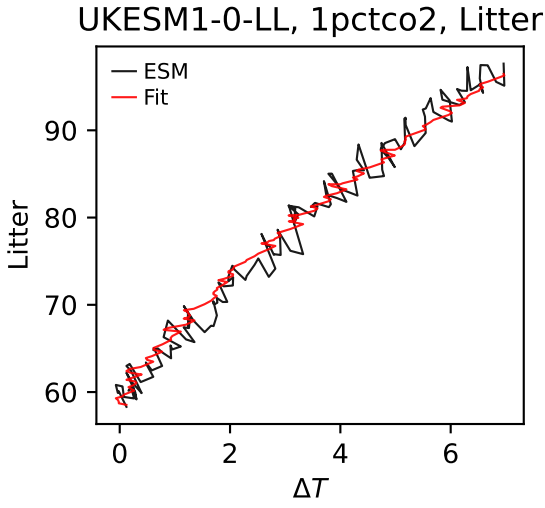

UKESM1-0-LL, 1pctco2, GPP, ln(MSE/SIGMA)
263, 0.0151, 146.8452, 0.2137, 0.0189, 0.0000, 0.9374, 0.9030, 0
gpp_hyst
gpp_c_e
UKESM1-0-LL
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
23.6
23.0
22.4
21.8
21.2
20.6
20.0
19.4
18.8

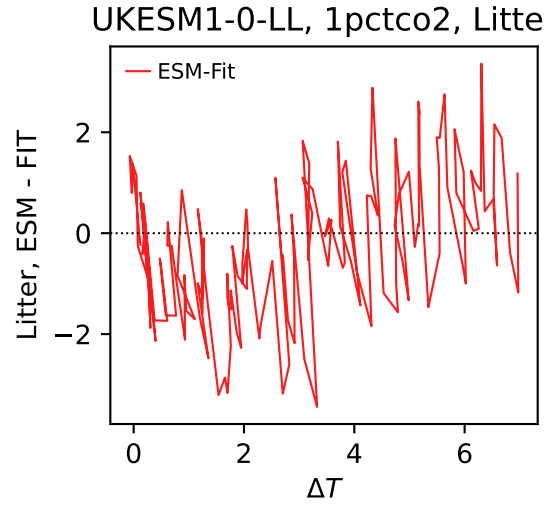

UKESM1-0-LL, 1pctco2, GPP, ln(MSE/SIGMA)
263, 0.0151, 146.8452, 0.2137, 0.0189, 0.0000, 0.9374, 0.9030, 0
1e−12+2.167857735e1
51.102
50.651
50.203
49.752
49.301
48.853
48.402
47.951
47.503
47.052
UKESM1-0-LL
0.04
0.02
0.00
−0.02
−0.04
gpp_c_tan2
−0.04
−0.02
0.00
0.02
0.04
gpp_c_tan

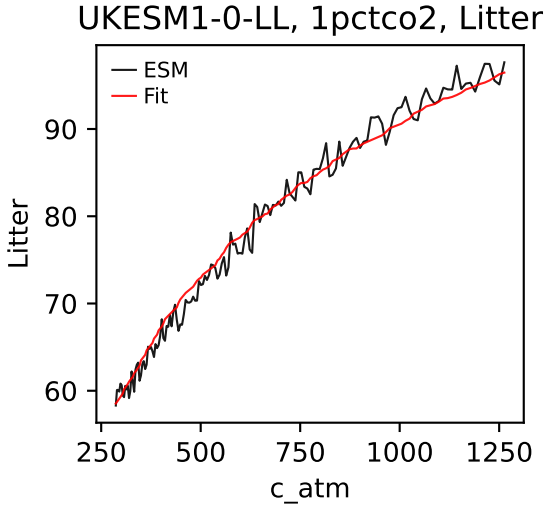

UKESM1-0-LL, 1pctco2, GPP, ln(MSE/SIGMA)
263, 0.0151, 146.8452, 0.2137, 0.0189, 0.0000, 0.9374, 0.9030, 0
1e−12+2.167857735e1
UKESM1-0-LL
gpp_slow
gpp_fast
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
0.90
0.92
0.94
0.96
0.98
1.00
51.102
50.651
50.203
49.752
49.301
48.853
48.402
47.951
47.503
47.052

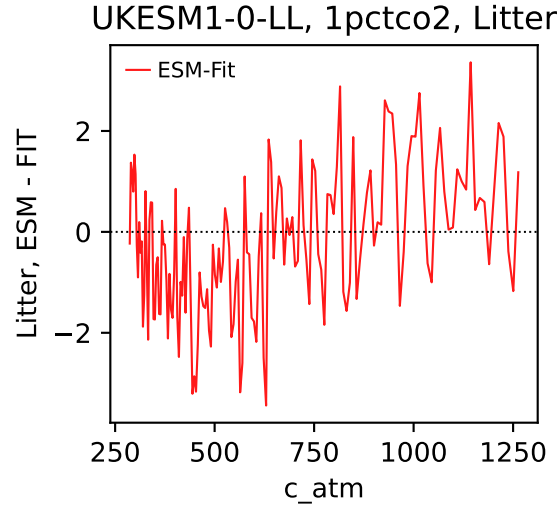

UKESM1-0-LL, 1pctco2, Litter
ESM
Fit
Litter
Year

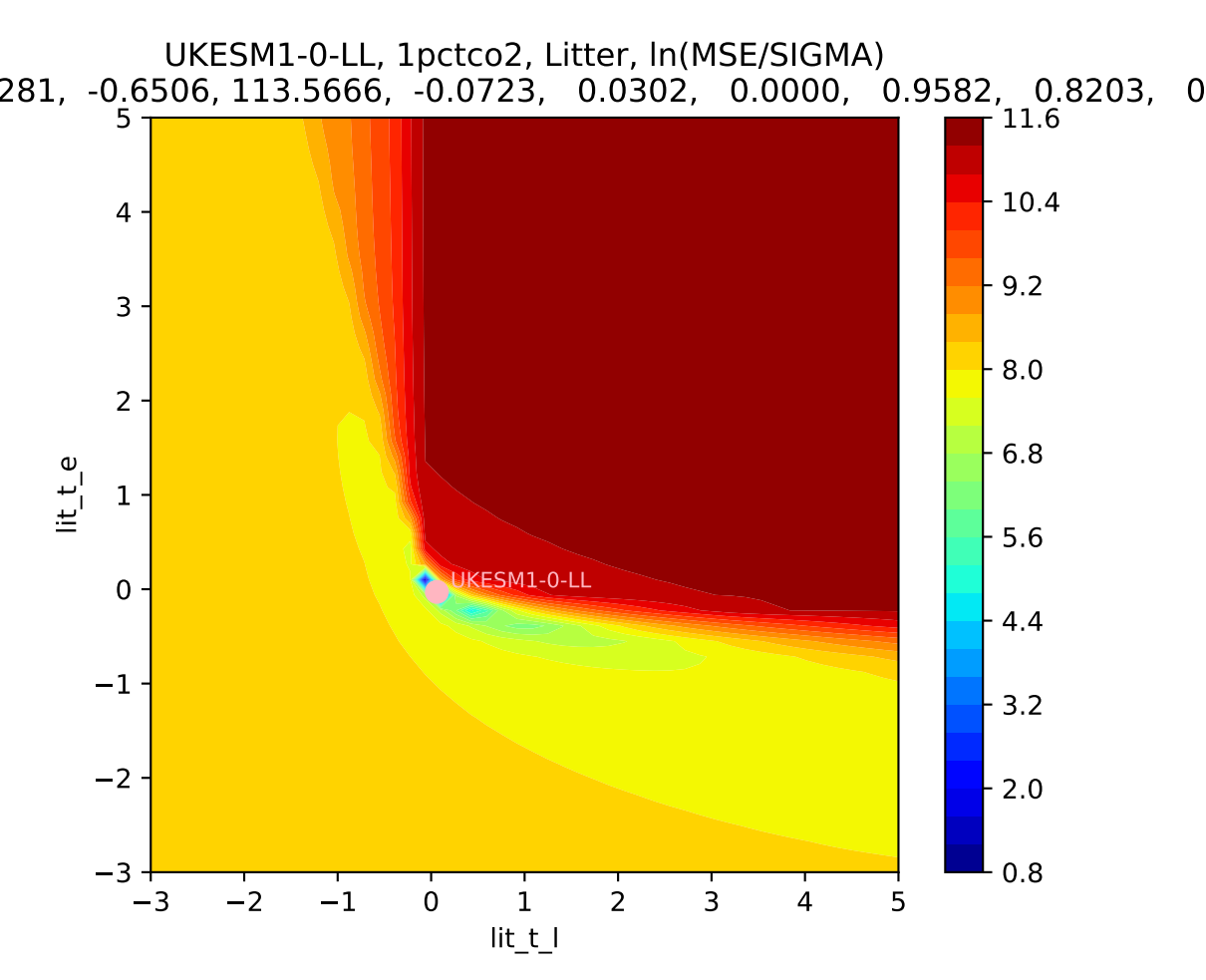

UKESM1-0-LL, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
Year

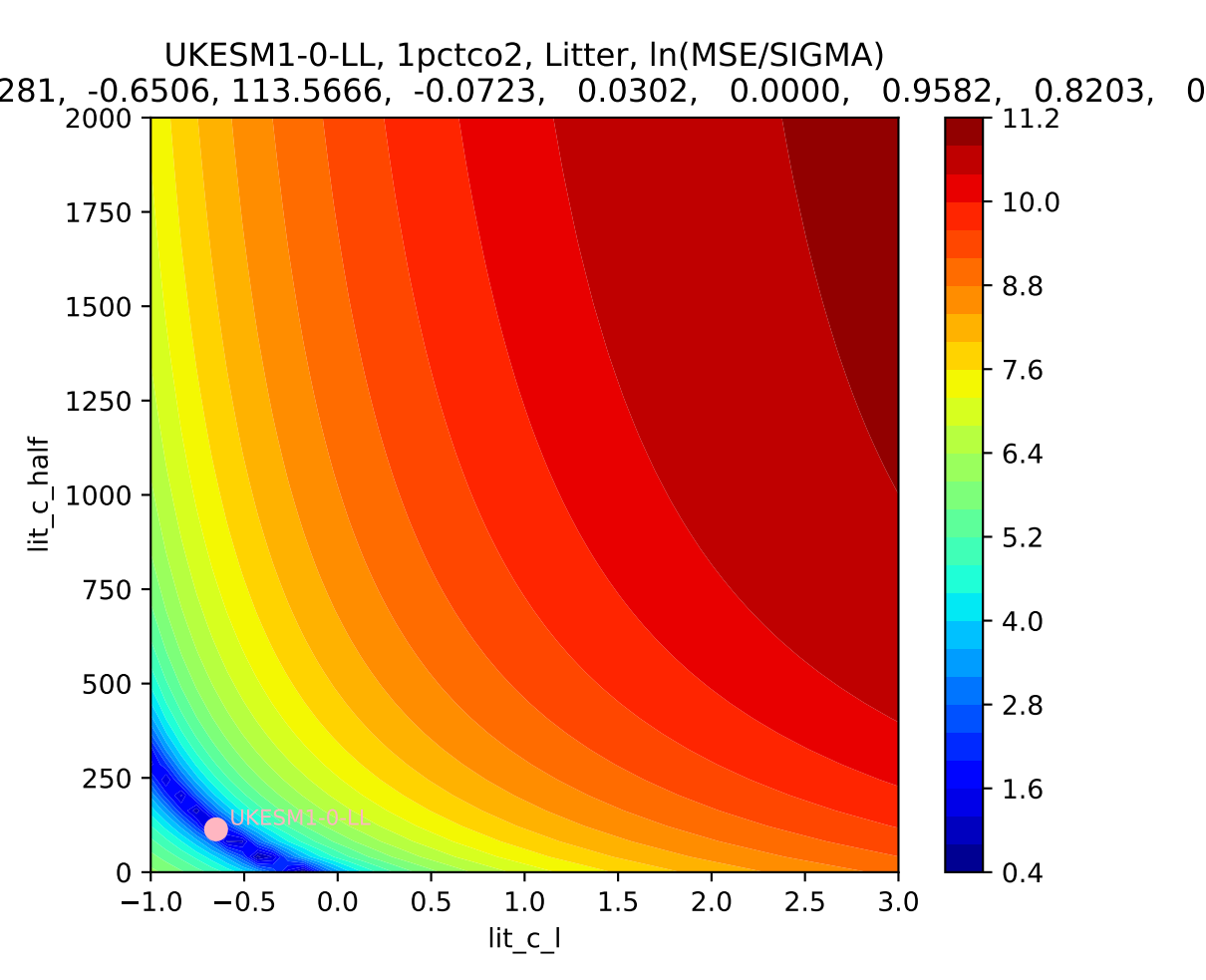

UKESM1-0-LL, 1pctco2, Litter
ESM
Fit
Litter
ΔT

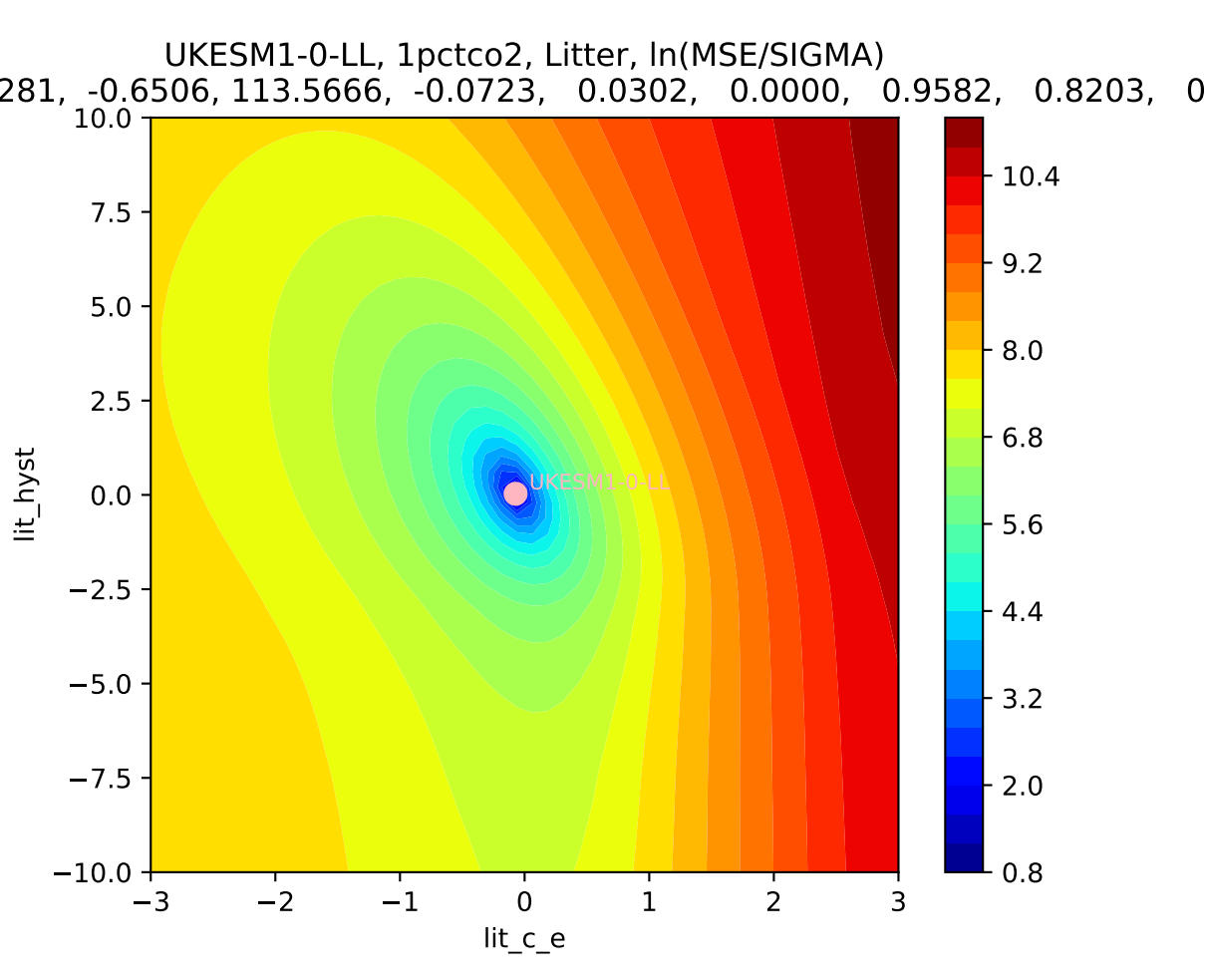

UKESM1-0-LL, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
ΔT

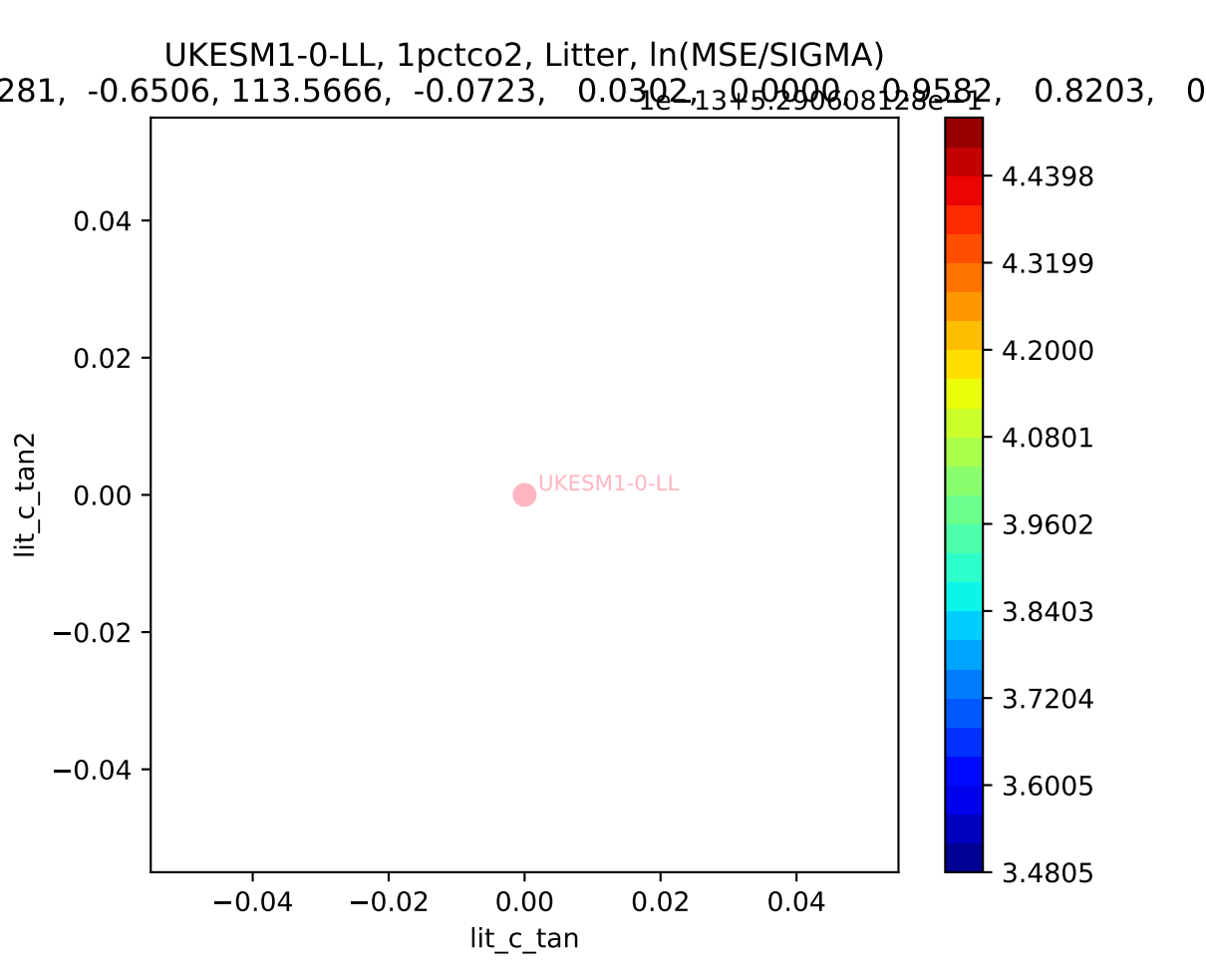

UKESM1-0-LL, 1pctco2, Litter
ESM
Fit
Litter
c_atm

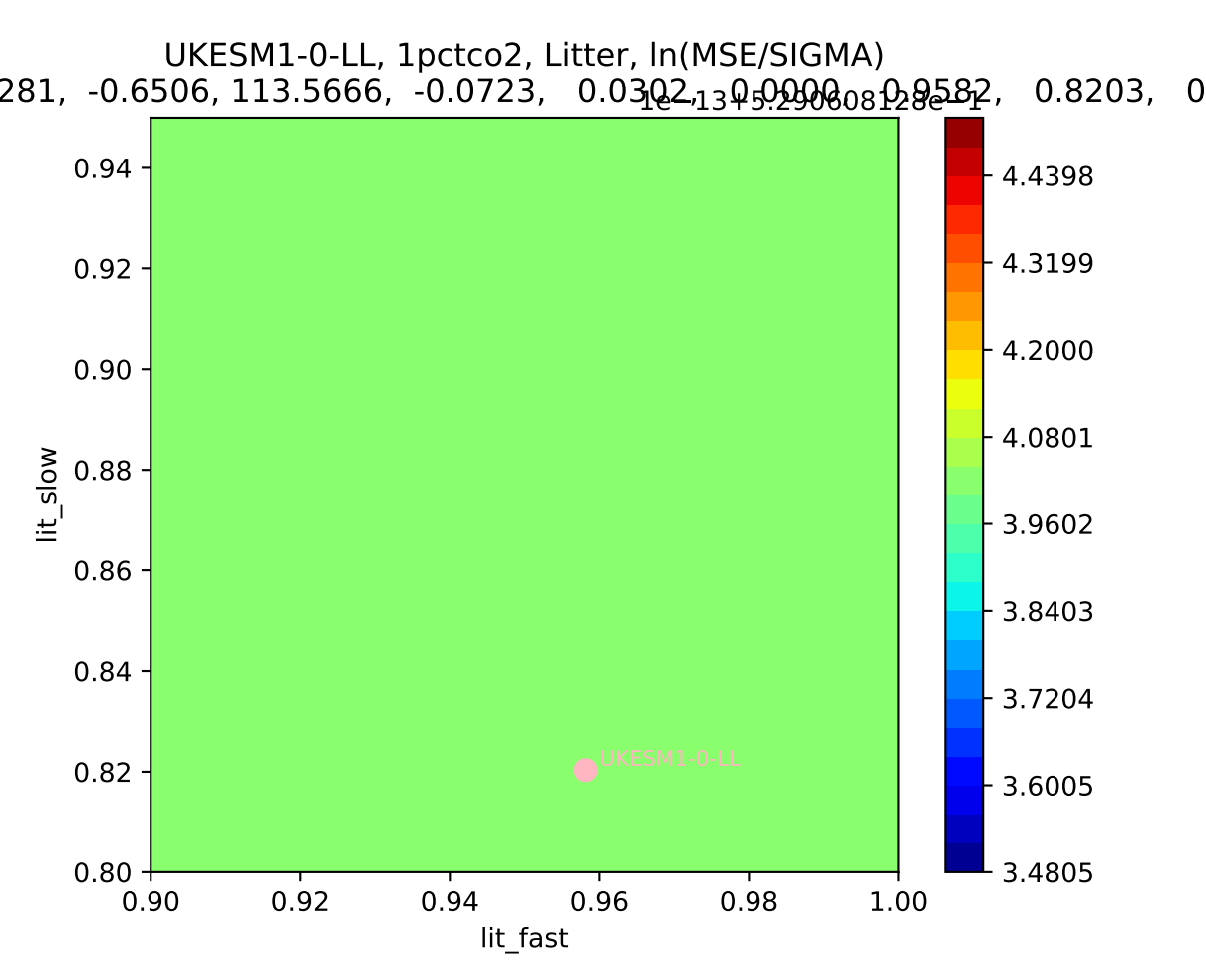

UKESM1-0-LL, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
c_atm

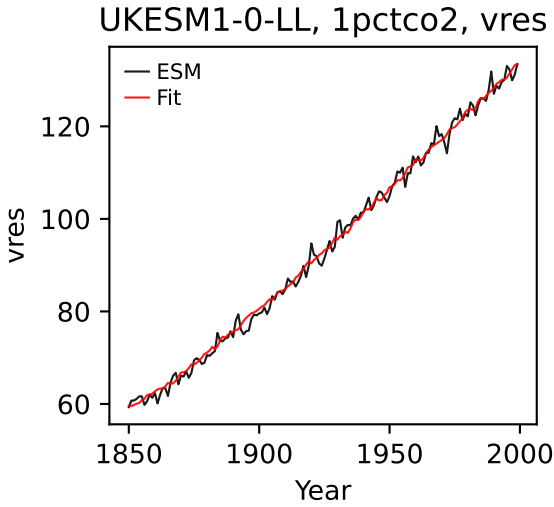

UKESM1-0-LL, 1pctco2, Litter, ln(MSE/SIGMA)
281, -0.6506, 113.5666, -0.0723, 0.0302, 0.0000, 0.9582, 0.8203, 0
UKESM1-0-LL
lit_t_e
lit_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
11.6
10.4
9.2
8.0
6.8
5.6
4.4
3.2
2.0
0.8

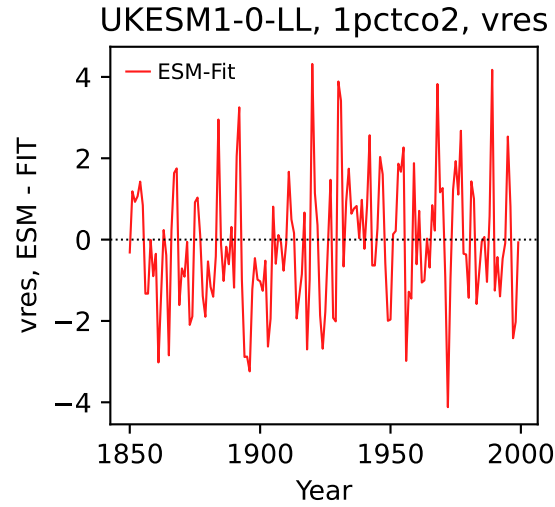

UKESM1-0-LL, 1pctco2, Litter, ln(MSE/SIGMA)
281, -0.6506, 113.5666, -0.0723, 0.0302, 0.0000, 0.9582, 0.8203, 0
lit_c_half
lit_c_l
UKESM1-0-LL
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
11.2
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6
0.4

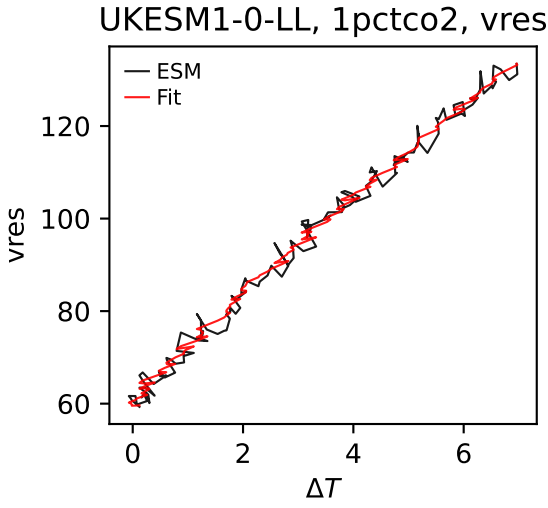

UKESM1-0-LL, 1pctco2, Litter, ln(MSE/SIGMA)
281, -0.6506, 113.5666, -0.0723, 0.0302, 0.0000, 0.9582, 0.8203, 0
lit_hyst
lit_c_e
UKESM1-0-LL
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
10.4
9.2
8.0
6.8
5.6
4.4
3.2
2.0
0.8

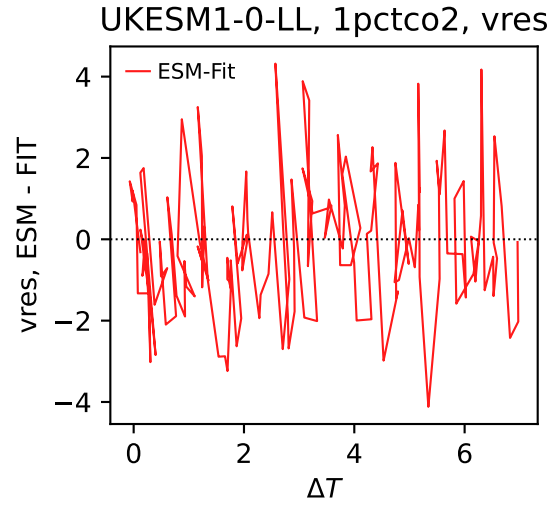

UKESM1-0-LL, 1pctco2, Litter, ln(MSE/SIGMA)
281, -0.6506, 113.5666, -0.0723, 0.0302, 0.0000, 0.9582, 0.8203, 0
1e−13+5.290608128e−1
UKESM1-0-LL
lit_c_tan2
lit_c_tan
0.04
0.02
0.00
−0.02
−0.04
4.4398
4.3199
4.2000
4.0801
3.9602
3.8403
3.7204
3.6005
3.4805

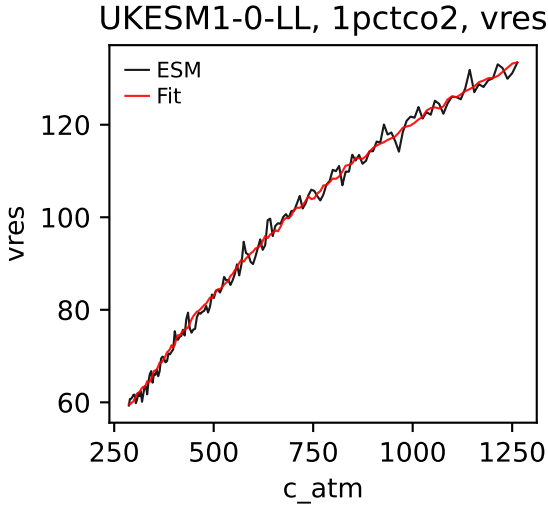

UKESM1-0-LL, 1pctco2, Litter, ln(MSE/SIGMA)
281, -0.6506, 113.5666, -0.0723, 0.0302, 0.0000, 0.9582, 0.8203, 0
1e−13+5.290608128e−1
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
lit_slow
0.90
0.92
0.94
0.96
0.98
1.00
lit_fast
UKESM1-0-LL
4.4398
4.3199
4.2000
4.0801
3.9602
3.8403
3.7204
3.6005
3.4805

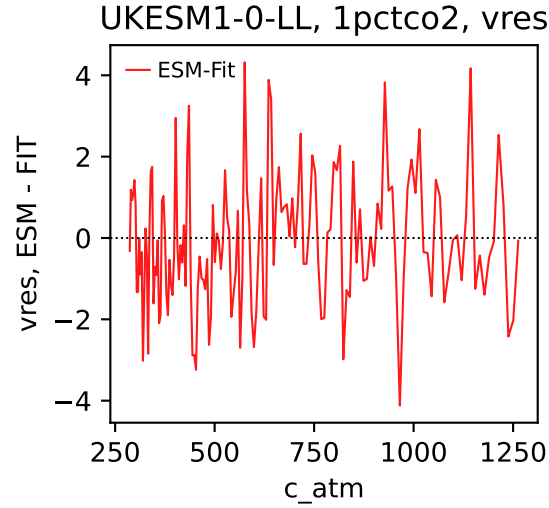

UKESM1-0-LL, 1pctco2, vres
ESM
Fit
vres
Year

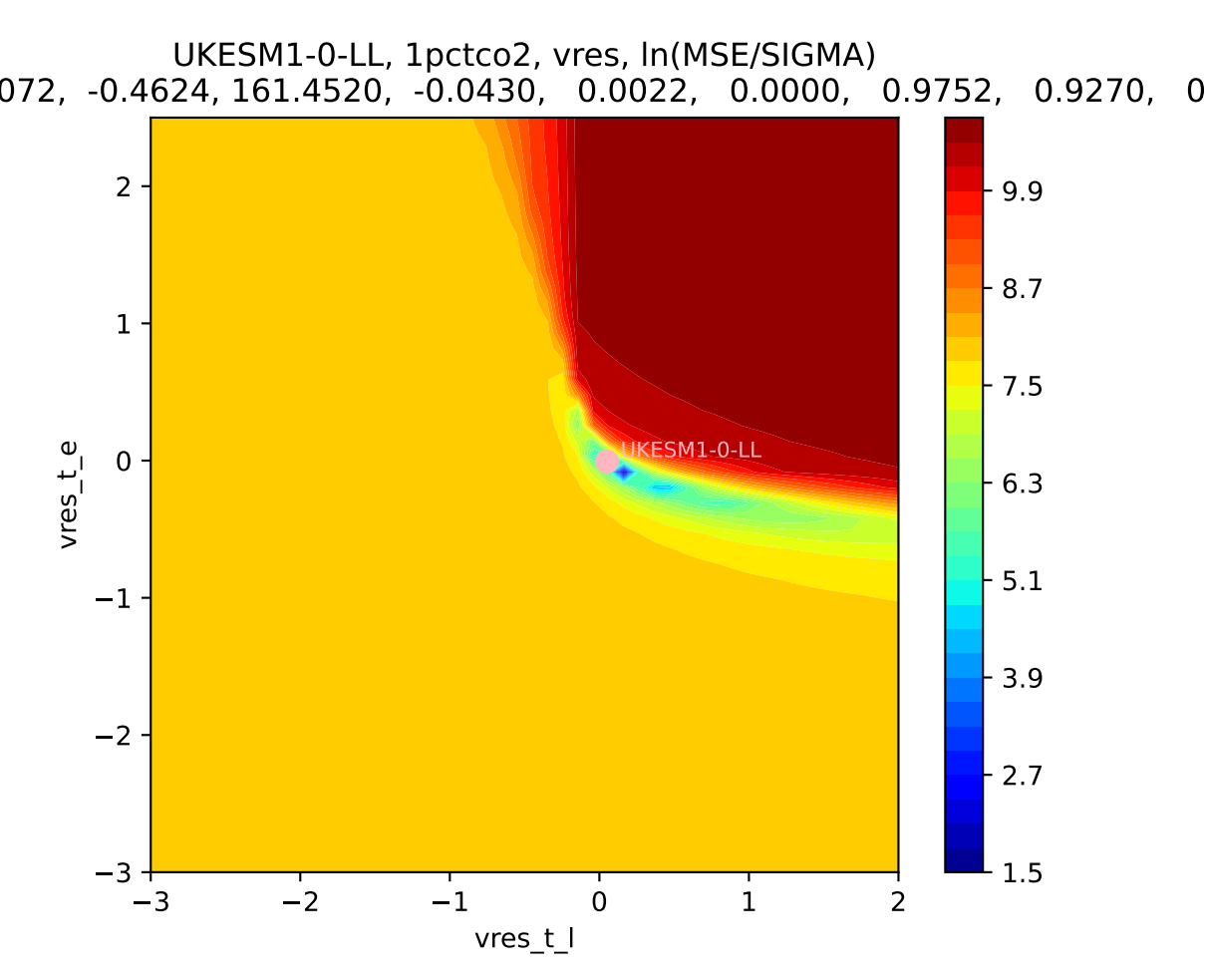

UKESM1-0-LL, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
Year

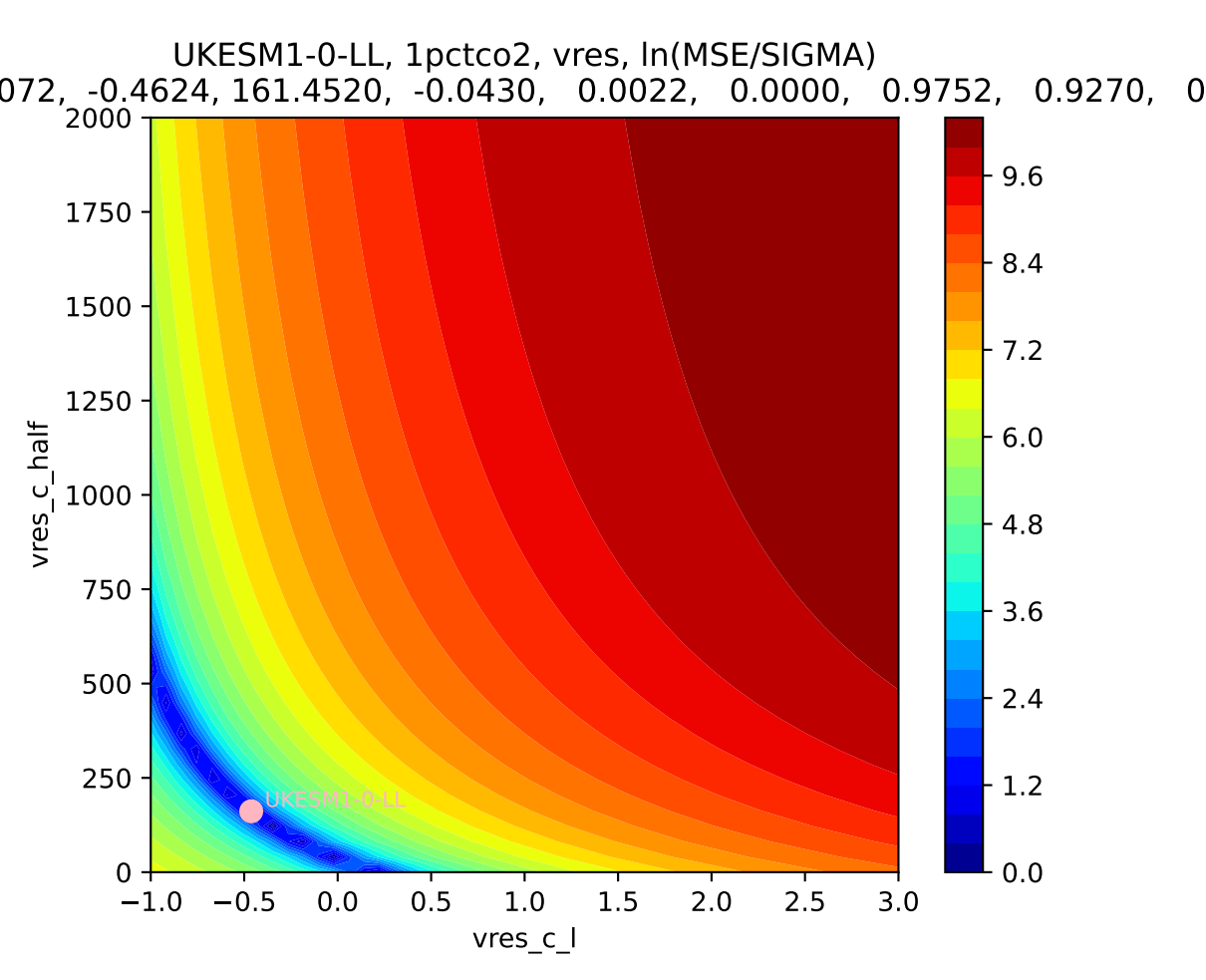

UKESM1-0-LL, 1pctco2, vres
ESM
Fit
vres
ΔT

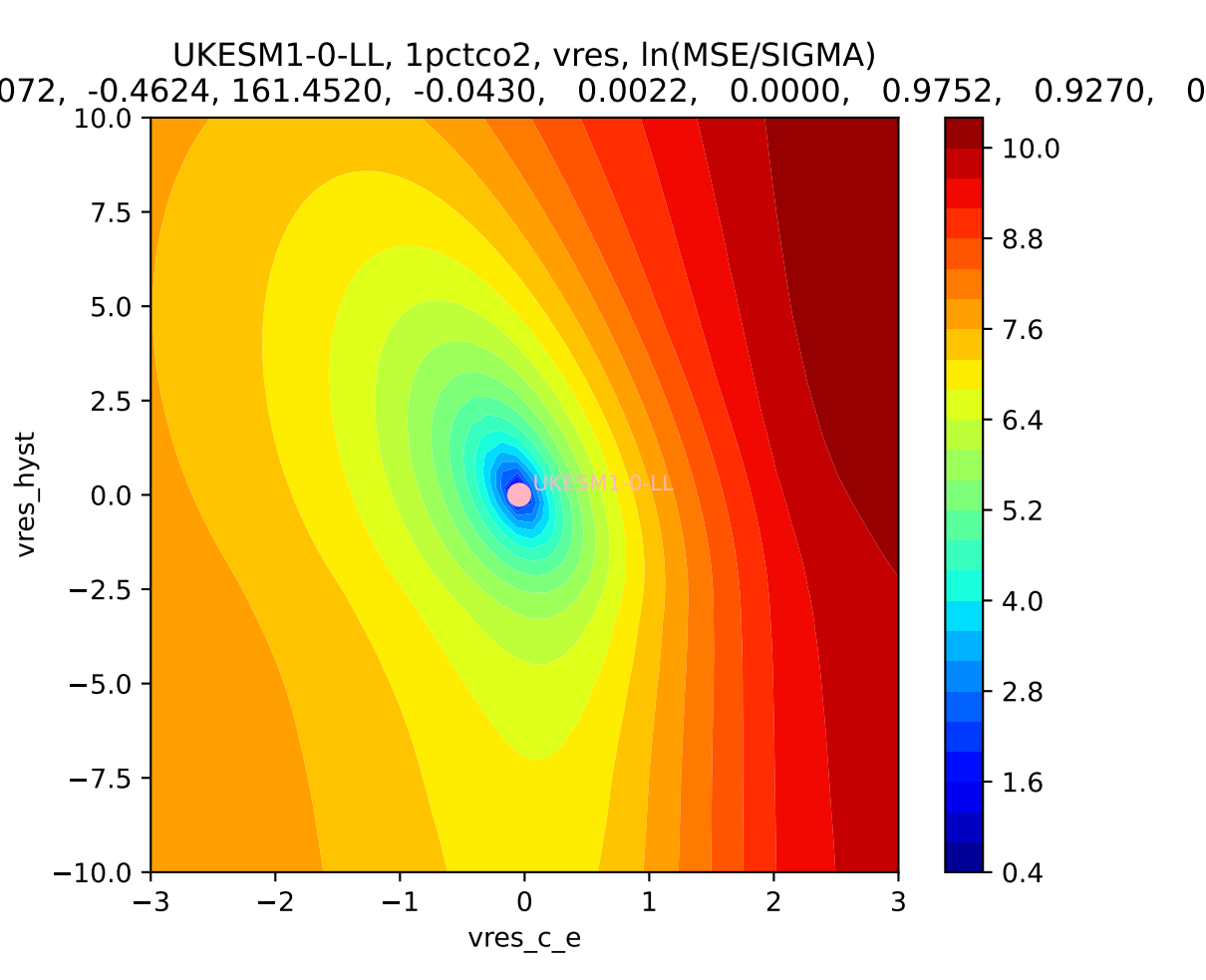

UKESM1-0-LL, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
ΔT

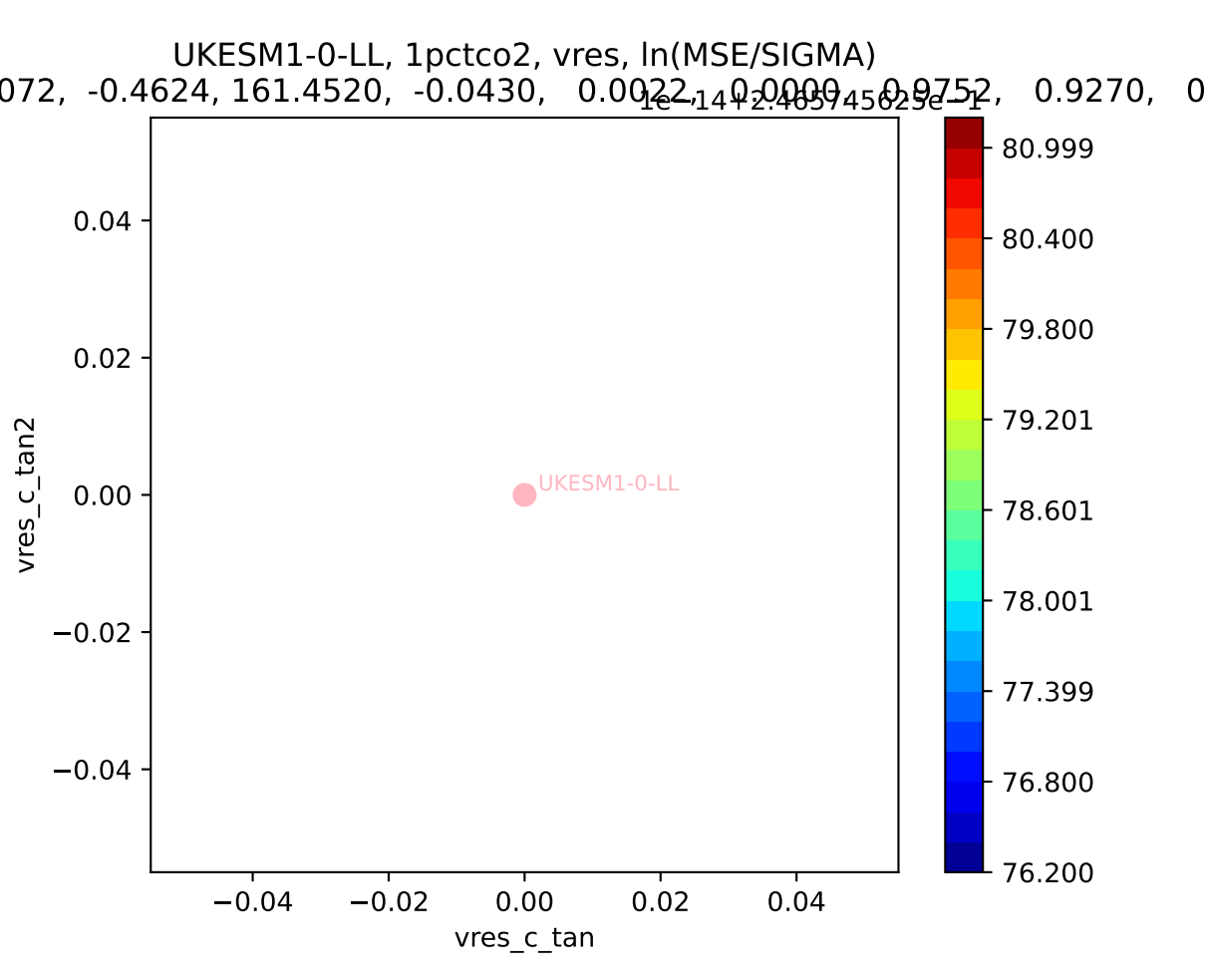

UKESM1-0-LL, 1pctco2, vres
ESM
Fit
vres
c_atm

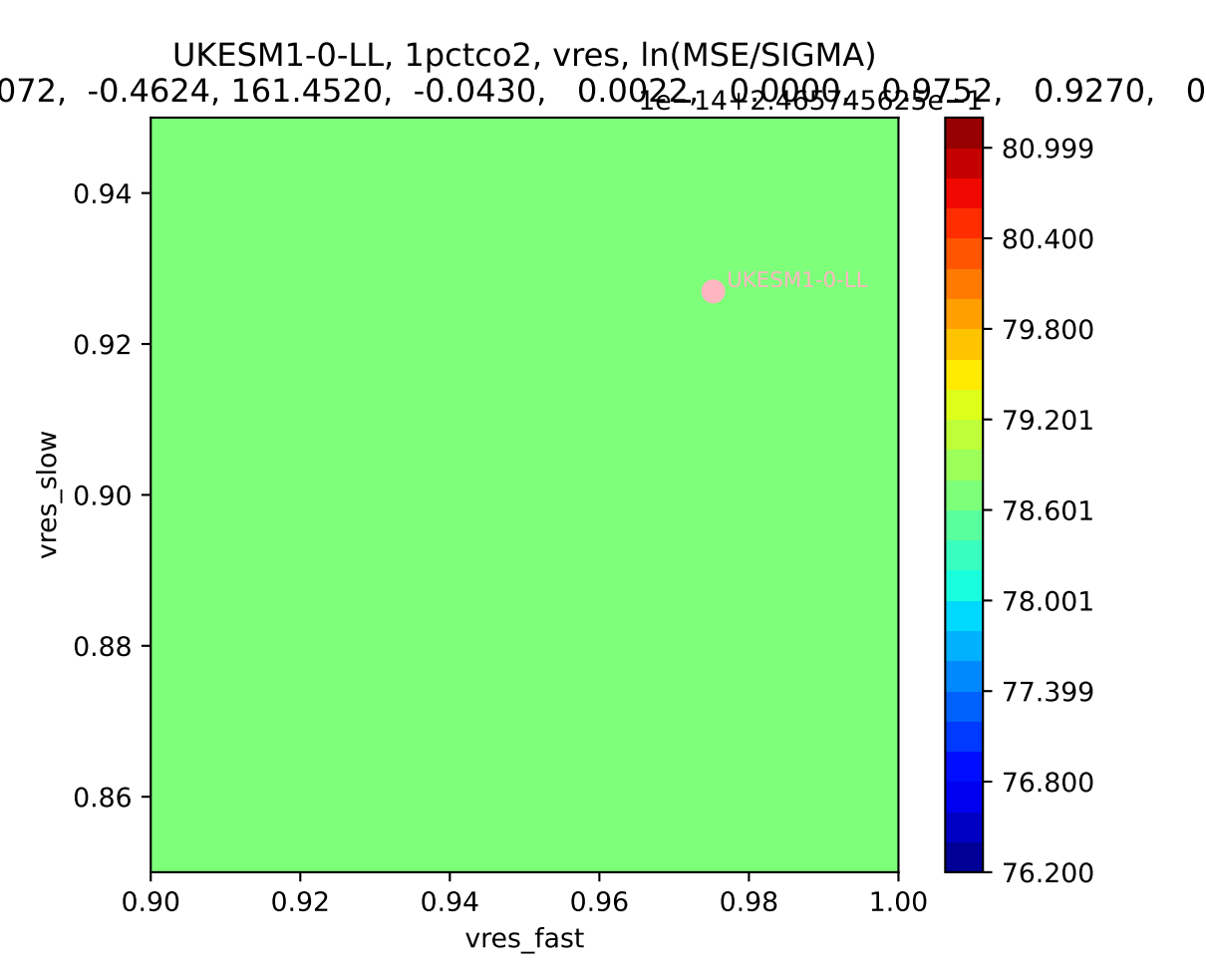

UKESM1-0-LL, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
c_atm

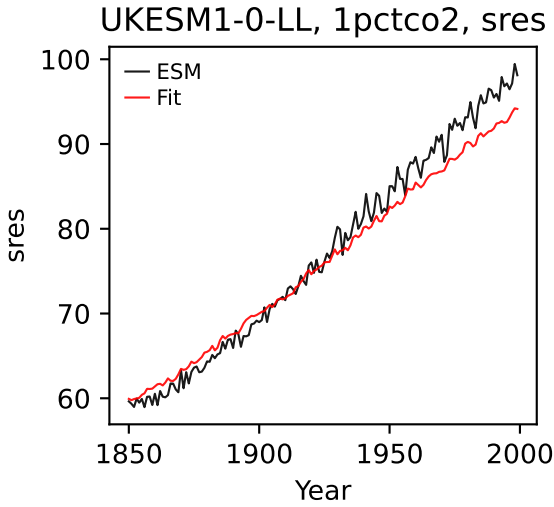

UKESM1-0-LL, 1pctco2, vres, ln(MSE/SIGMA)
072, -0.4624, 161.4520, -0.0430, 0.0022, 0.0000, 0.9752, 0.9270, 0
UKESM1-0-LL
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5

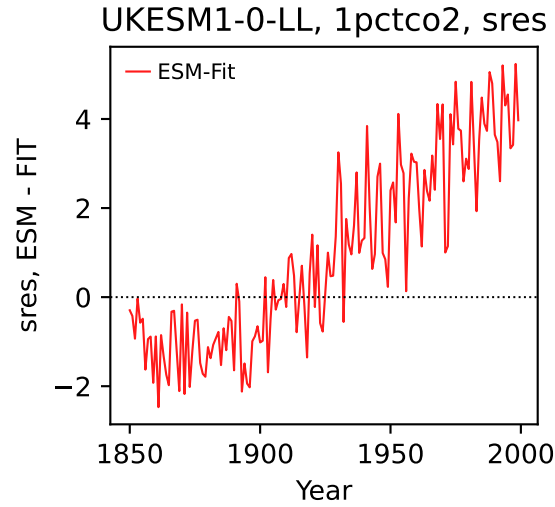

UKESM1-0-LL, 1pctco2, vres, ln(MSE/SIGMA)
072, -0.4624, 161.4520, -0.0430, 0.0022, 0.0000, 0.9752, 0.9270, 0
vres_c_half
vres_c_l
UKESM1-0-LL
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

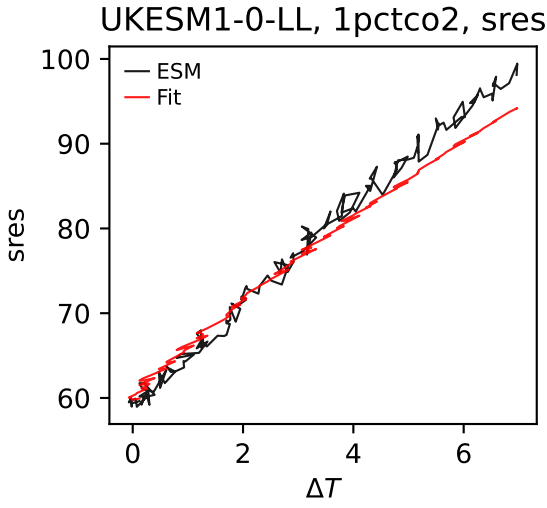

UKESM1-0-LL, 1pctco2, vres, ln(MSE/SIGMA)
072, -0.4624, 161.4520, -0.0430, 0.0022, 0.0000, 0.9752, 0.9270, 0
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
vres_hyst
UKESM1-0-LL
−3
−2
−1
0
1
2
3
vres_c_e
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6
0.4

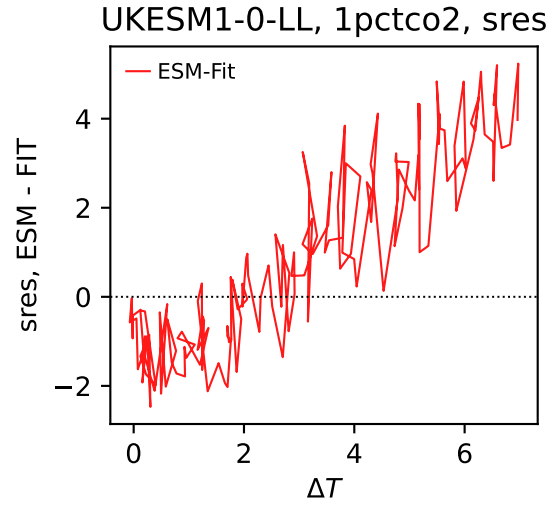

UKESM1-0-LL, 1pctco2, vres, ln(MSE/SIGMA)
072, -0.4624, 161.4520, -0.0430, 0.0022, 0.0000, 0.9752, 0.9270, 0
1e−14+2.465745625e−1
80.999
80.400
79.800
79.201
78.601
78.001
77.399
76.800
76.200
0.04
0.02
0.00
−0.02
−0.04
vres_c_tan2
UKESM1-0-LL
−0.04
−0.02
0.00
0.02
0.04
vres_c_tan

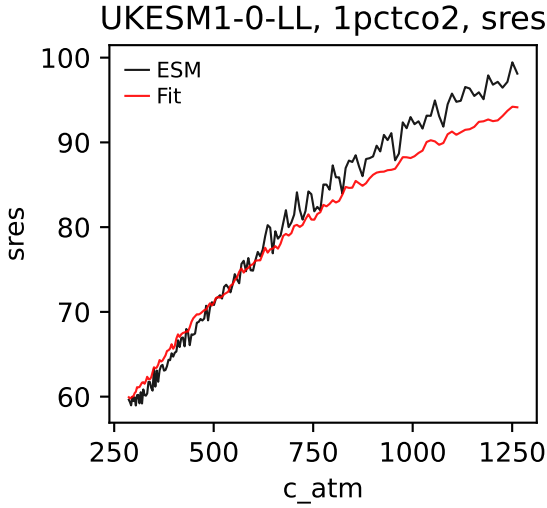

UKESM1-0-LL, 1pctco2, vres, ln(MSE/SIGMA)
072, -0.4624, 161.4520, -0.0430, 0.0022, 0.0000, 0.9752, 0.9270, 0
1e−14+2.465745625e−1
UKESM1-0-LL
vres_slow
vres_fast
0.94
0.92
0.90
0.88
0.86
0.90
0.92
0.94
0.96
0.98
1.00
80.999
80.400
79.800
79.201
78.601
78.001
77.399
76.800
76.200

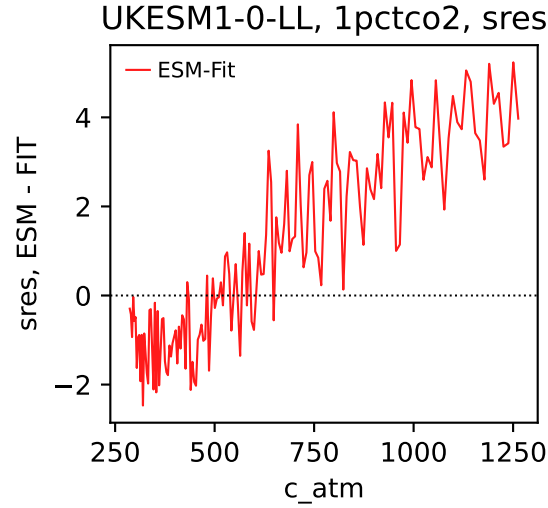

UKESM1-0-LL, 1pctco2, sres
ESM
Fit
sres
Year

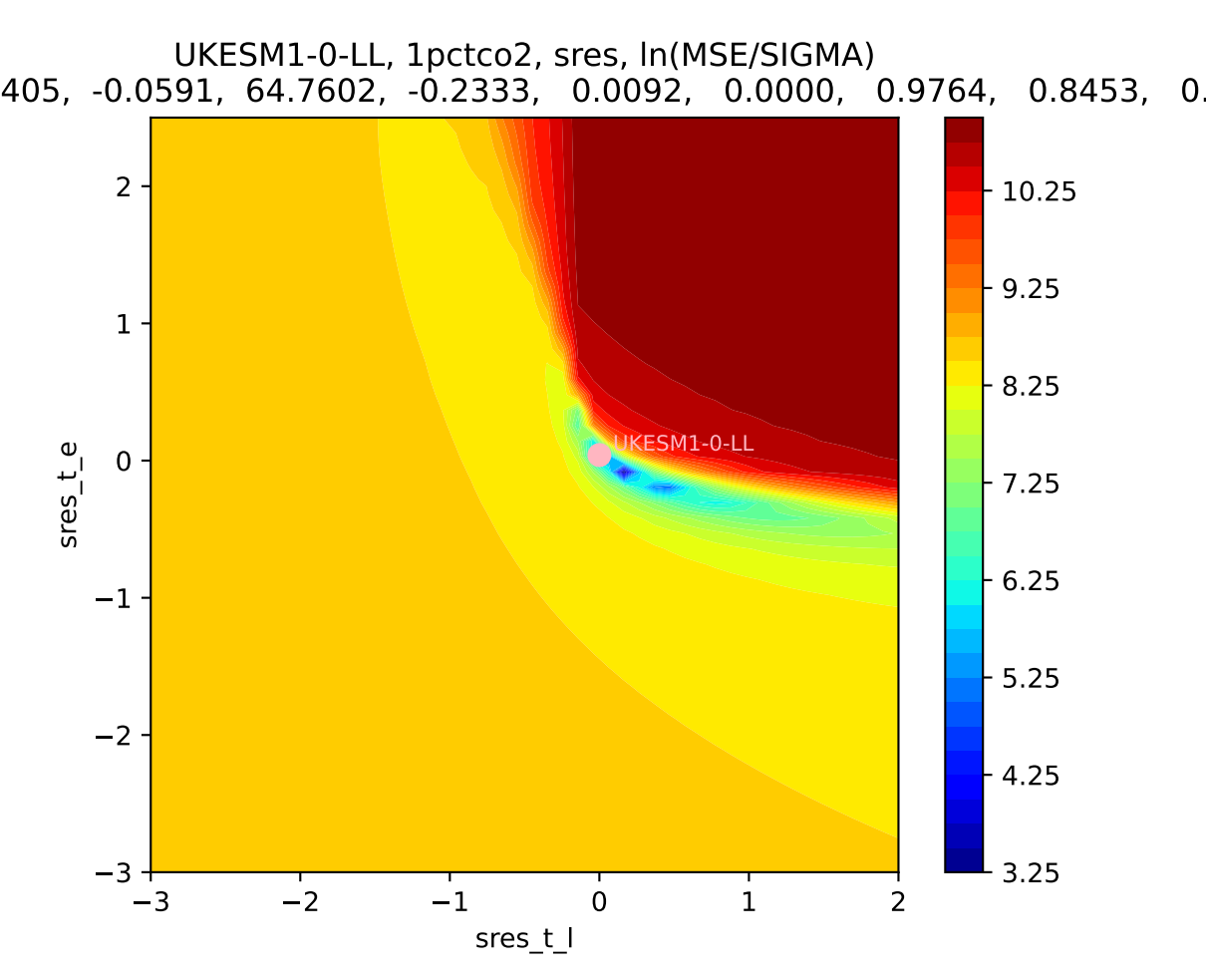

UKESM1-0-LL, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
Year

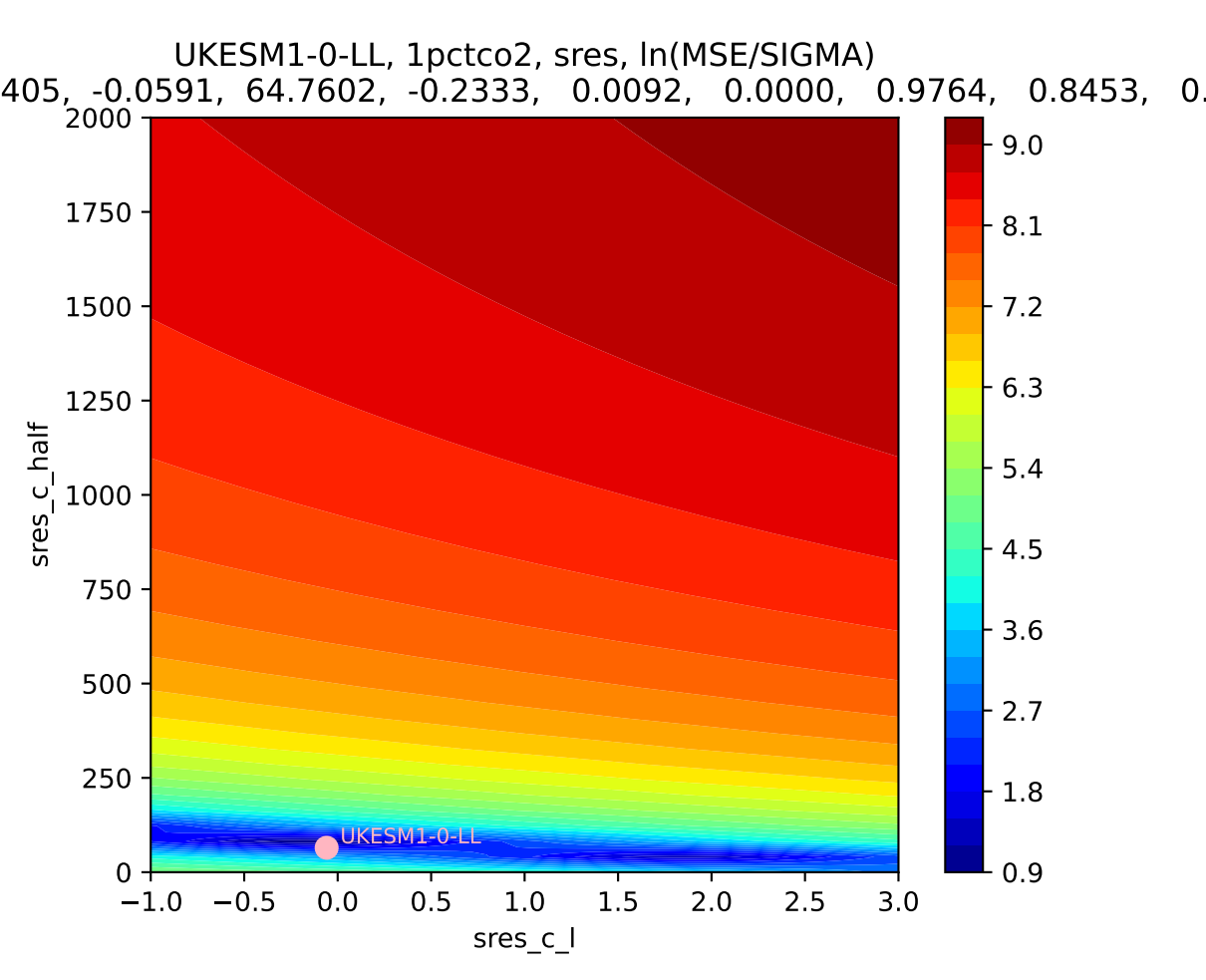

UKESM1-0-LL, 1pctco2, sres
ESM
Fit
sres
ΔT

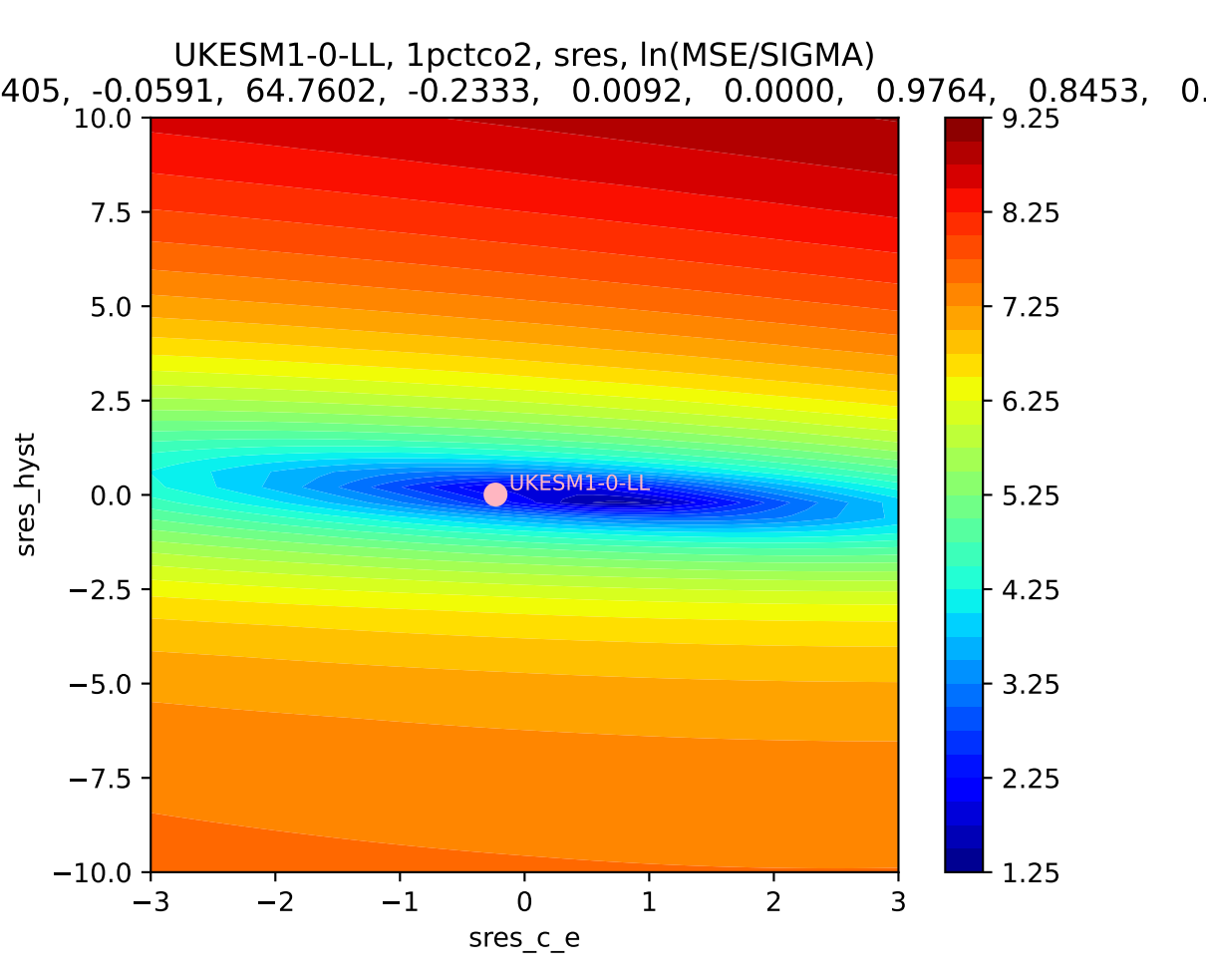

UKESM1-0-LL, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
ΔT

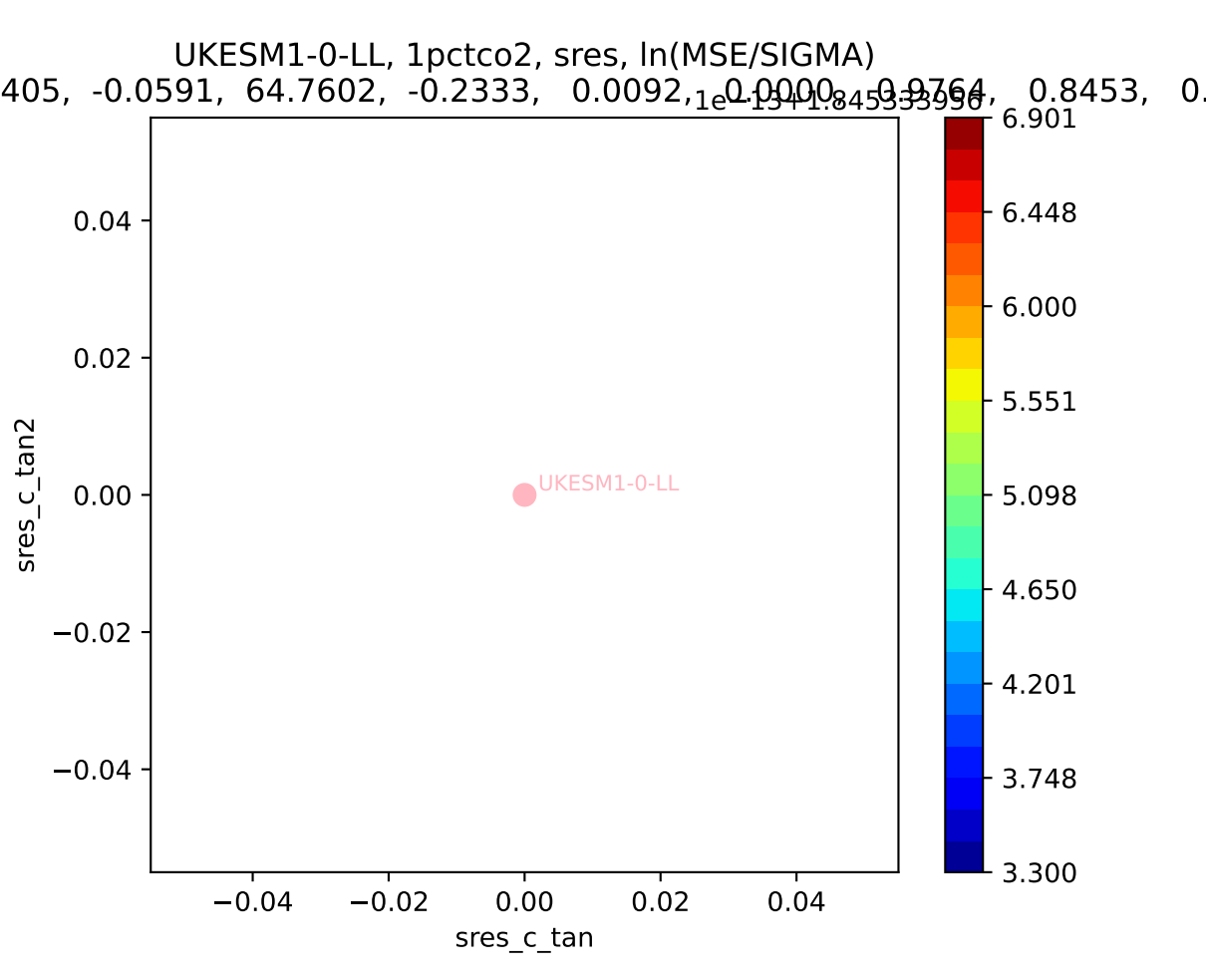

UKESM1-0-LL, 1pctco2, sres
ESM
Fit
sres
c_atm

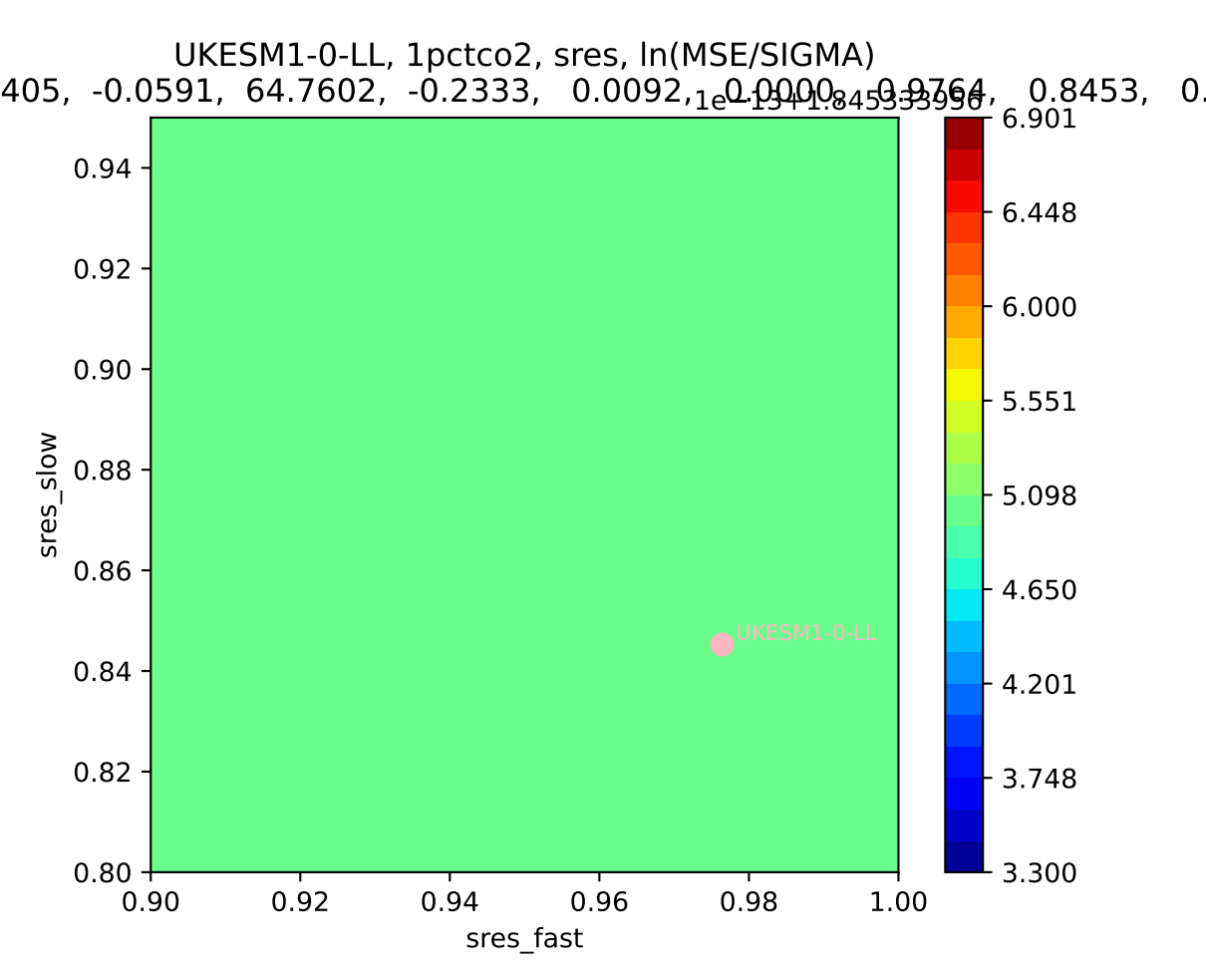

UKESM1-0-LL, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
c_atm

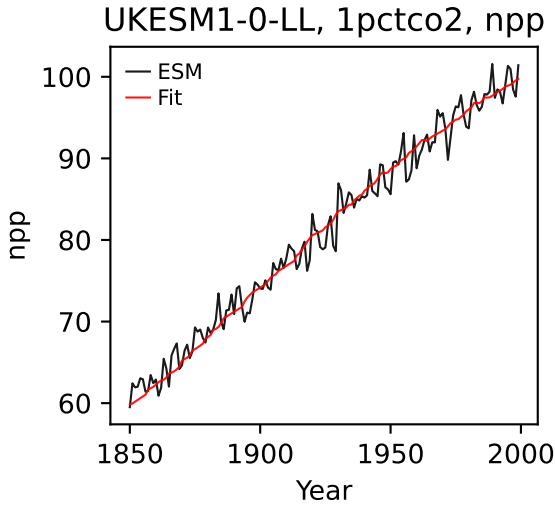

UKESM1-0-LL, 1pctco2, sres, ln(MSE/SIGMA)
405, -0.0591, 64.7602, -0.2333, 0.0092, 0.0000, 0.9764, 0.8453, 0.
UKESM1-0-LL
sres_t_e
sres_t_l
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
10.25
9.25
8.25
7.25
6.25
5.25
4.25
3.25

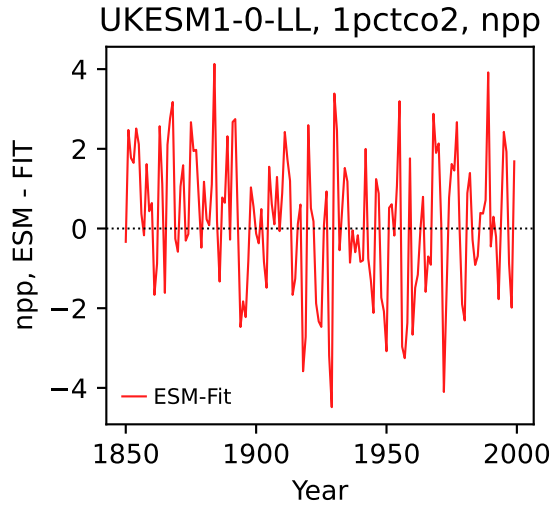

UKESM1-0-LL, 1pctco2, sres, ln(MSE/SIGMA)
405, -0.0591, 64.7602, -0.2333, 0.0092, 0.0000, 0.9764, 0.8453, 0.
sres_c_half
sres_c_l
UKESM1-0-LL
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8
0.9

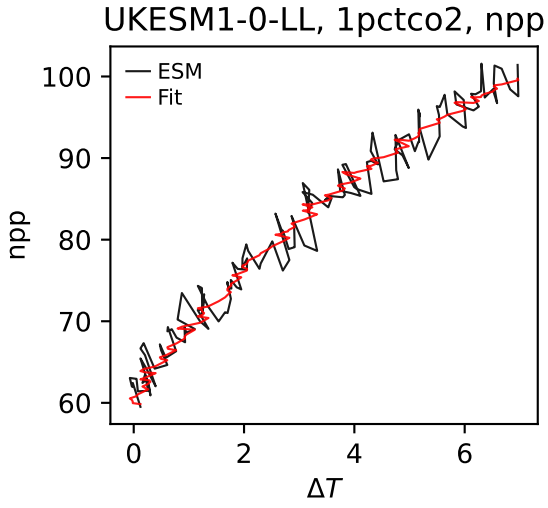

UKESM1-0-LL, 1pctco2, sres, ln(MSE/SIGMA)
405, -0.0591, 64.7602, -0.2333, 0.0092, 0.0000, 0.9764, 0.8453, 0.
UKESM1-0-LL
sres_hyst
sres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
9.25
8.25
7.25
6.25
5.25
4.25
3.25
2.25
1.25

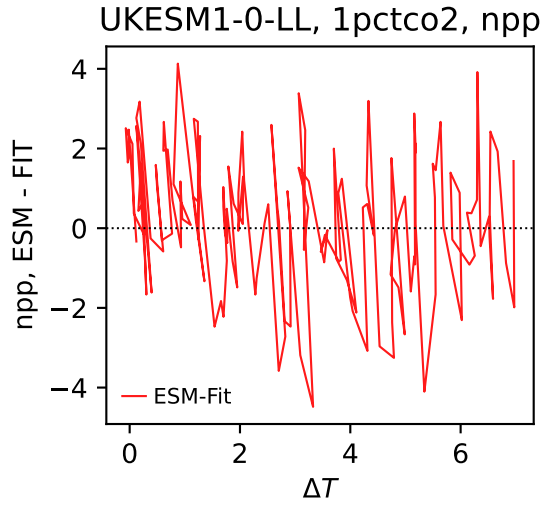

UKESM1-0-LL, 1pctco2, sres, ln(MSE/SIGMA)
405, -0.0591, 64.7602, -0.2333, 0.0092, 0.0000, 0.9764, 0.8453, 0.
1e-1341.845333956
UKESM1-0-LL
sres_c_tan2
sres_c_tan
0.04
0.02
0.00
−0.02
−0.04
6.901
6.448
6.000
5.551
5.098
4.650
4.201
3.748
3.300

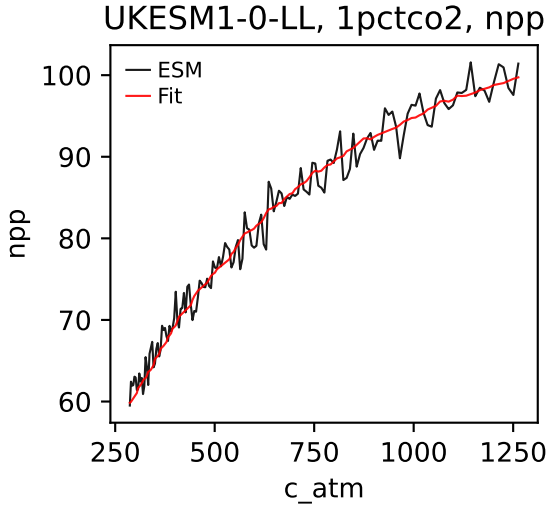

UKESM1-0-LL, 1pctco2, sres, ln(MSE/SIGMA)
405, -0.0591, 64.7602, -0.2333, 0.0092, 0.0000, 0.9764, 0.8453, 0.
1e-13 41.845333956
6.901
6.448
6.000
5.551
5.098
4.650
4.201
3.748
3.300
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
sres_slow
UKESM1-0-LL
0.90
0.92
0.94
0.96
0.98
1.00
sres_fast

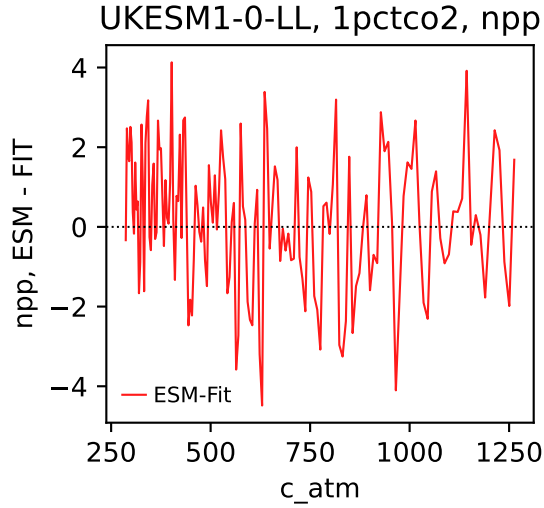

UKESM1-0-LL, 1pctco2, npp
ESM
Fit
npp
Year

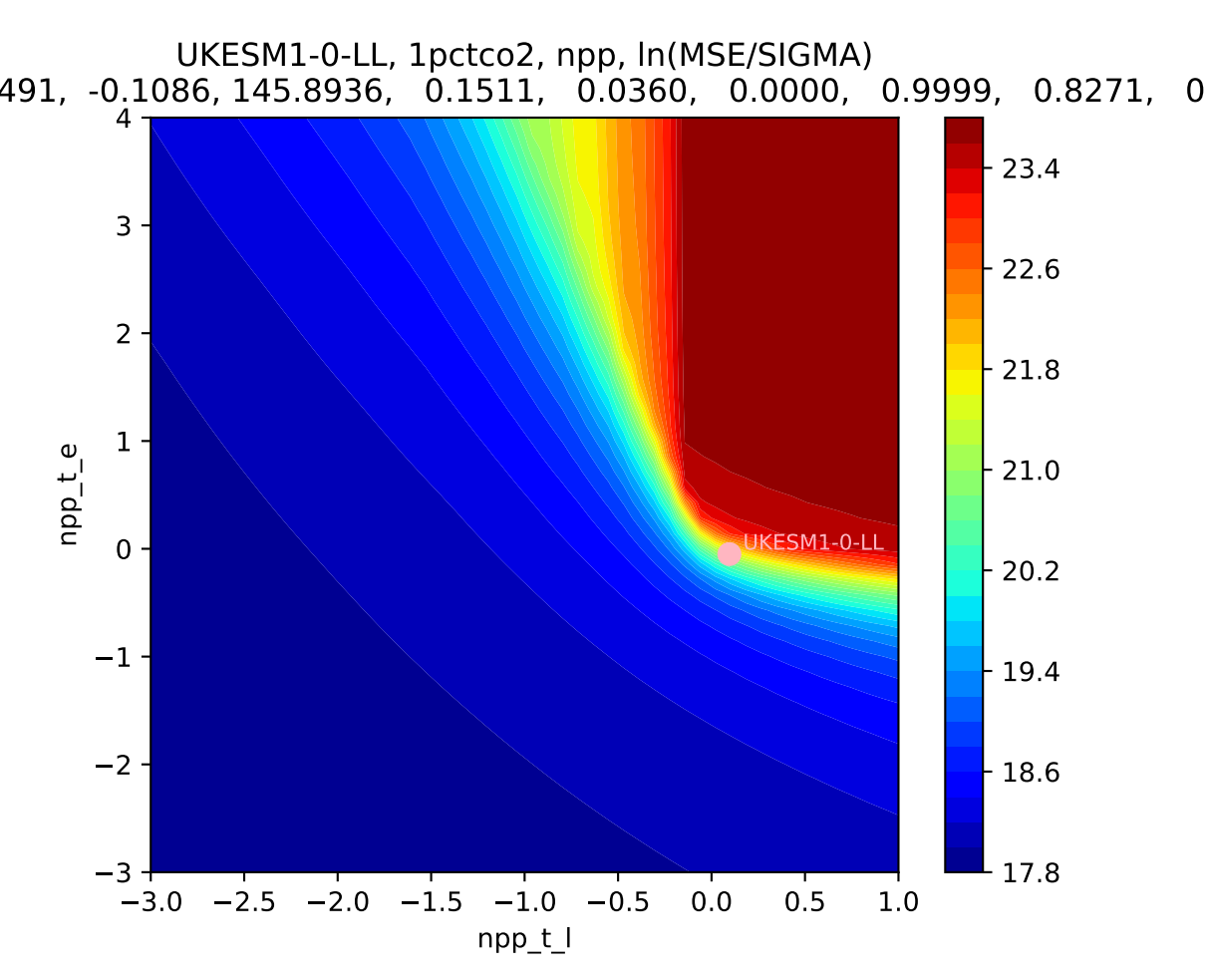

UKESM1-0-LL, 1pctco2, npp
npp, ESM - FIT
ESM-Fit
Year

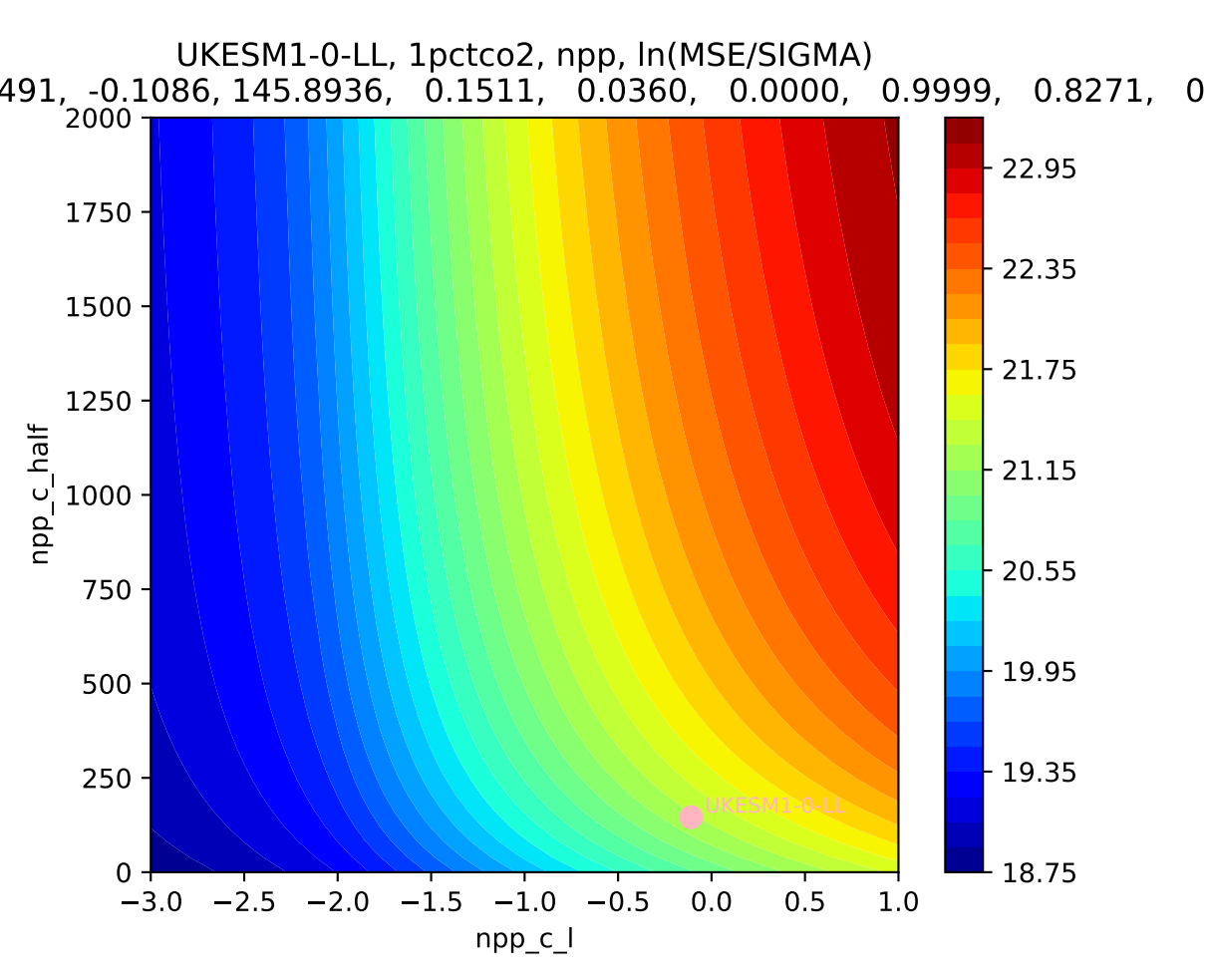

UKESM1-0-LL, 1pctco2, npp
ESM
Fit
npp
ΔT

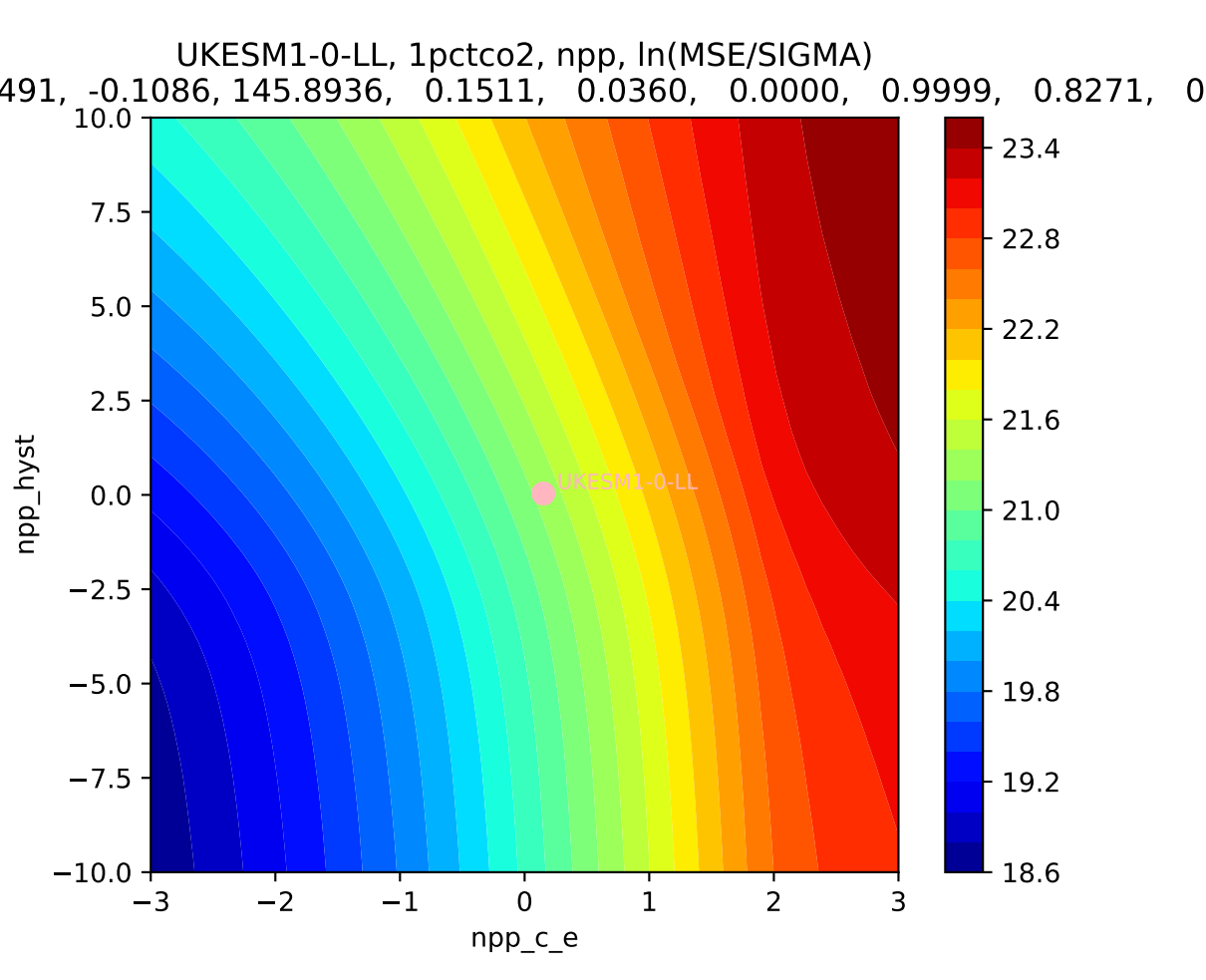

UKESM1-0-LL, 1pctco2, npp
npp, ESM - FIT
ESM-Fit
ΔT

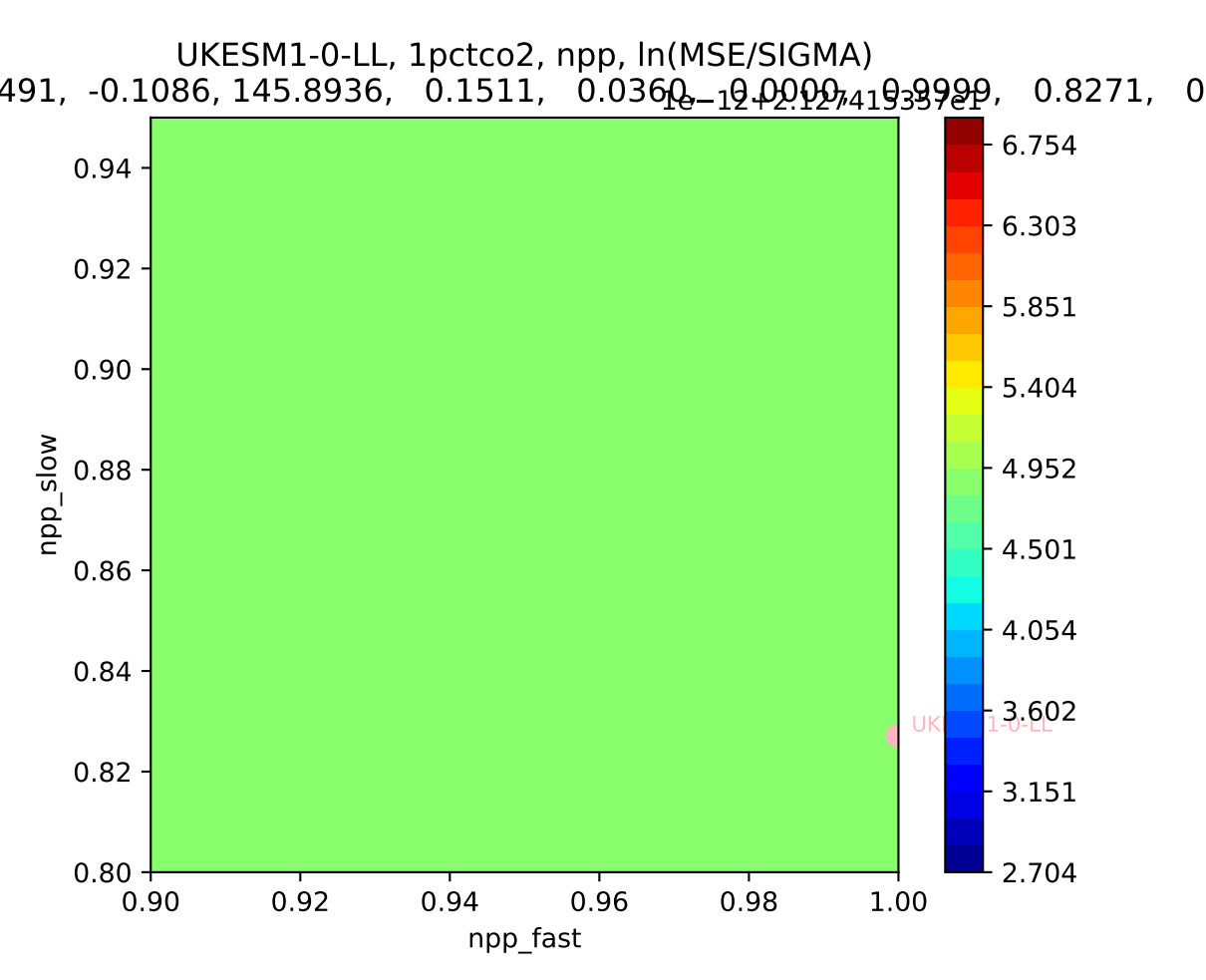

UKESM1-0-LL, 1pctco2, npp
ESM
Fit
npp
c_atm

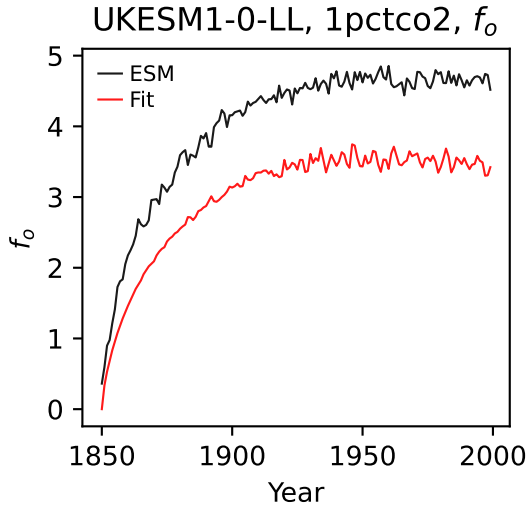

UKESM1-0-LL, 1pctco2, npp
npp, ESM - FIT
ESM-Fit
c_atm

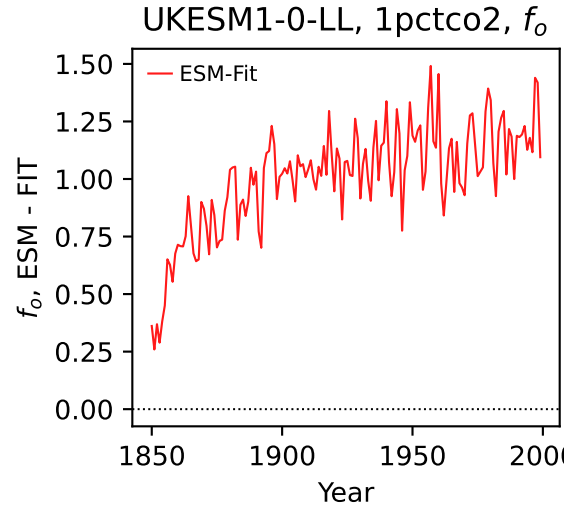

UKESM1-0-LL, 1pctco2, npp, ln(MSE/SIGMA)
491, -0.1086, 145.8936, 0.1511, 0.0360, 0.0000, 0.9999, 0.8271, 0
npp_t_e
npp_t_l
UKESM1-0-LL
4
3
2
1
0
−1
−2
−3
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
23.4
22.6
21.8
21.0
20.2
19.4
18.6
17.8

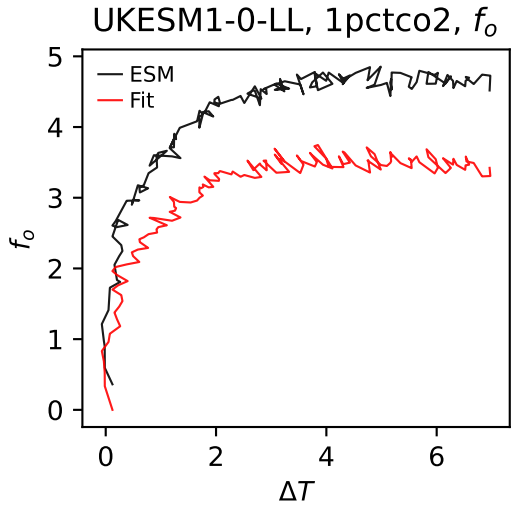

UKESM1-0-LL, 1pctco2, npp, ln(MSE/SIGMA)
491, -0.1086, 145.8936, 0.1511, 0.0360, 0.0000, 0.9999, 0.8271, 0
2000
1750
1500
1250
1000
750
500
250
0
npp_c_half
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
npp_c_l
UKESM1-0-LL
22.95
22.35
21.75
21.15
20.55
19.95
19.35
18.75

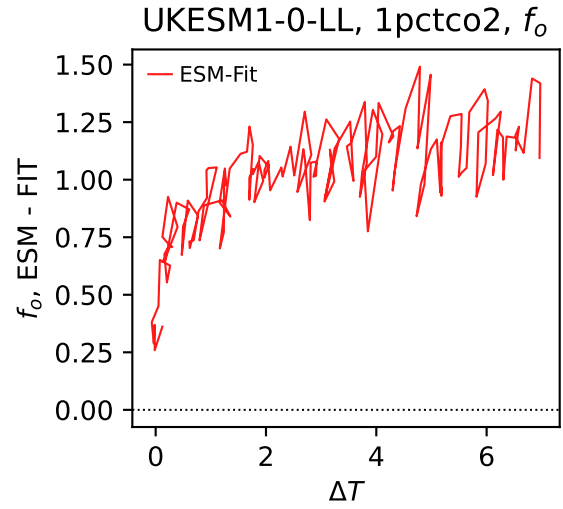

UKESM1-0-LL, 1pctco2, npp, ln(MSE/SIGMA)
491, -0.1086, 145.8936, 0.1511, 0.0360, 0.0000, 0.9999, 0.8271, 0
UKESM1-0-LL
npp_hyst
npp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
23.4
22.8
22.2
21.6
21.0
20.4
19.8
19.2
18.6

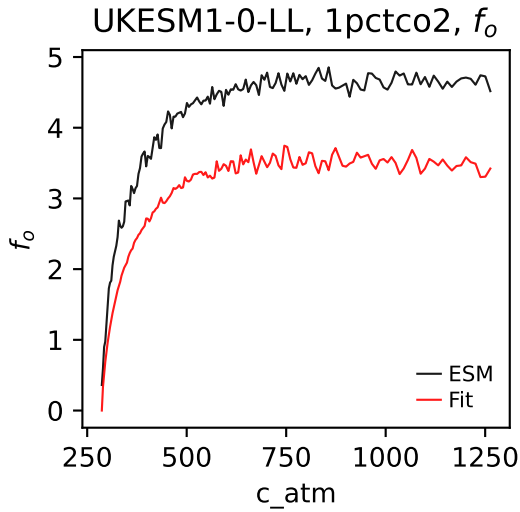

UKESM1-0-LL, 1pctco2, npp, ln(MSE/SIGMA)
491, -0.1086, 145.8936, 0.1511, 0.0360, 0.0000, 0.9999, 0.8271, 0
1e−12+2.127415337e1
6.754
6.303
5.851
5.404
4.952
4.501
4.054
3.602
3.151
2.704
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
npp_slow
0.90
0.92
0.94
0.96
0.98
1.00
npp_fast

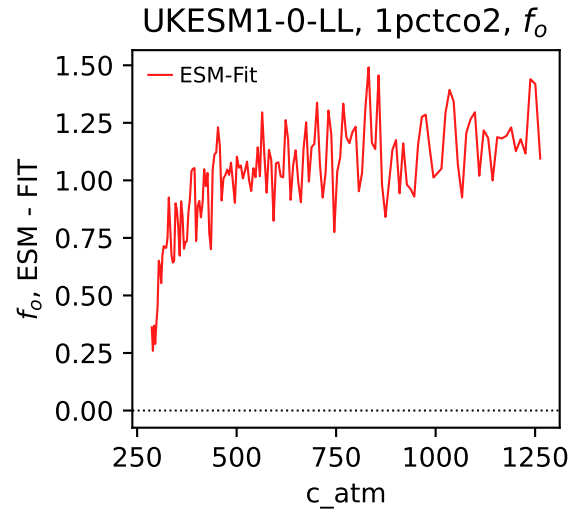

UKESM1-0-LL, 1pctco2, f_o
ESM
Fit
f_o
Year

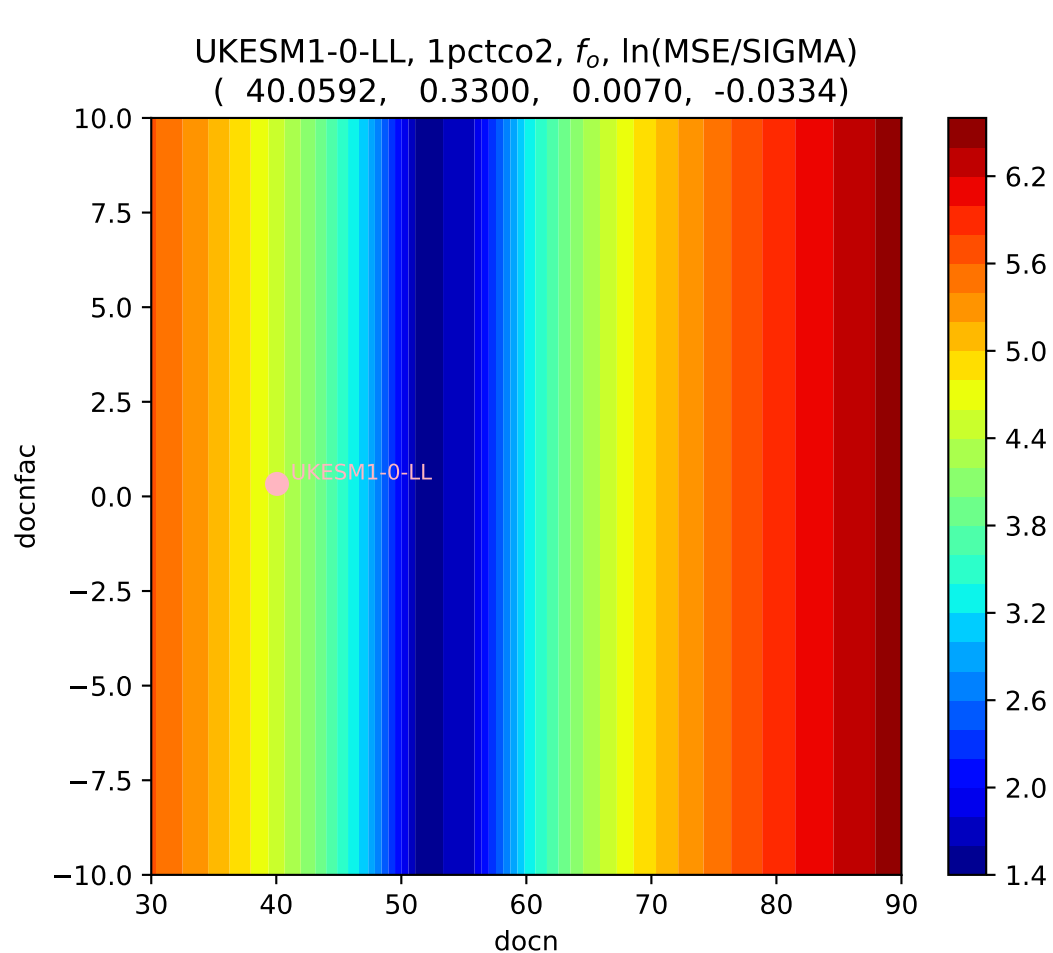

UKESM1-0-LL, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
Year

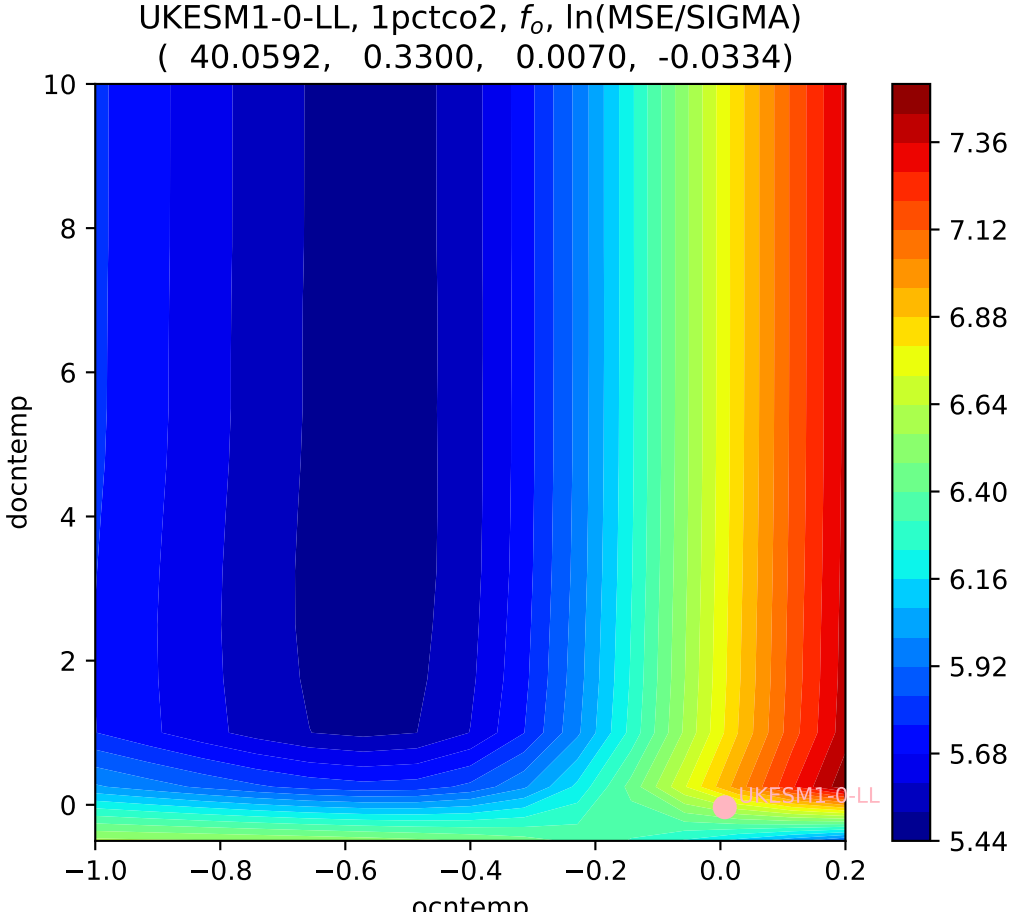

UKESM1-0-LL, 1pctco2, f_o
ESM
Fit
f_o
ΔT


UKESM1-0-LL, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
ΔT


UKESM1-0-LL, 1pctco2, f_o
ESM
Fit
f_o
c_atm


UKESM1-0-LL, 1pctco2, f_o
ESM-Fit
f_o, ESM - FIT
c_atm


UKESM1-0-LL, 1pctco2, f_o, ln(MSE/SIGMA)
(40.0592, 0.3300, 0.0070, -0.0334)
UKESM1-0-LL
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
6.2
5.6
5.0
4.4
3.8
3.2
2.6
2.0
1.4


UKESM1-0-LL, 1pctco2, f_o, ln(MSE/SIGMA)
(40.0592, 0.3300, 0.0070, -0.0334)
docntemp
ocntemp
10
8
6
4
2
0
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.36
7.12
6.88
6.64
6.40
6.16
5.92
5.68
5.44
UKESM1-0-LL