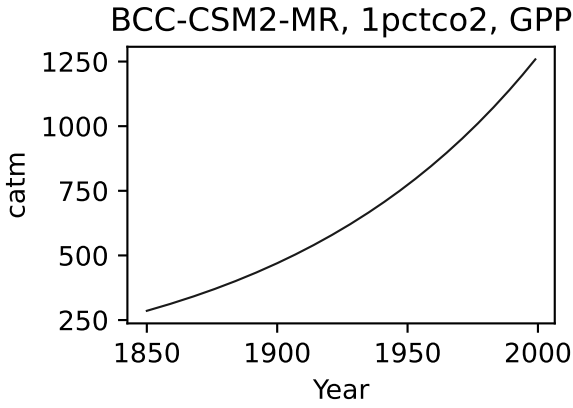
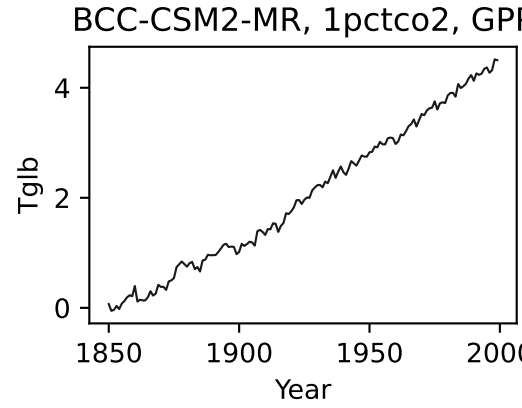
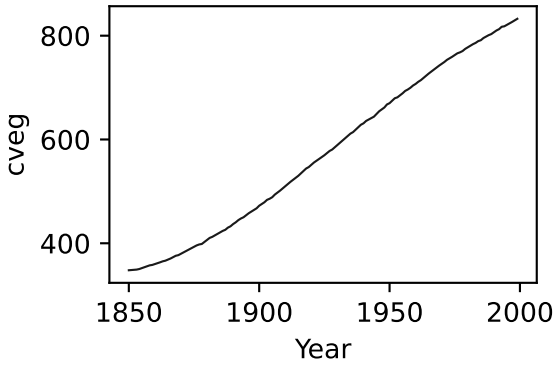
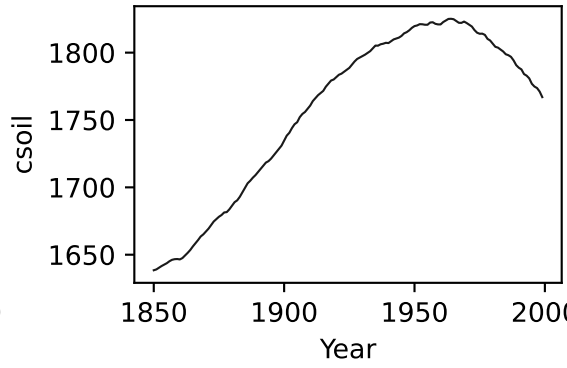
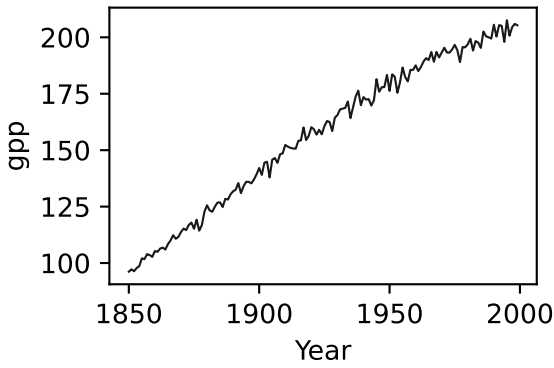
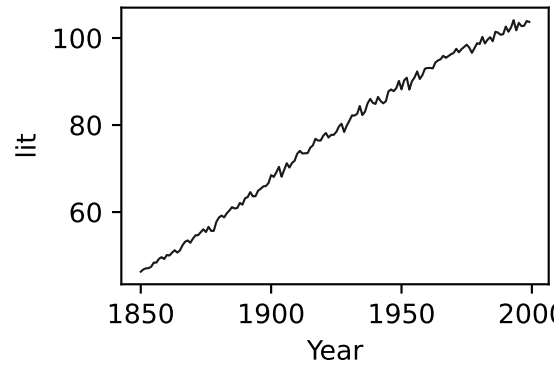

BCC-CSM2-MR, 1pctco2, GPP
catm
1250
1000
750
500
250
1850
1900
1950
2000
Year

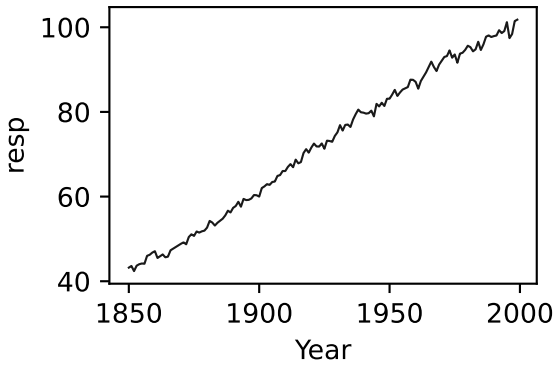

BCC-CSM2-MR, 1pctco2, GPP
Tglb
4
2
0
1850
1900
1950
2000
Year

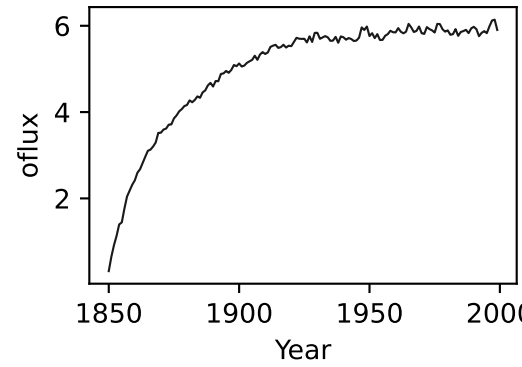

cveg
800
600
400
1850
1900
1950
2000
Year

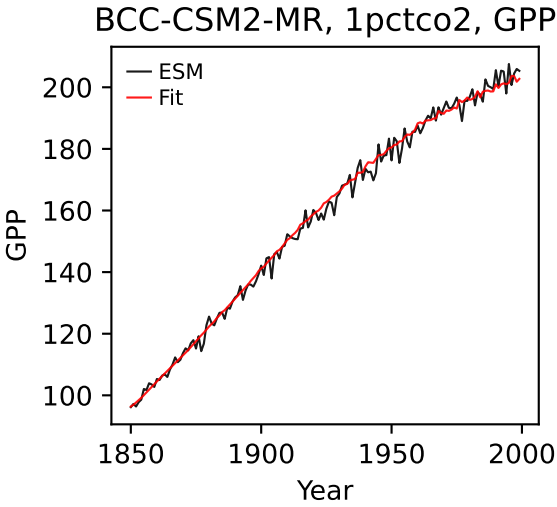

csoil
1800
1750
1700
1650
1850
1900
1950
2000
Year

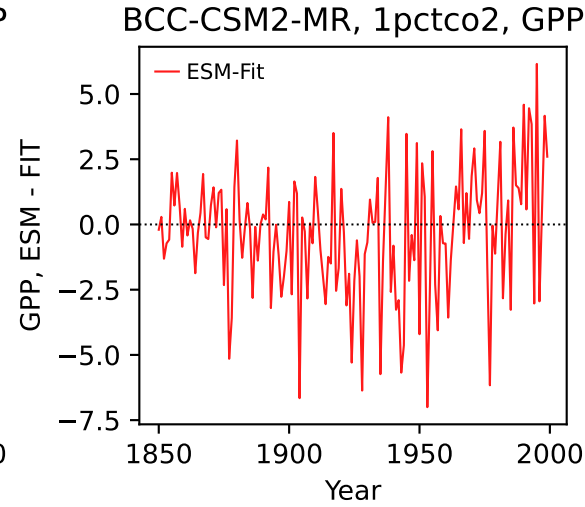

gpp
200
175
150
125
100
1850
1900
1950
2000
Year

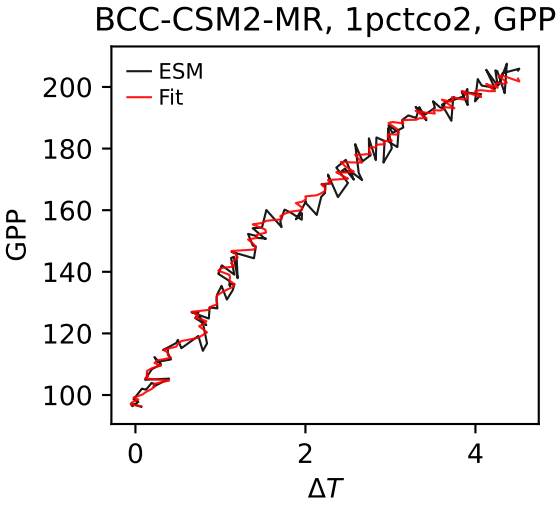

lit
100
80
60
1850
1900
1950
2000
Year

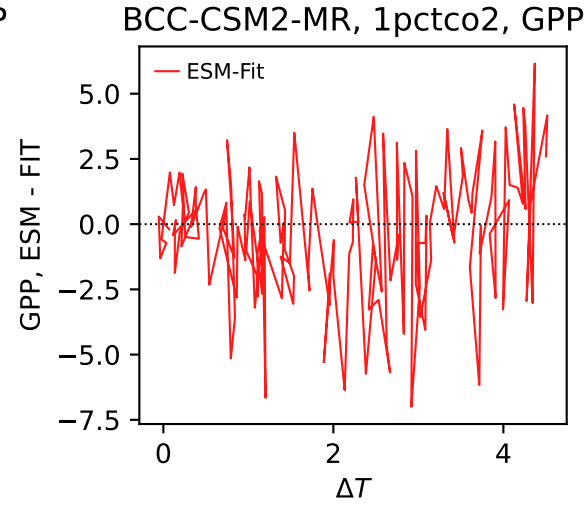

resp
100
80
60
40
1850
1900
1950
2000
Year

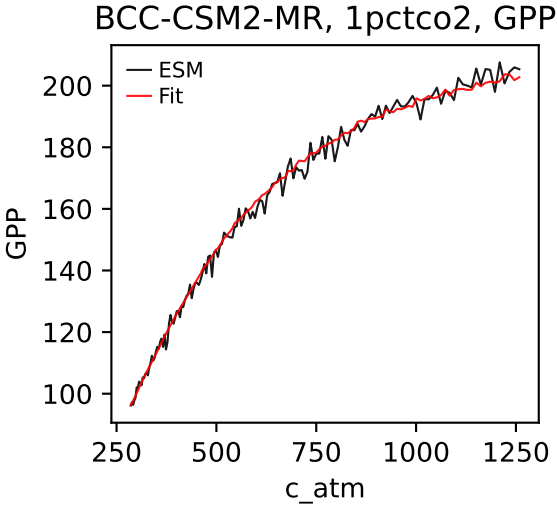

oflux
6
4
2
1850
1900
1950
2000
Year

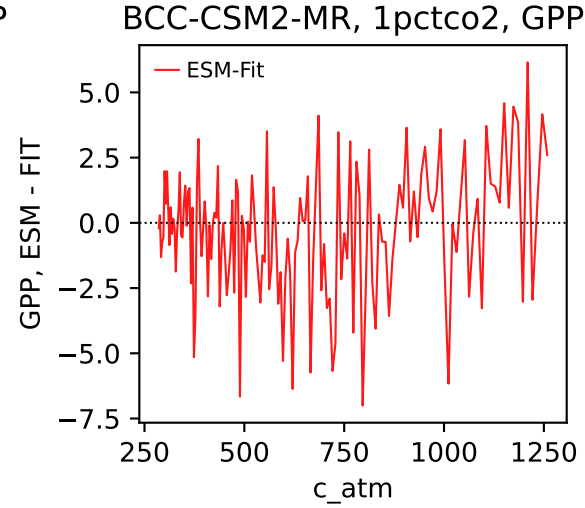

BCC-CSM2-MR, 1pctco2, GPP
ESM
Fit
GPP
Year

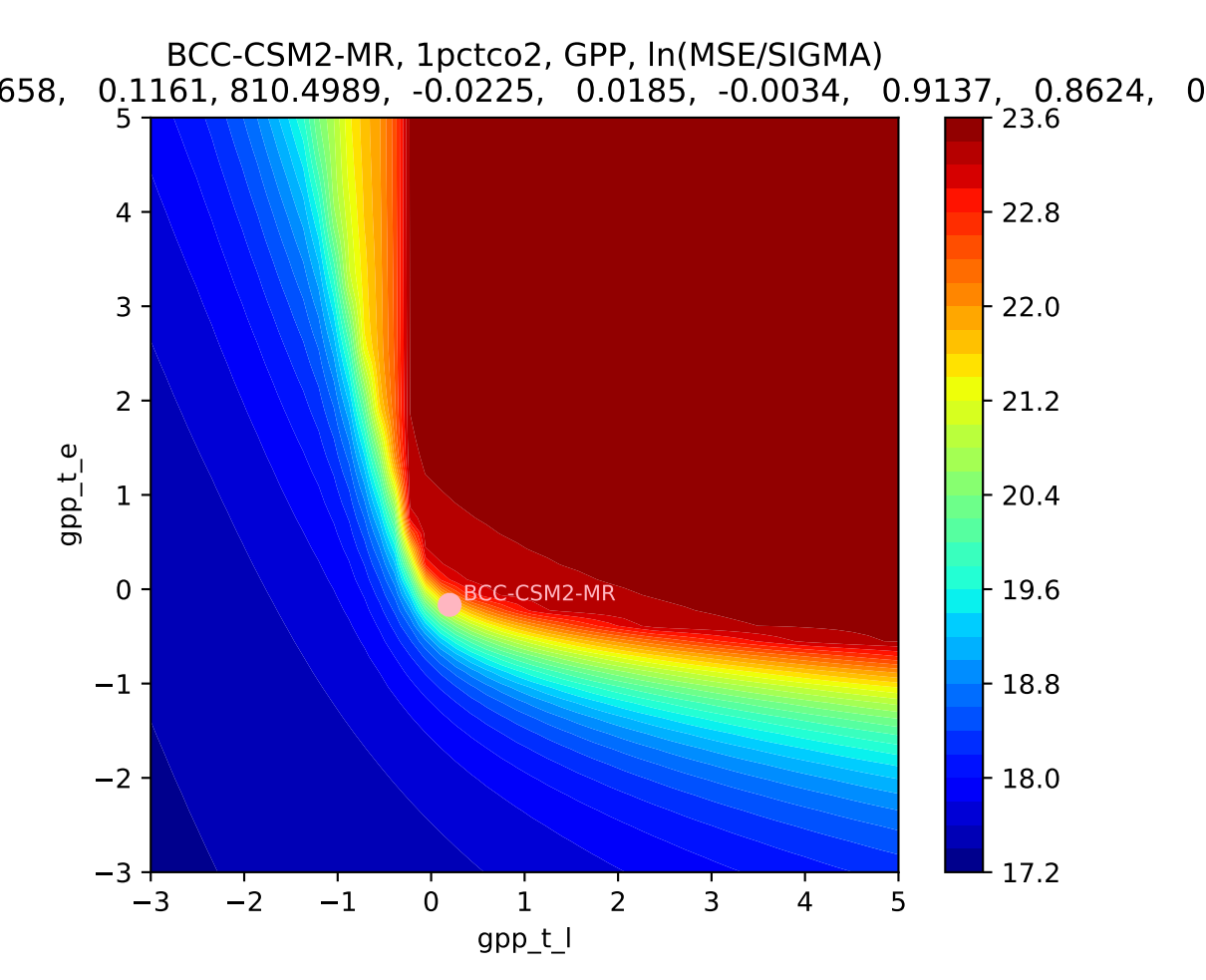

BCC-CSM2-MR, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
Year

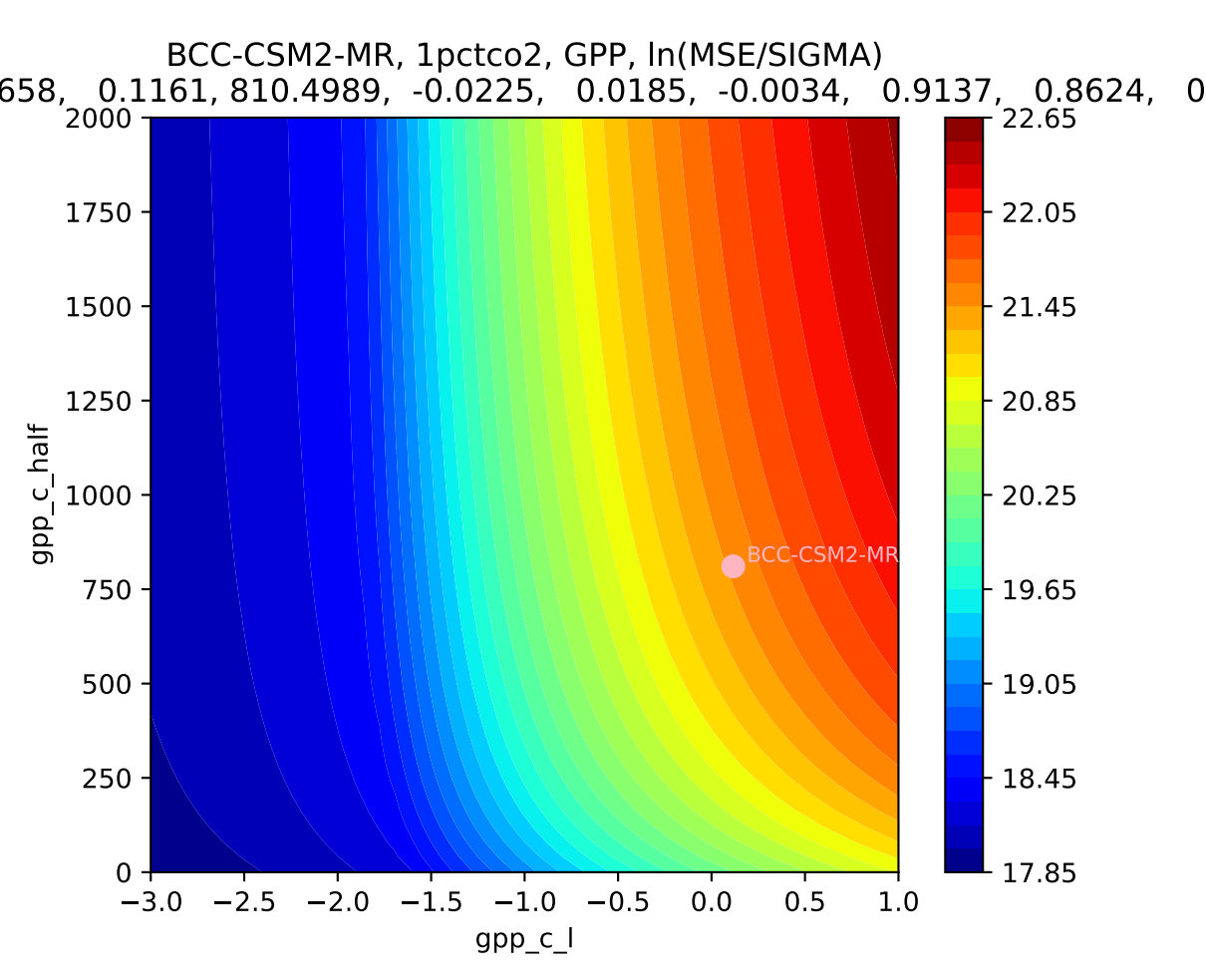

BCC-CSM2-MR, 1pctco2, GPP
ESM
Fit
GPP
ΔT

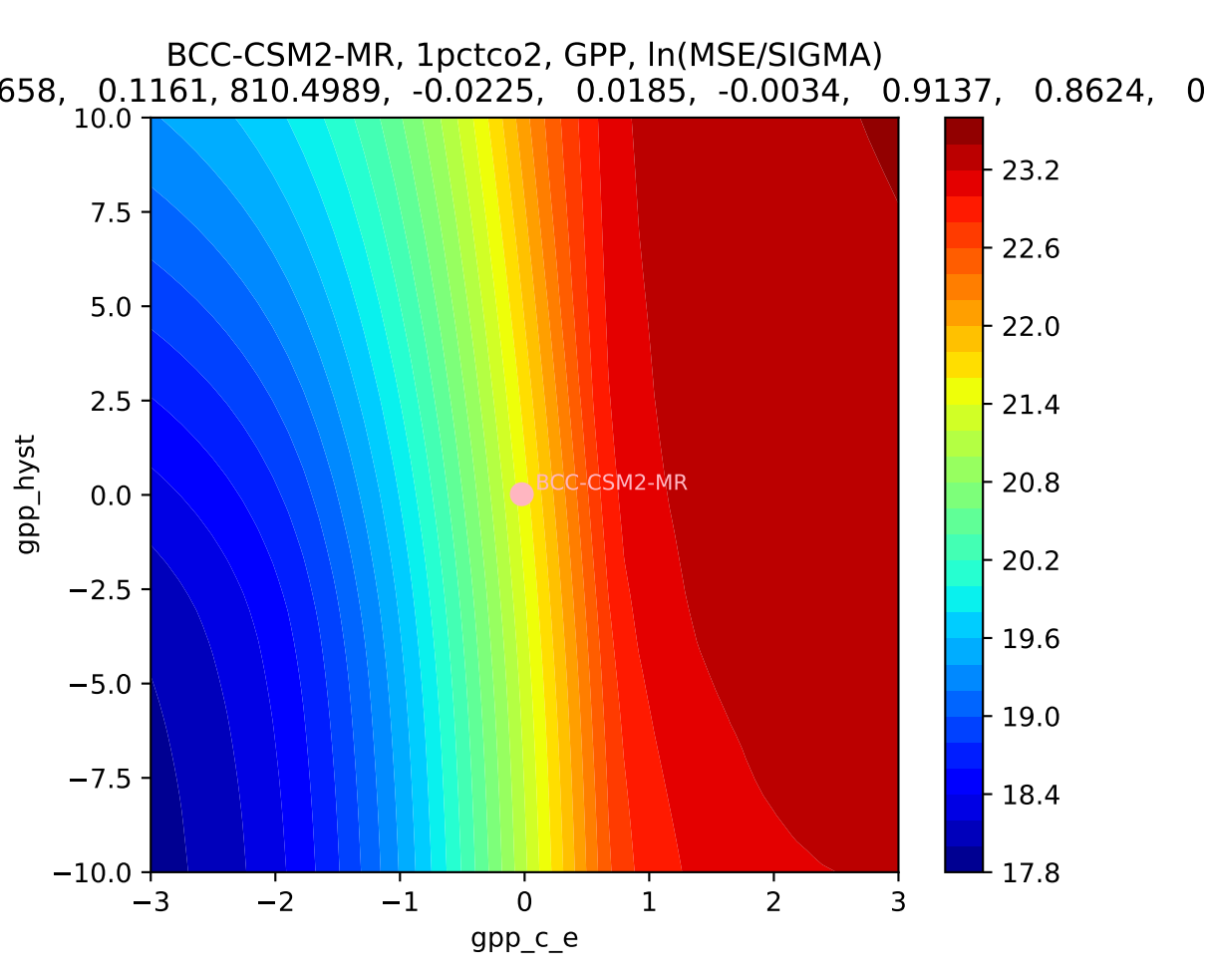

BCC-CSM2-MR, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

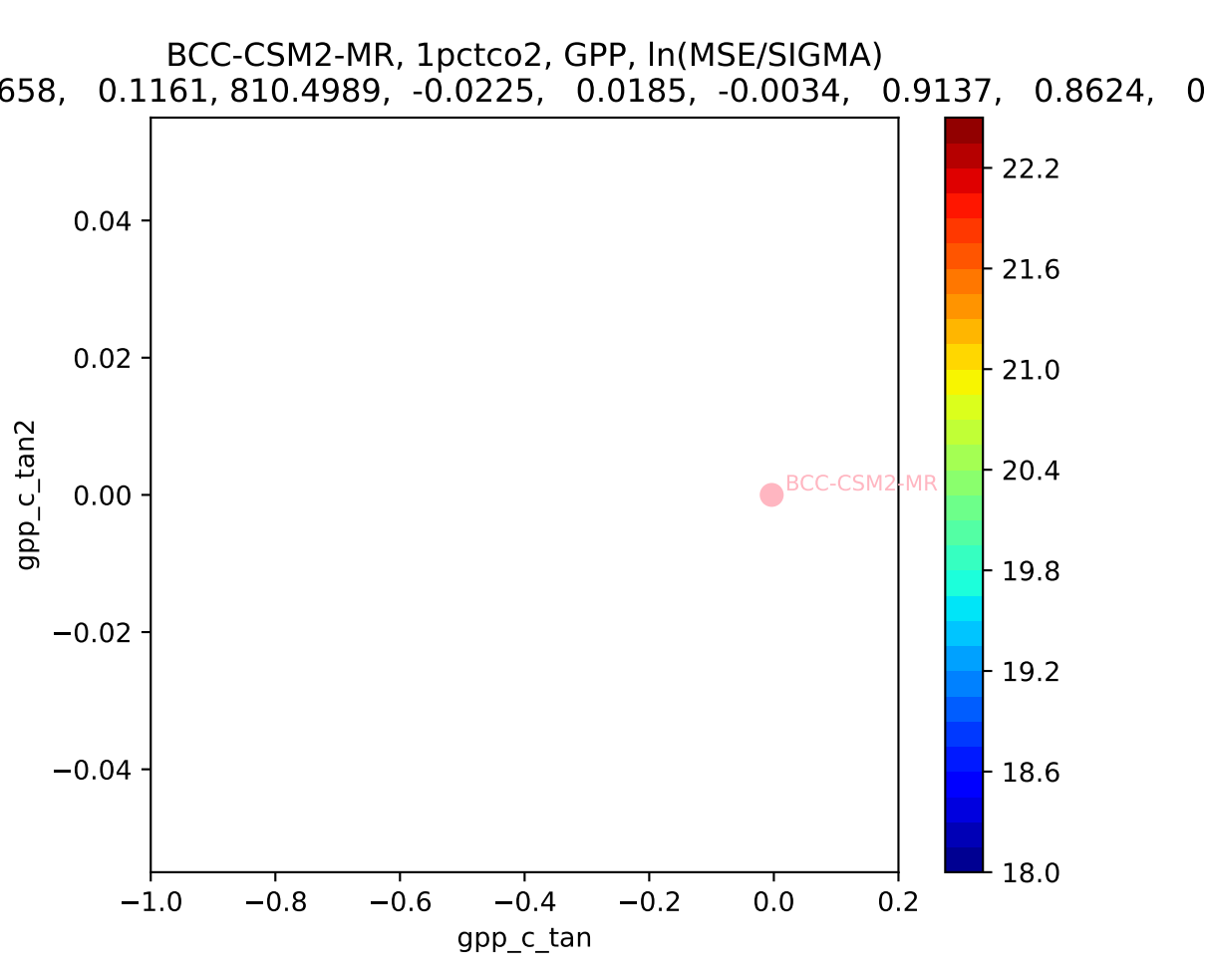

BCC-CSM2-MR, 1pctco2, GPP
ESM
Fit
GPP
c_atm

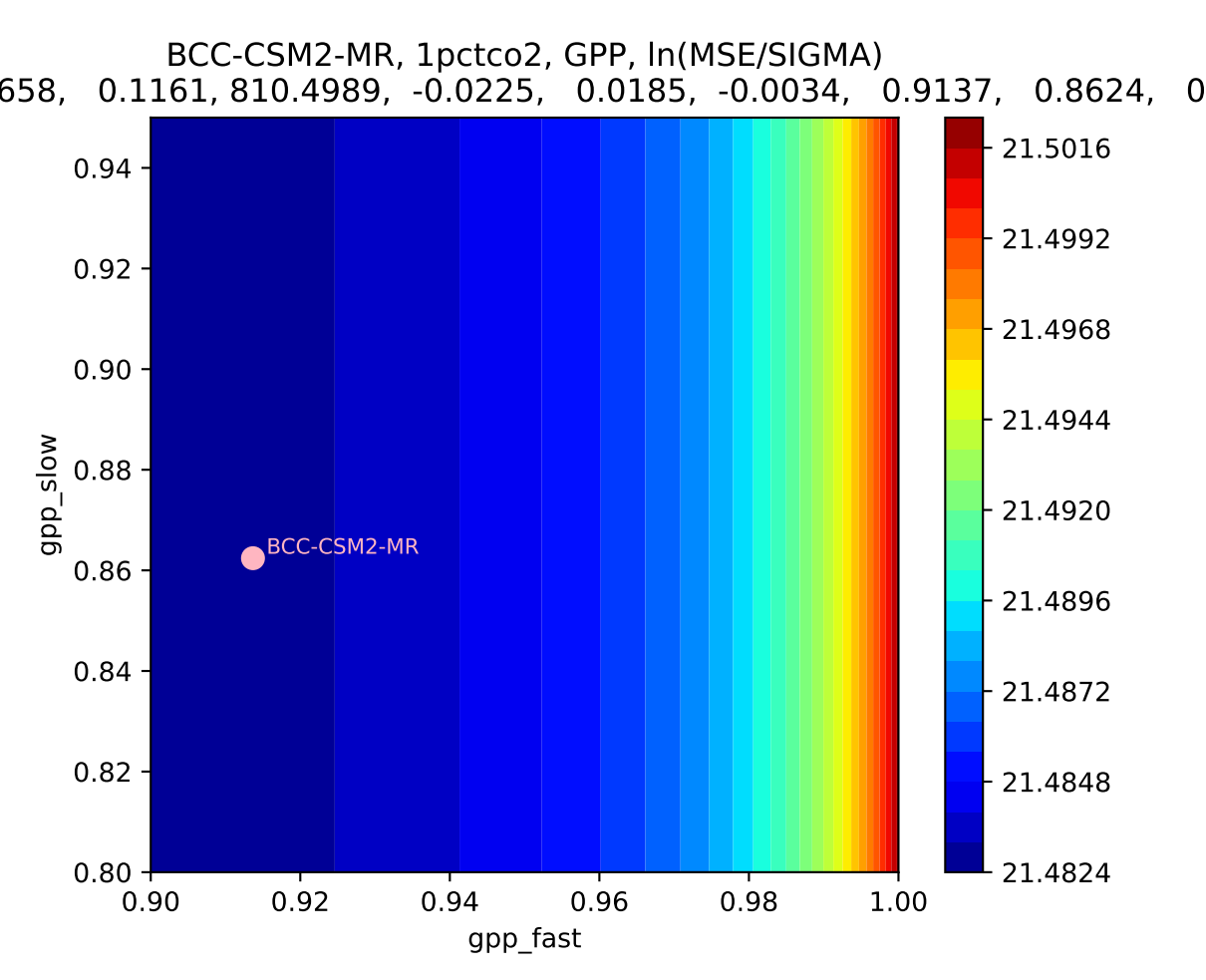

BCC-CSM2-MR, 1pctco2, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

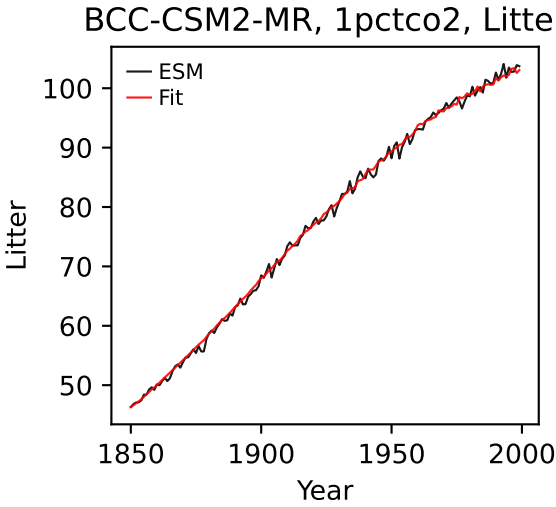

BCC-CSM2-MR, 1pctco2, GPP, ln(MSE/SIGMA)
658, 0.1161, 810.4989, -0.0225, 0.0185, -0.0034, 0.9137, 0.8624, 0
BCC-CSM2-MR
gpp_t_e
gpp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
23.6
22.8
22.0
21.2
20.4
19.6
18.8
18.0
17.2

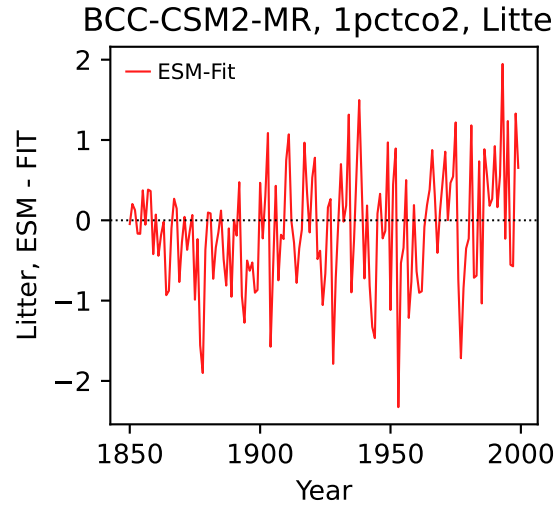

BCC-CSM2-MR, 1pctco2, GPP, ln(MSE/SIGMA)
658, 0.1161, 810.4989, -0.0225, 0.0185, -0.0034, 0.9137, 0.8624, 0
gpp_c_half
gpp_c_l
BCC-CSM2-MR
2000
1750
1500
1250
1000
750
500
250
0
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
22.65
22.05
21.45
20.85
20.25
19.65
19.05
18.45
17.85

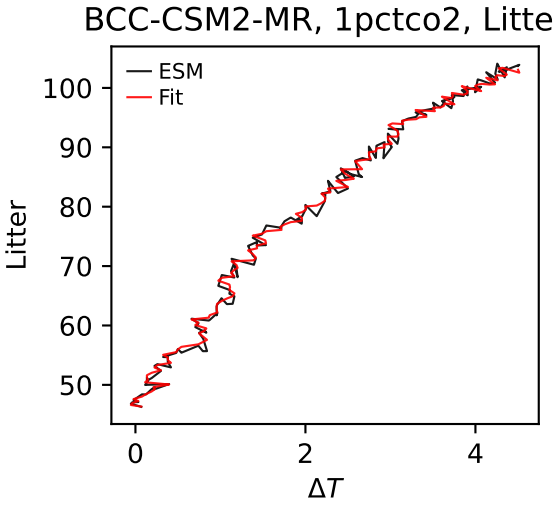

BCC-CSM2-MR, 1pctco2, GPP, ln(MSE/SIGMA)
658, 0.1161, 810.4989, -0.0225, 0.0185, -0.0034, 0.9137, 0.8624, 0
BCC-CSM2-MR
gpp_hyst
gpp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
23.2
22.6
22.0
21.4
20.8
20.2
19.6
19.0
18.4
17.8

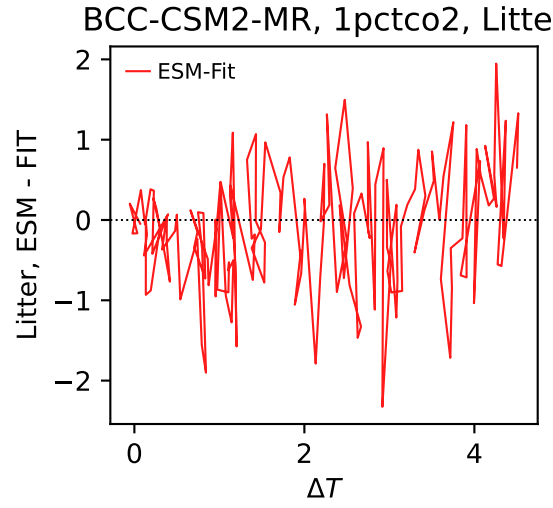

BCC-CSM2-MR, 1pctco2, GPP, ln(MSE/SIGMA)
658, 0.1161, 810.4989, -0.0225, 0.0185, -0.0034, 0.9137, 0.8624, 0
BCC-CSM2-MR
gpp_c_tan2
gpp_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
22.2
21.6
21.0
20.4
19.8
19.2
18.6
18.0

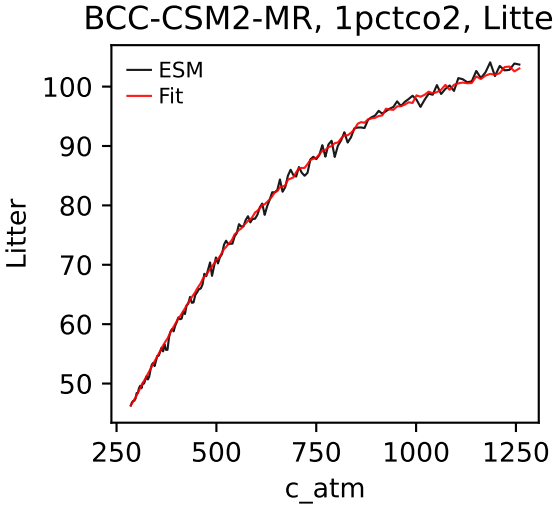

BCC-CSM2-MR, 1pctco2, GPP, ln(MSE/SIGMA)
658, 0.1161, 810.4989, -0.0225, 0.0185, -0.0034, 0.9137, 0.8624, 0
BCC-CSM2-MR
gpp_slow
gpp_fast
0.80
0.82
0.84
0.86
0.88
0.90
0.92
0.94
0.90
0.92
0.94
0.96
0.98
1.00
21.5016
21.4992
21.4968
21.4944
21.4920
21.4896
21.4872
21.4848
21.4824

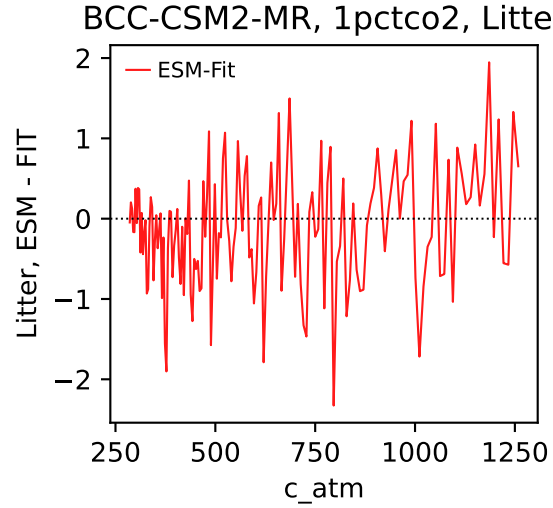

BCC-CSM2-MR, 1pctco2, Litter
ESM
Fit
Litter
Year

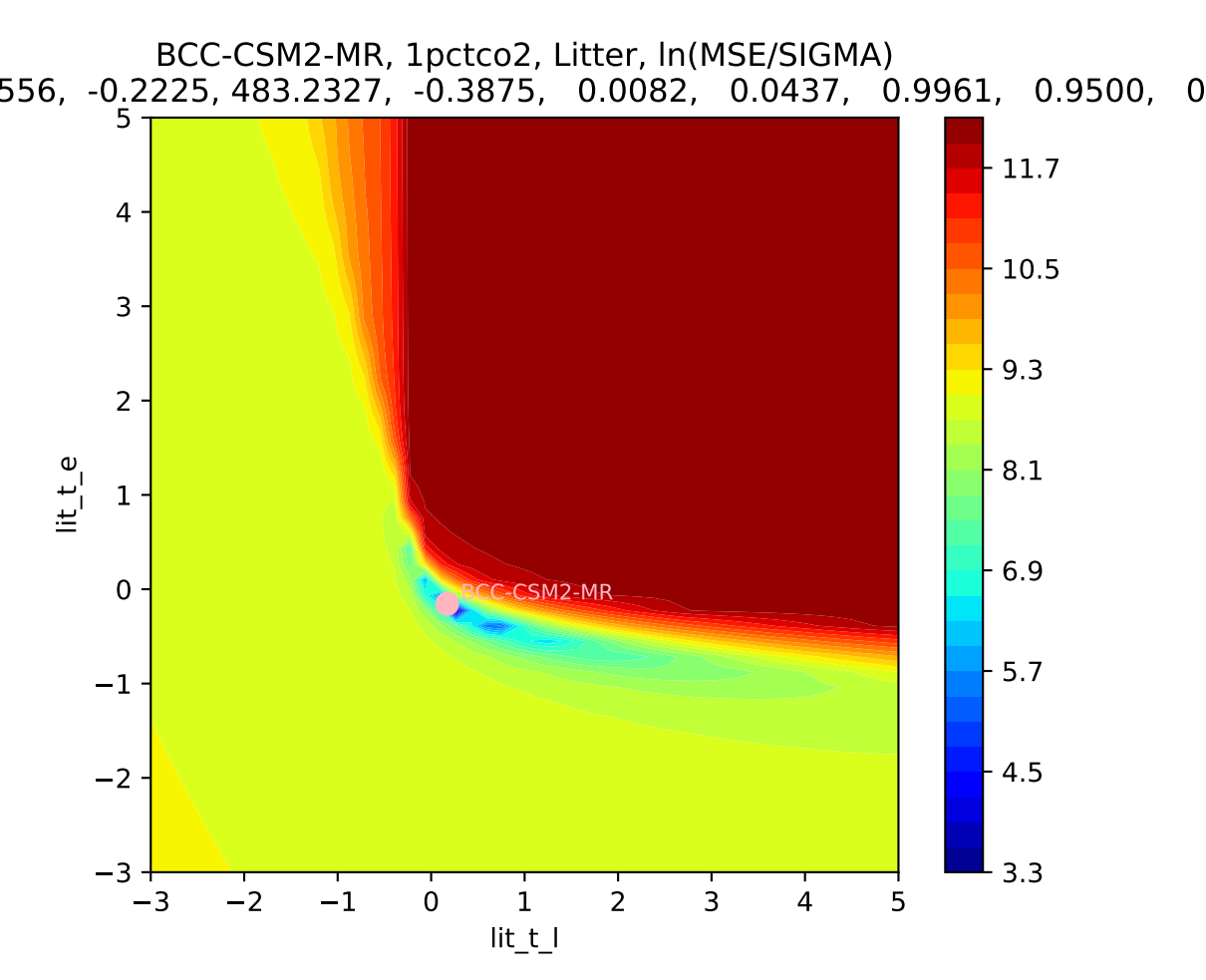

BCC-CSM2-MR, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
Year

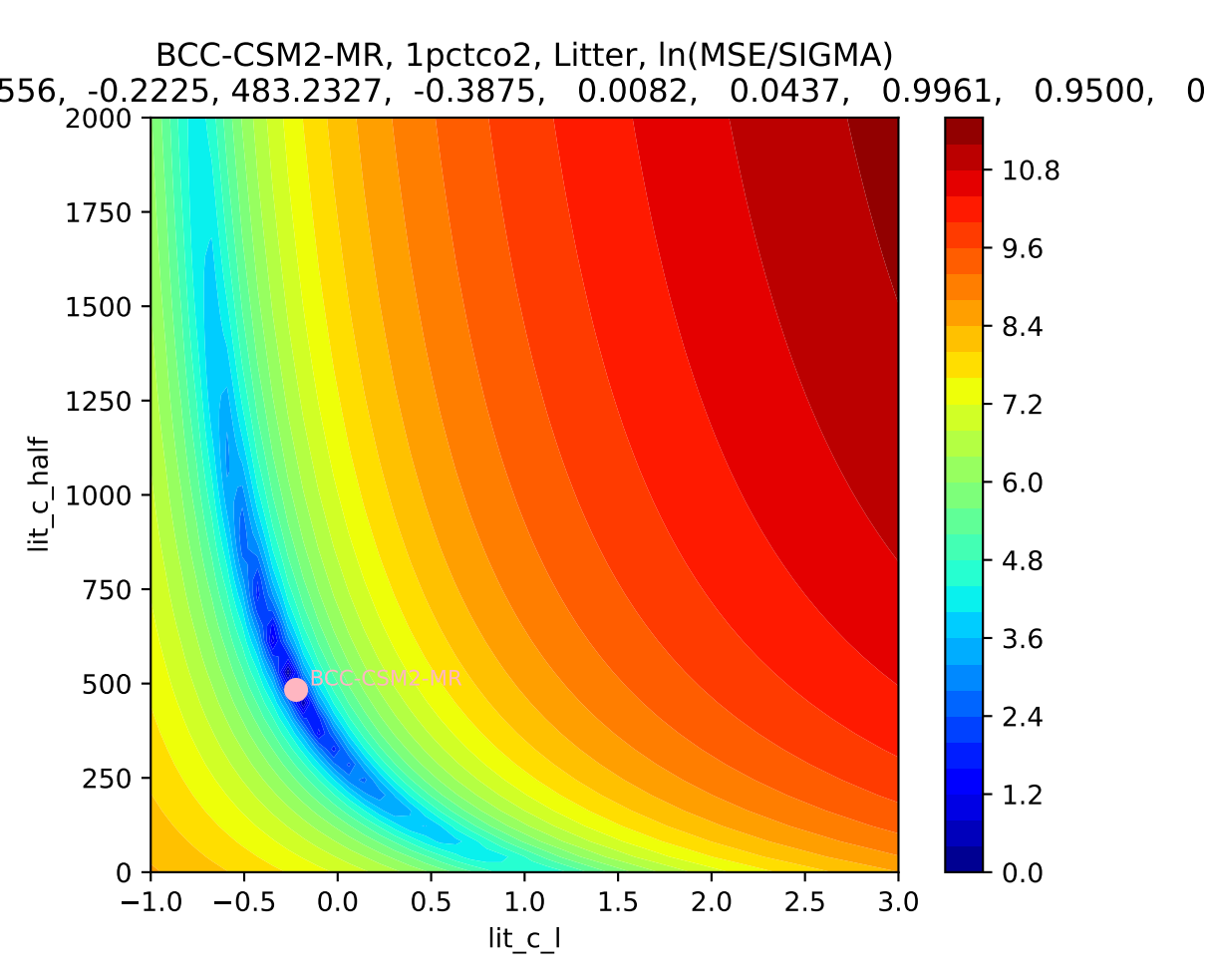

BCC-CSM2-MR, 1pctco2, Litter
ESM
Fit
Litter
ΔT

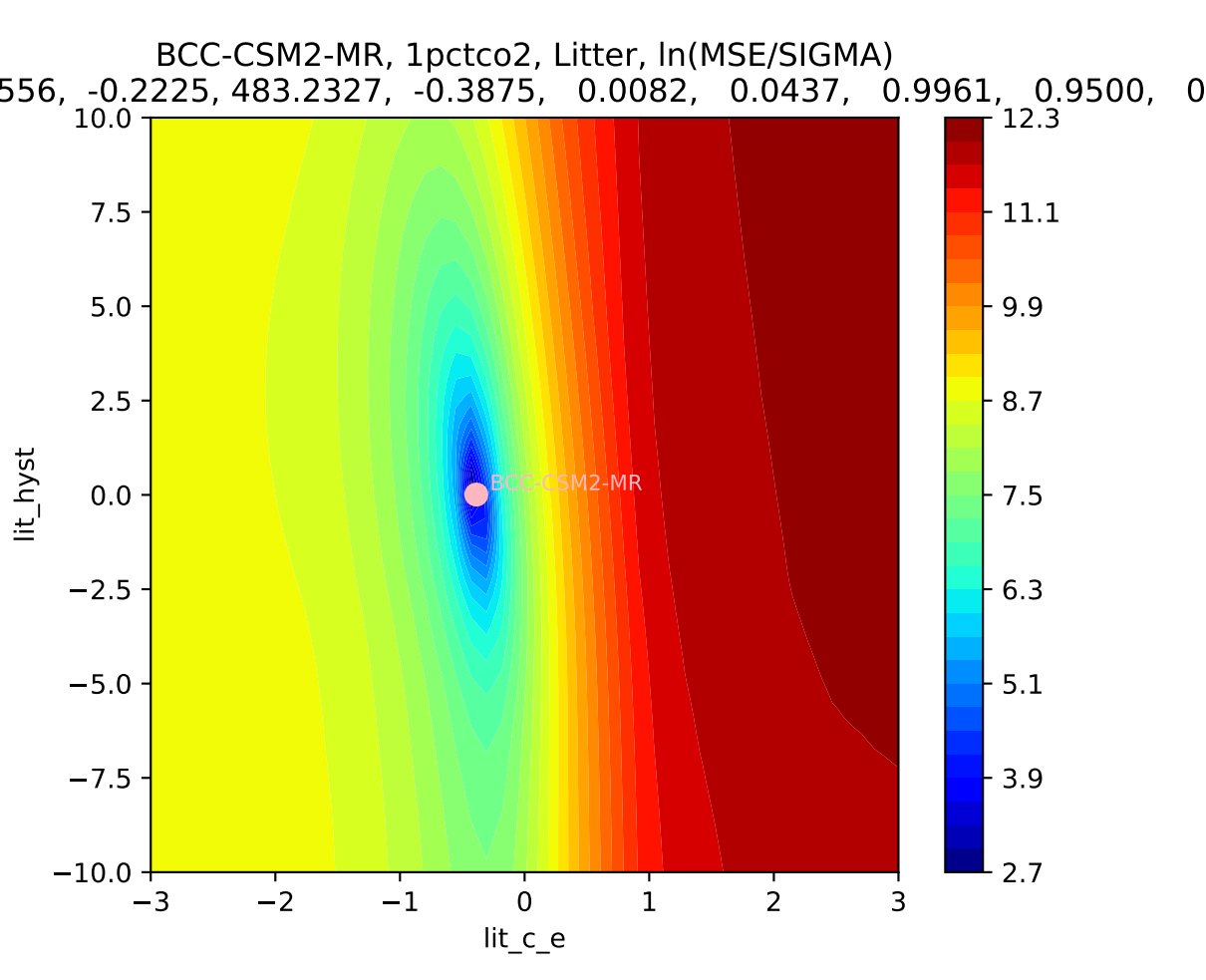

BCC-CSM2-MR, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
ΔT

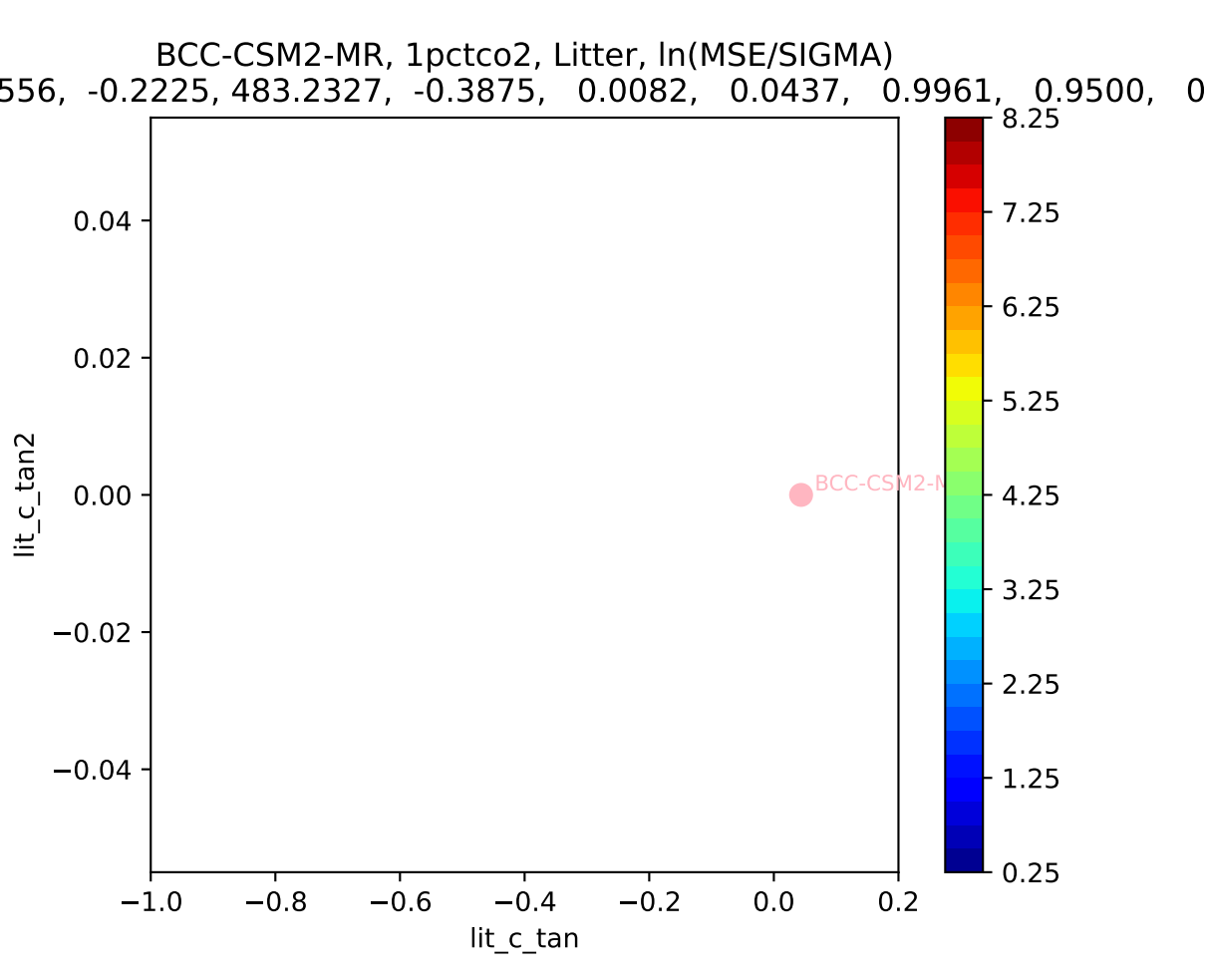

BCC-CSM2-MR, 1pctco2, Litter
ESM
Fit
Litter
c_atm

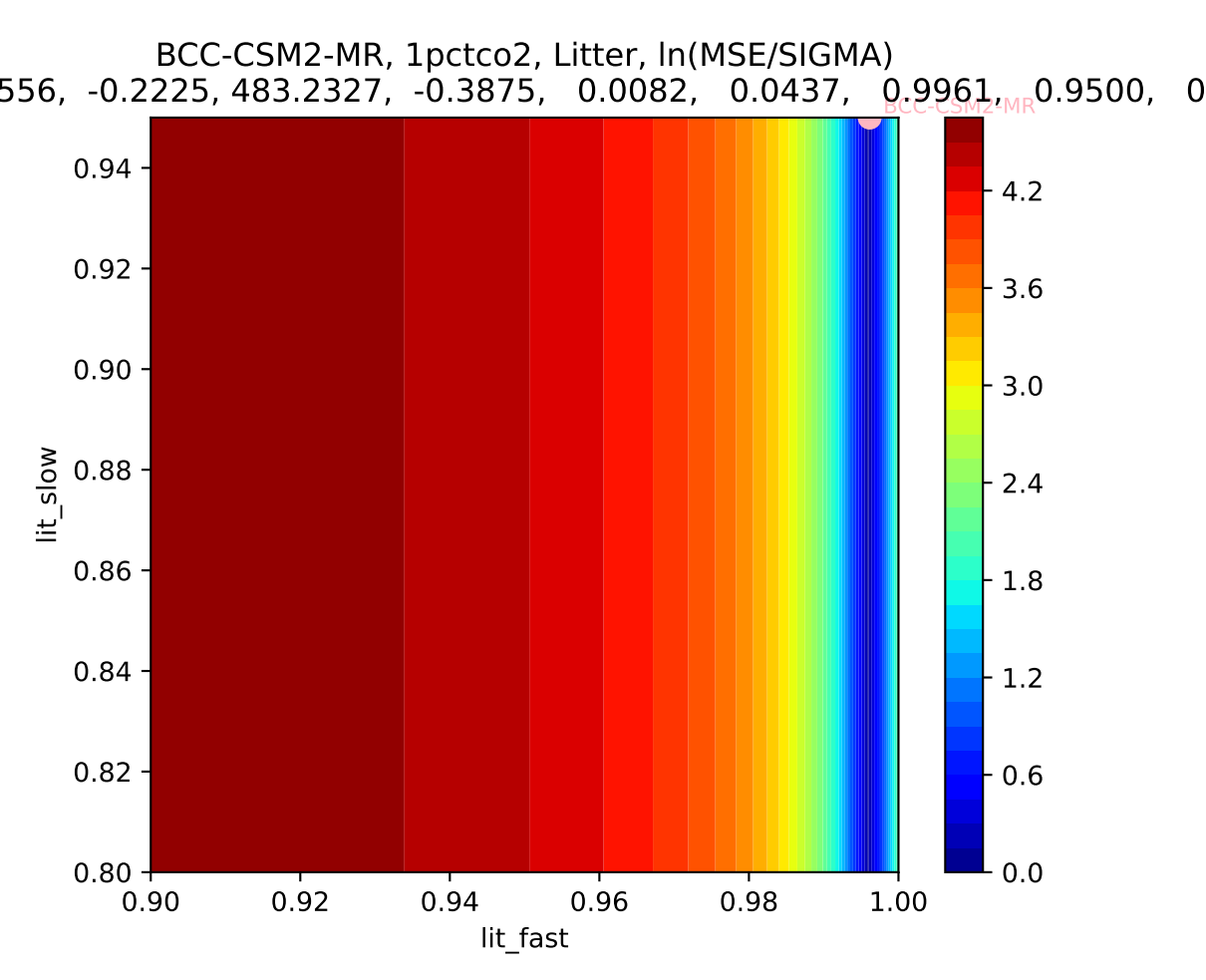

BCC-CSM2-MR, 1pctco2, Litter
ESM-Fit
Litter, ESM - FIT
c_atm

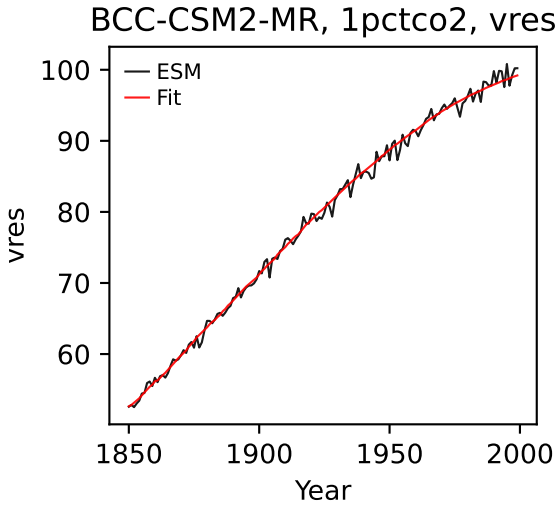

BCC-CSM2-MR, 1pctco2, Litter, ln(MSE/SIGMA)
556, -0.2225, 483.2327, -0.3875, 0.0082, 0.0437, 0.9961, 0.9500, 0
BCC-CSM2-MR
lit_t_e
lit_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
11.7
10.5
9.3
8.1
6.9
5.7
4.5
3.3

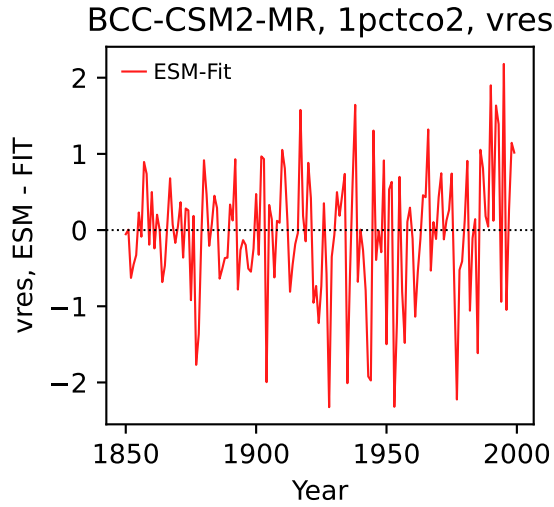

BCC-CSM2-MR, 1pctco2, Litter, ln(MSE/SIGMA)
556, -0.2225, 483.2327, -0.3875, 0.0082, 0.0437, 0.9961, 0.9500, 0
lit_c_half
lit_c_l
BCC-CSM2-MR
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
10.8
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0

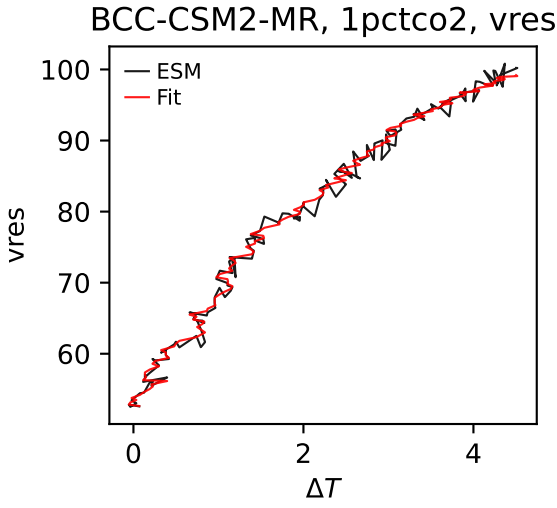

BCC-CSM2-MR, 1pctco2, Litter, ln(MSE/SIGMA)
556, -0.2225, 483.2327, -0.3875, 0.0082, 0.0437, 0.9961, 0.9500, 0
BCC-CSM2-MR
lit_hyst
lit_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
12.3
11.1
9.9
8.7
7.5
6.3
5.1
3.9
2.7

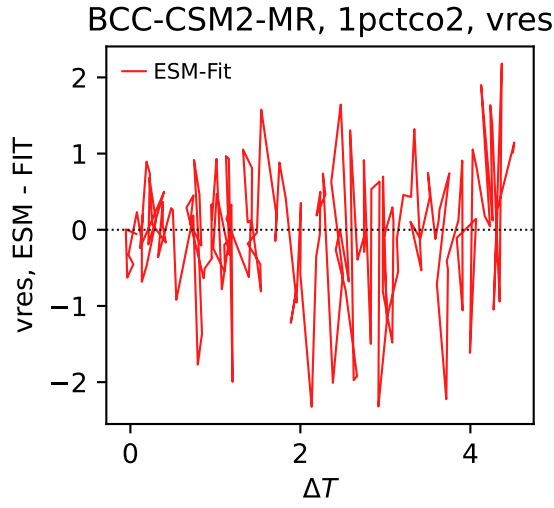

BCC-CSM2-MR, 1pctco2, Litter, ln(MSE/SIGMA)
556, -0.2225, 483.2327, -0.3875, 0.0082, 0.0437, 0.9961, 0.9500, 0
BCC-CSM2-M
lit_c_tan2
lit_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
8.25
7.25
6.25
5.25
4.25
3.25
2.25
1.25
0.25

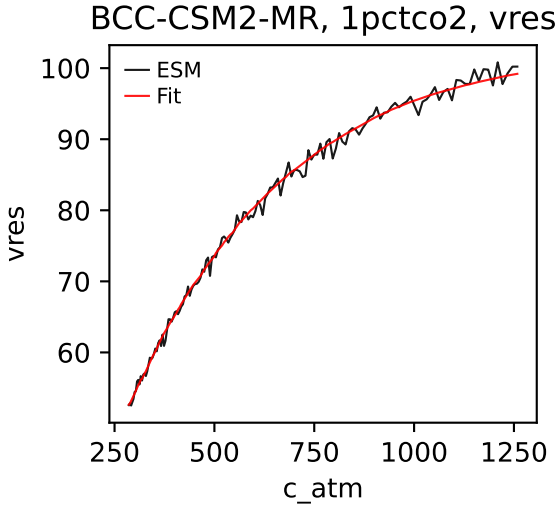

BCC-CSM2-MR, 1pctco2, Litter, ln(MSE/SIGMA)
556, -0.2225, 483.2327, -0.3875, 0.0082, 0.0437, 0.9961, 0.9500, 0
BCC-CSM2-MR
lit_slow
lit_fast
0.80
0.82
0.84
0.86
0.88
0.90
0.92
0.94
0.90
0.92
0.94
0.96
0.98
1.00
0.0
0.6
1.2
1.8
2.4
3.0
3.6
4.2

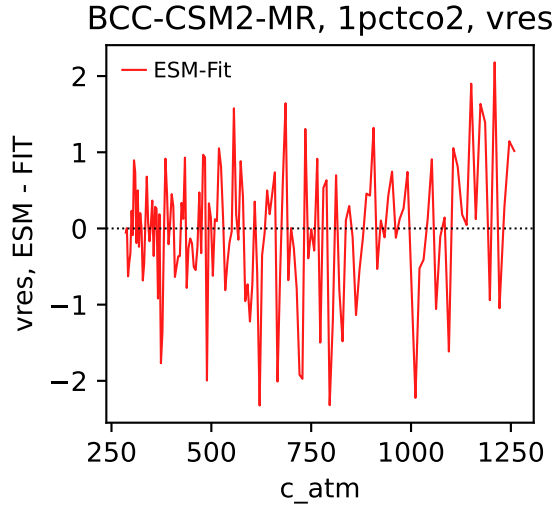

BCC-CSM2-MR, 1pctco2, vres
ESM
Fit
vres
Year

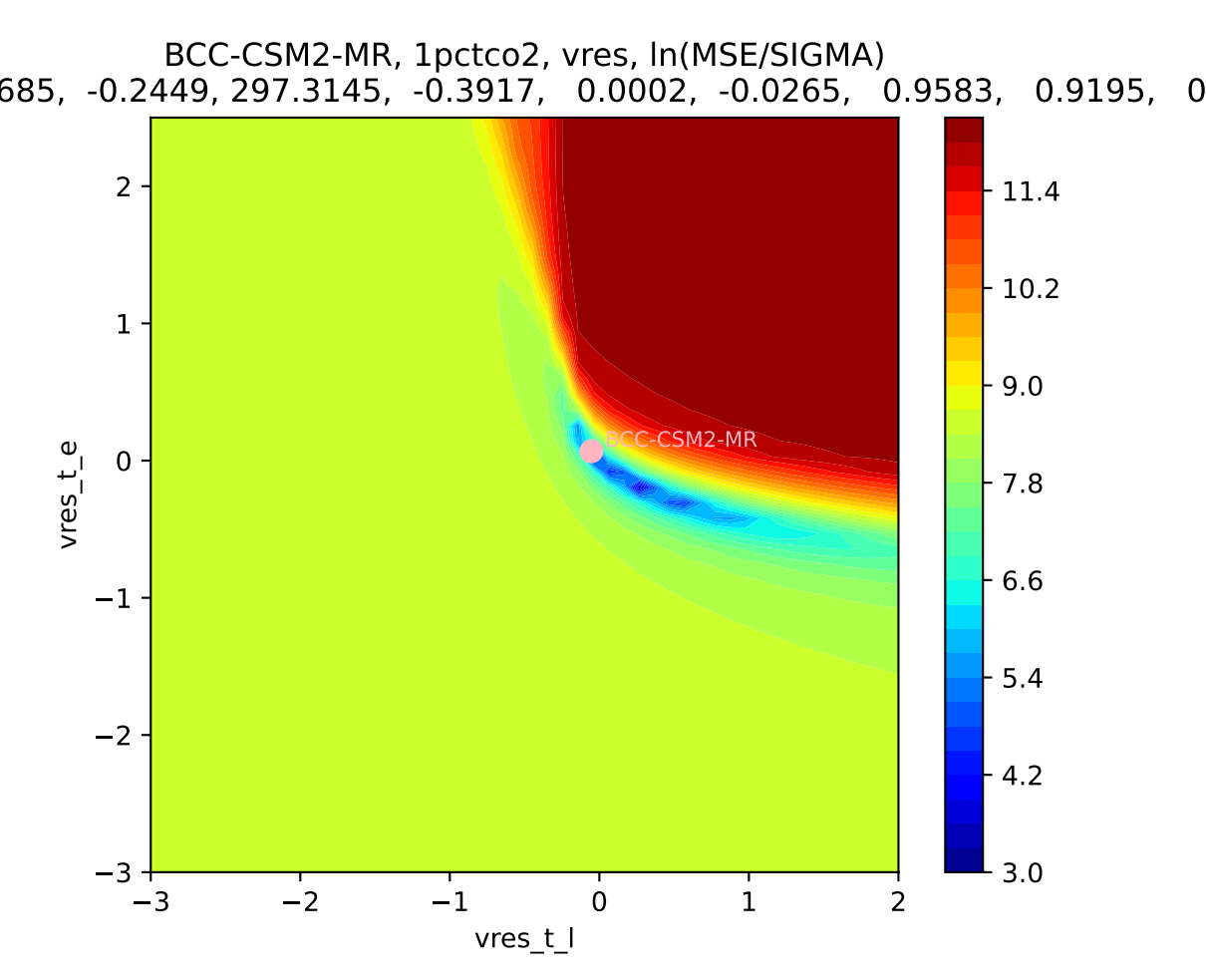

BCC-CSM2-MR, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
Year

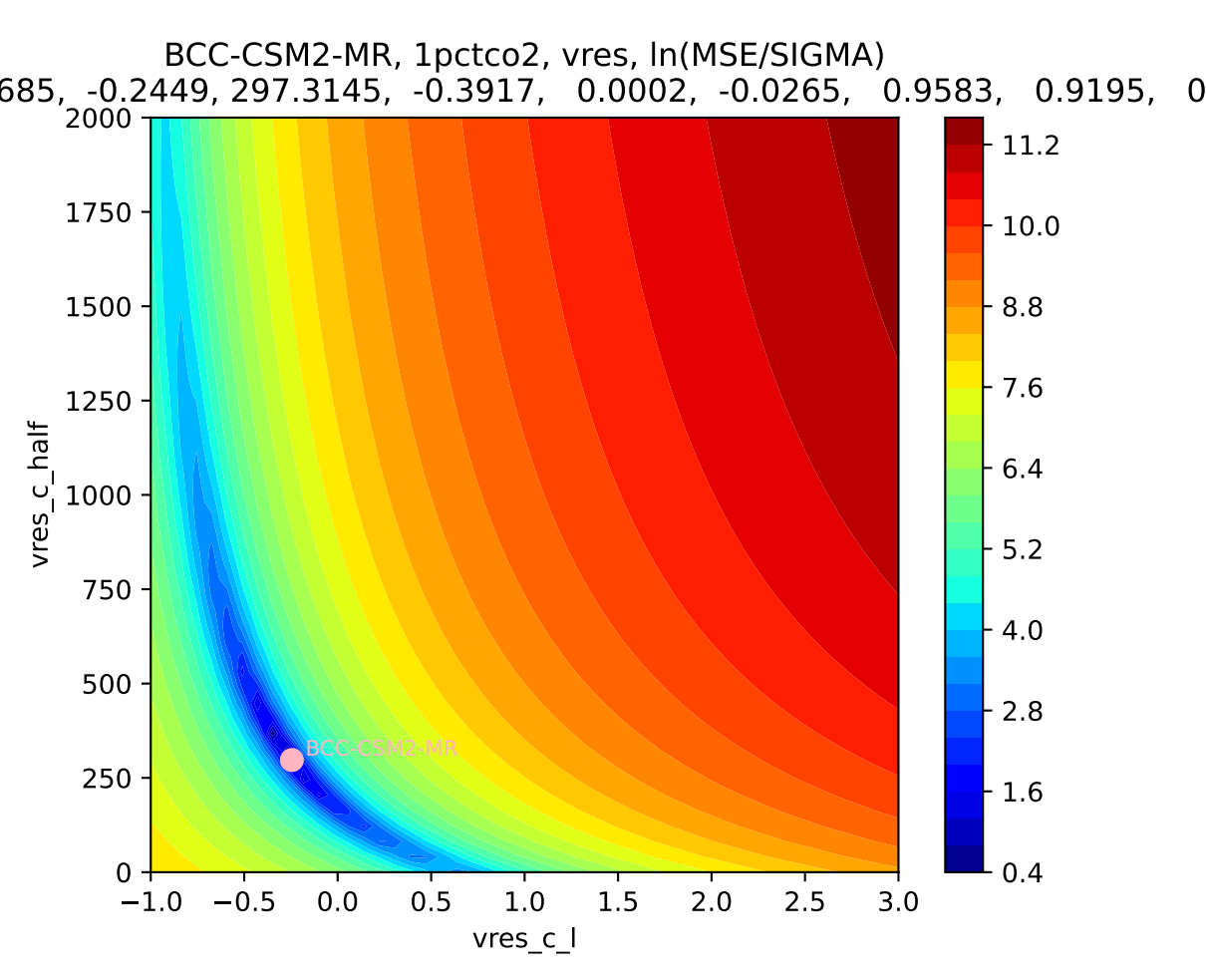

BCC-CSM2-MR, 1pctco2, vres
ESM
Fit
vres
ΔT

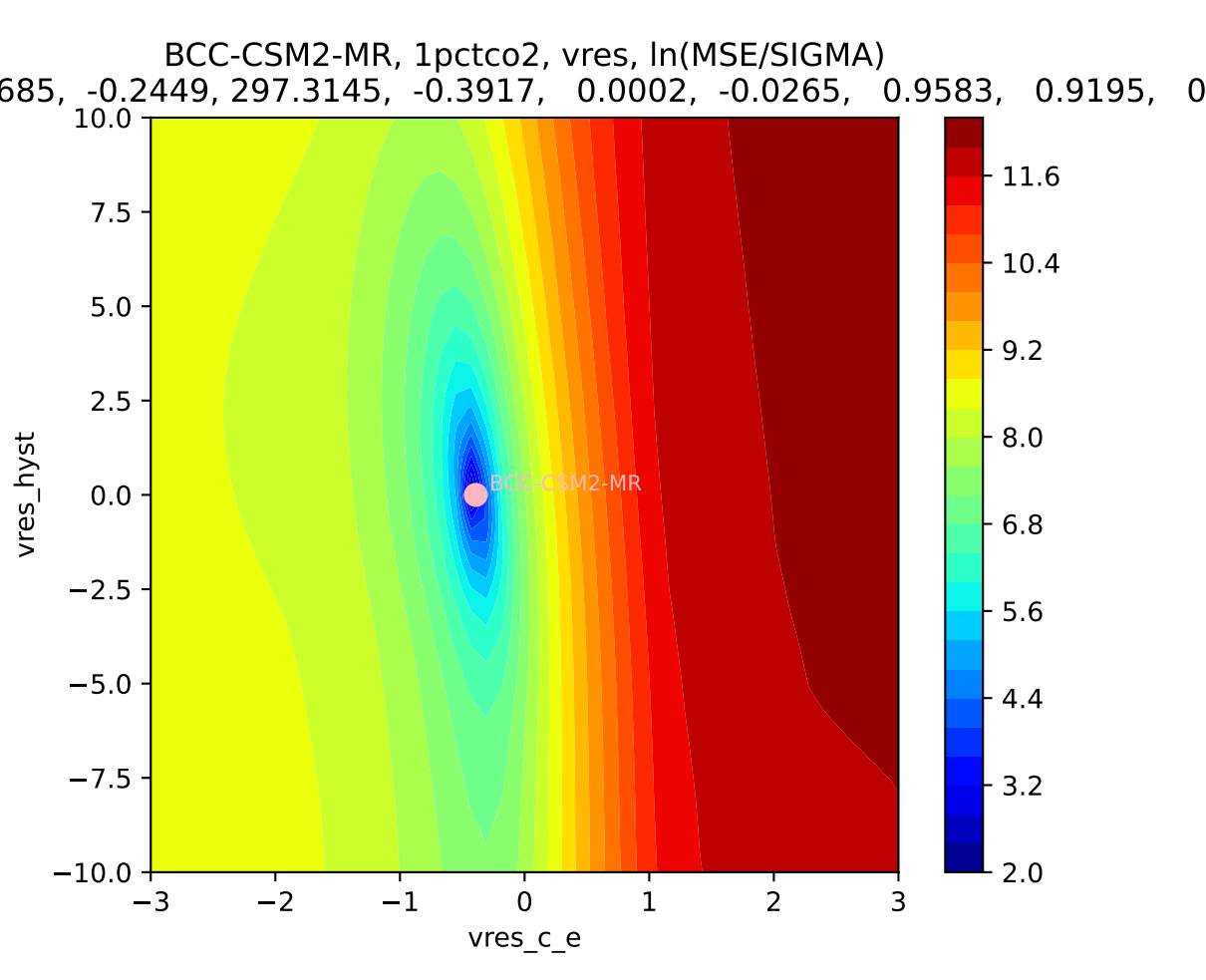

BCC-CSM2-MR, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
ΔT

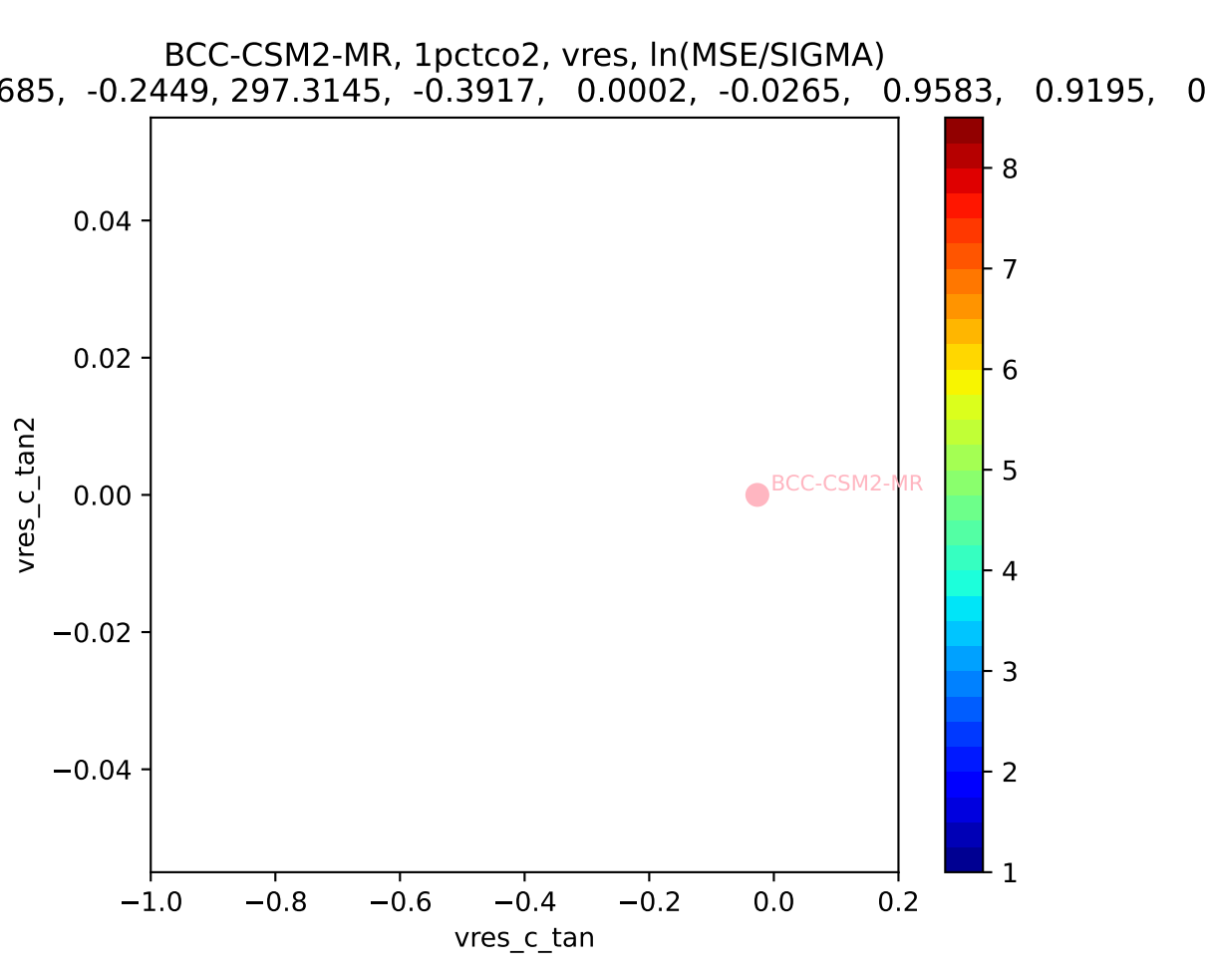

BCC-CSM2-MR, 1pctco2, vres
ESM
Fit
vres
c_atm

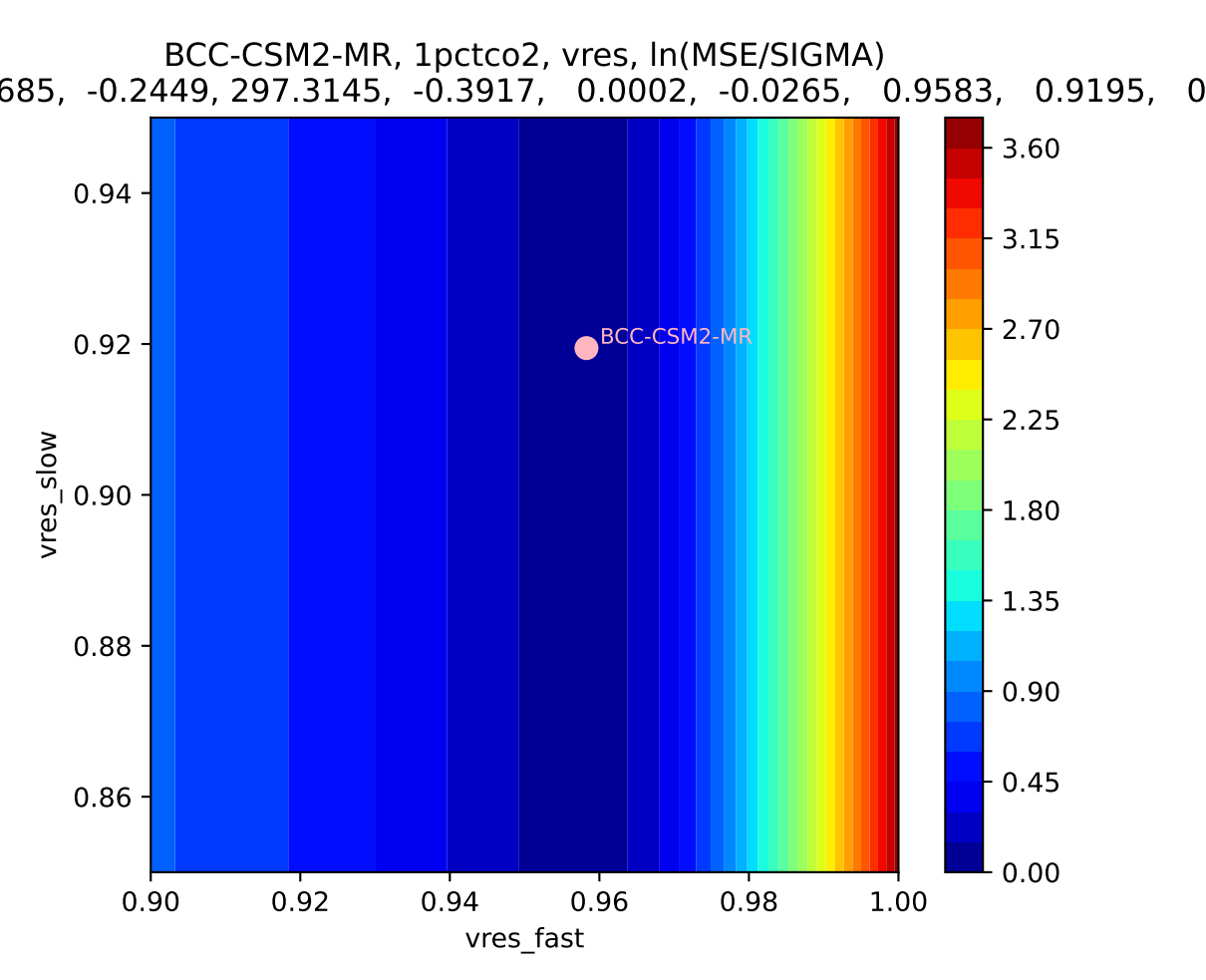

BCC-CSM2-MR, 1pctco2, vres
ESM-Fit
vres, ESM - FIT
c_atm

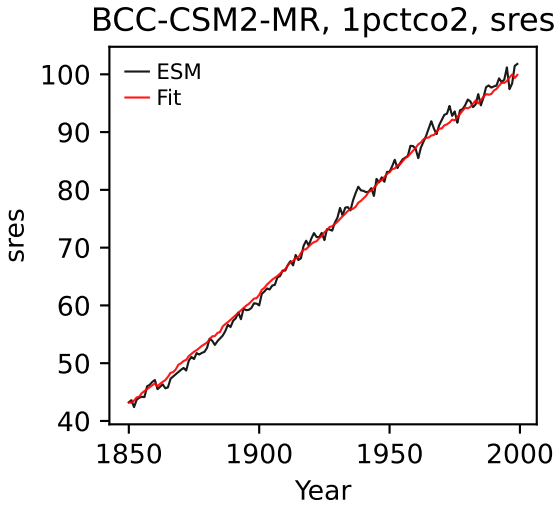

BCC-CSM2-MR, 1pctco2, vres, ln(MSE/SIGMA)
685, -0.2449, 297.3145, -0.3917, 0.0002, -0.0265, 0.9583, 0.9195, 0
BCC-CSM2-MR
vres_t_e
vres_t_l
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
11.4
10.2
9.0
7.8
6.6
5.4
4.2
3.0

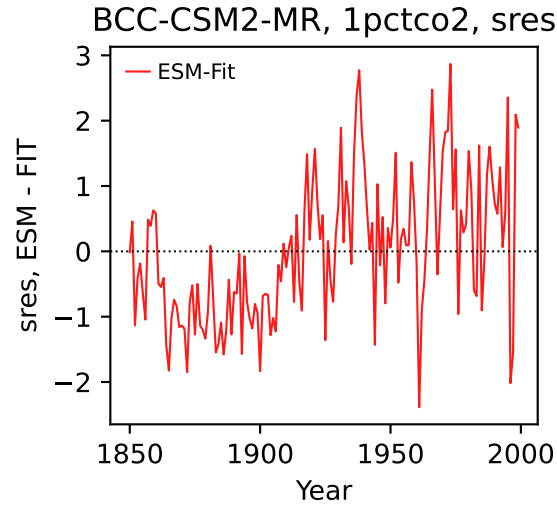

BCC-CSM2-MR, 1pctco2, vres, ln(MSE/SIGMA)
685, -0.2449, 297.3145, -0.3917, 0.0002, -0.0265, 0.9583, 0.9195, 0
vres_c_half
vres_c_l
BCC-CSM2-MR
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
11.2
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6
0.4

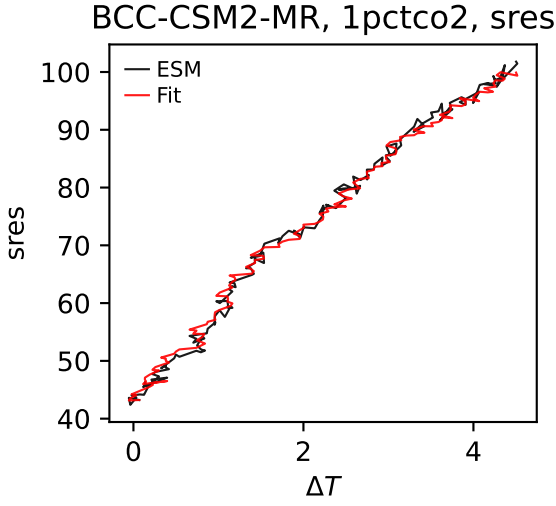

BCC-CSM2-MR, 1pctco2, vres, ln(MSE/SIGMA)
685, -0.2449, 297.3145, -0.3917, 0.0002, -0.0265, 0.9583, 0.9195, 0
BCC-CSM2-MR
vres_hyst
vres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
11.6
10.4
9.2
8.0
6.8
5.6
4.4
3.2
2.0

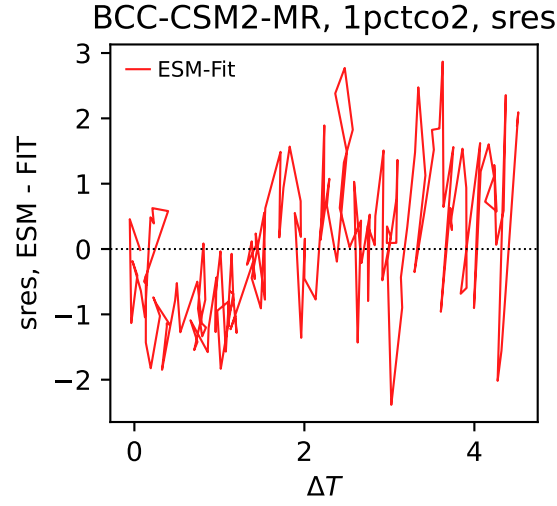

BCC-CSM2-MR, 1pctco2, vres, ln(MSE/SIGMA)
685, -0.2449, 297.3145, -0.3917, 0.0002, -0.0265, 0.9583, 0.9195, 0
BCC-CSM2-MR
vres_c_tan2
vres_c_tan
0.04
0.02
0.00
−0.02
−0.04
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
8
7
6
5
4
3
2
1

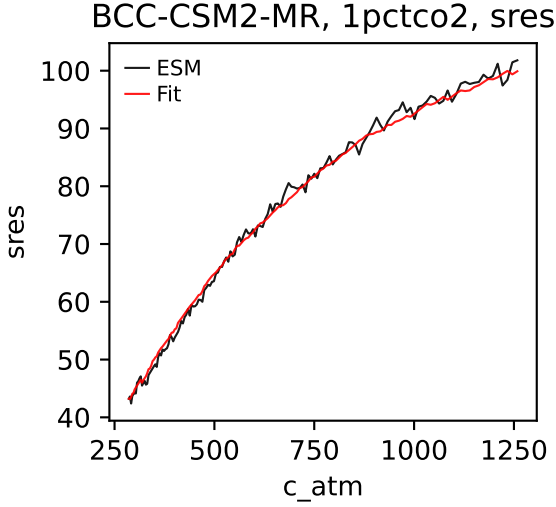

BCC-CSM2-MR, 1pctco2, vres, ln(MSE/SIGMA)
685, -0.2449, 297.3145, -0.3917, 0.0002, -0.0265, 0.9583, 0.9195, 0
BCC-CSM2-MR
0.94
0.92
0.90
0.88
0.86
vres_slow
0.90
0.92
0.94
0.96
0.98
1.00
vres_fast
3.60
3.15
2.70
2.25
1.80
1.35
0.90
0.45
0.00

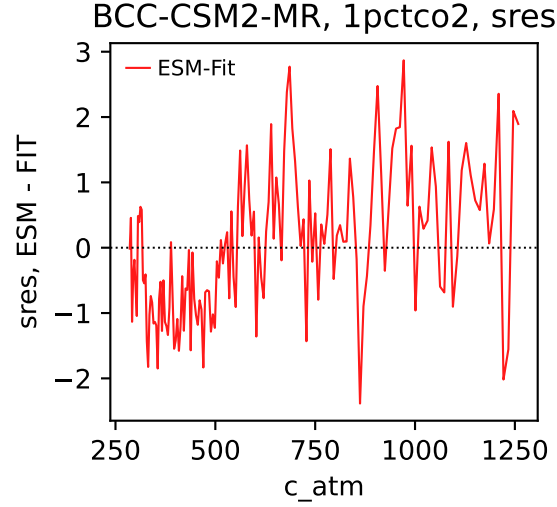

BCC-CSM2-MR, 1pctco2, sres
ESM
Fit
sres
Year

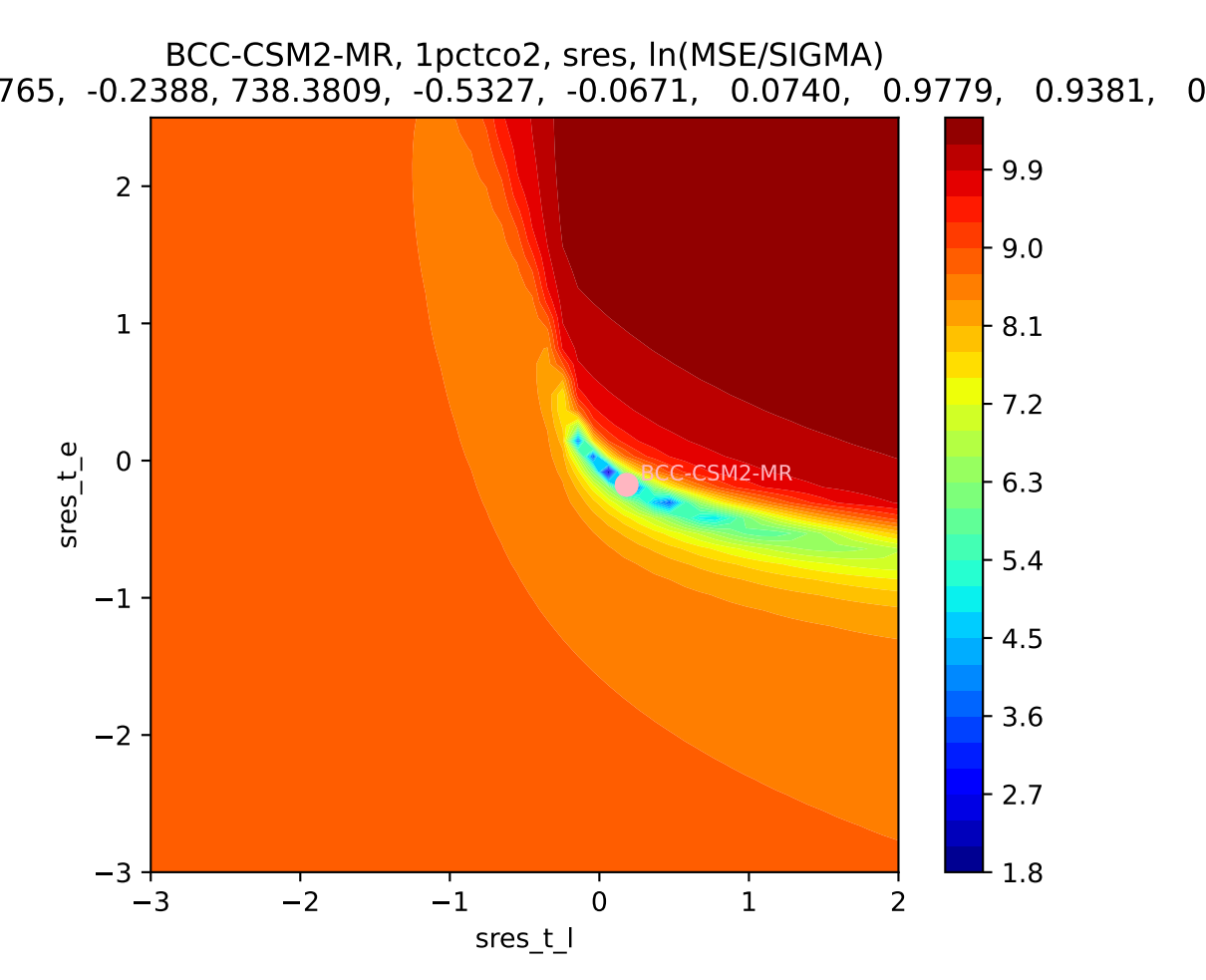

BCC-CSM2-MR, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
Year

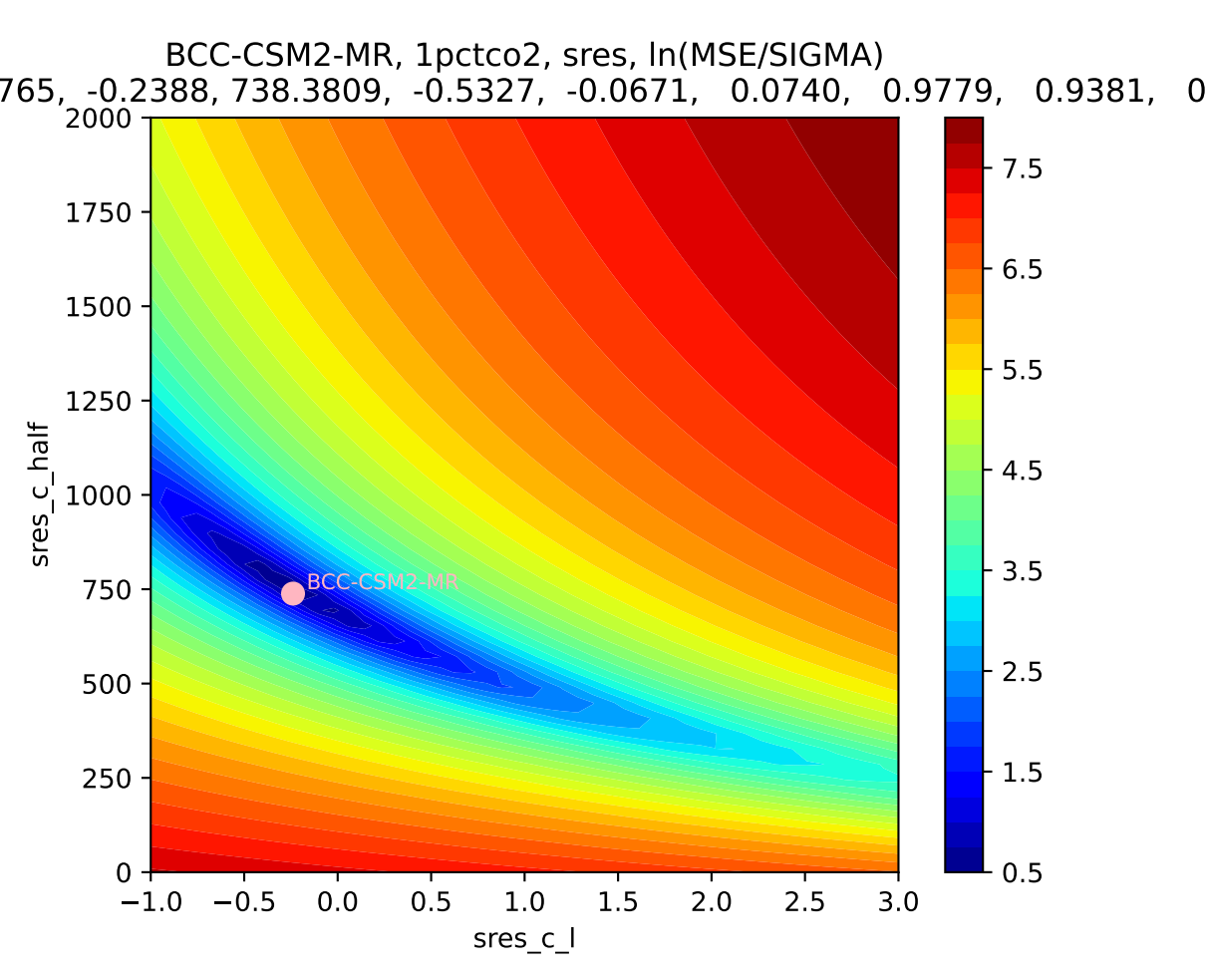

BCC-CSM2-MR, 1pctco2, sres
ESM
Fit
sres
ΔT

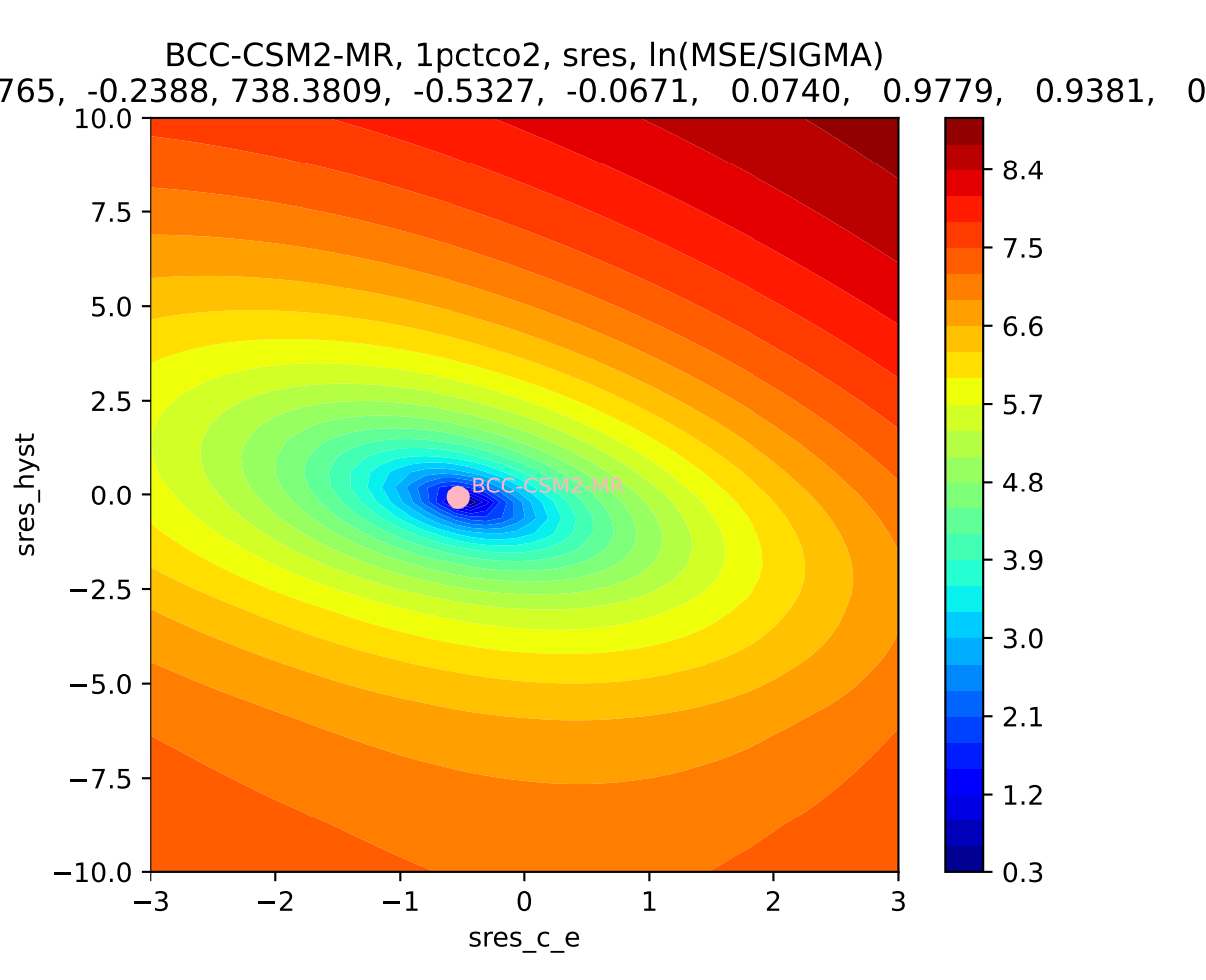

BCC-CSM2-MR, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
ΔT

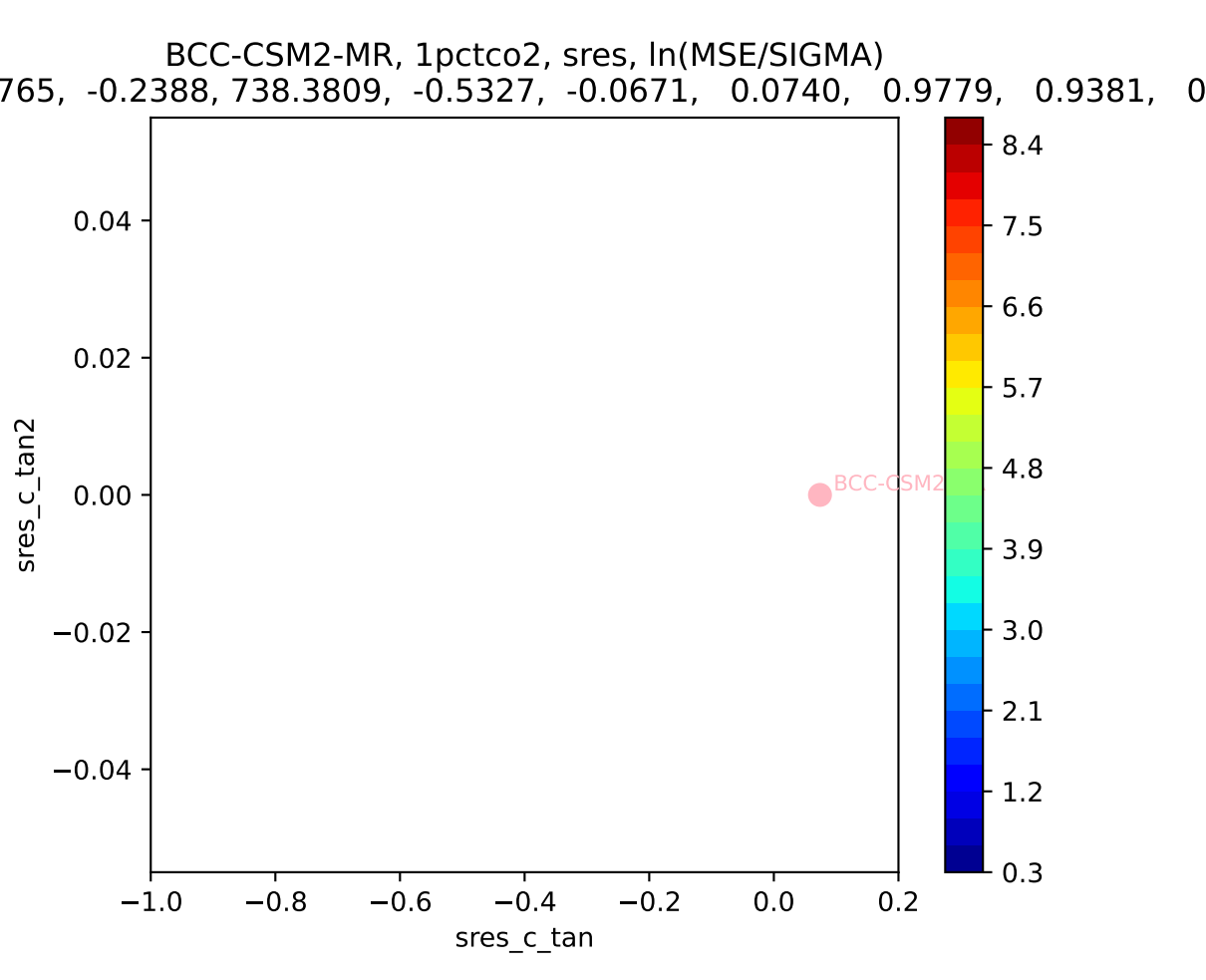

BCC-CSM2-MR, 1pctco2, sres
ESM
Fit
sres
c_atm

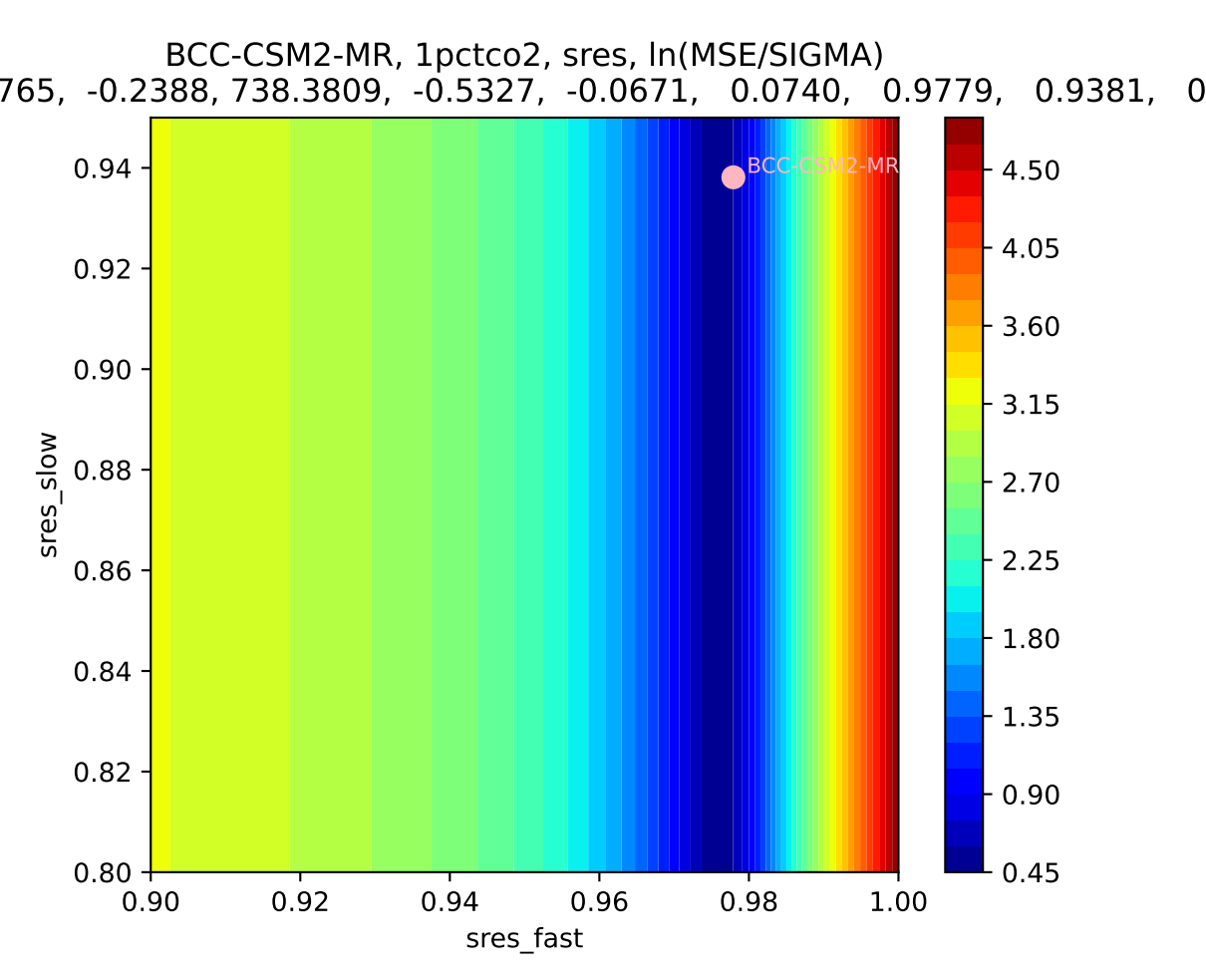

BCC-CSM2-MR, 1pctco2, sres
ESM-Fit
sres, ESM - FIT
c_atm

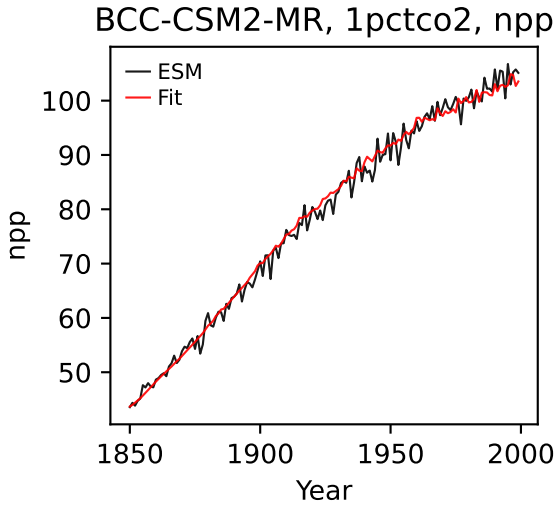

BCC-CSM2-MR, 1pctco2, sres, ln(MSE/SIGMA)
765, -0.2388, 738.3809, -0.5327, -0.0671, 0.0740, 0.9779, 0.9381, 0
BCC-CSM2-MR
sres_t_e
sres_t_l
2
1
0
−1
−2
−3
9.9
9.0
8.1
7.2
6.3
5.4
4.5
3.6
2.7
1.8

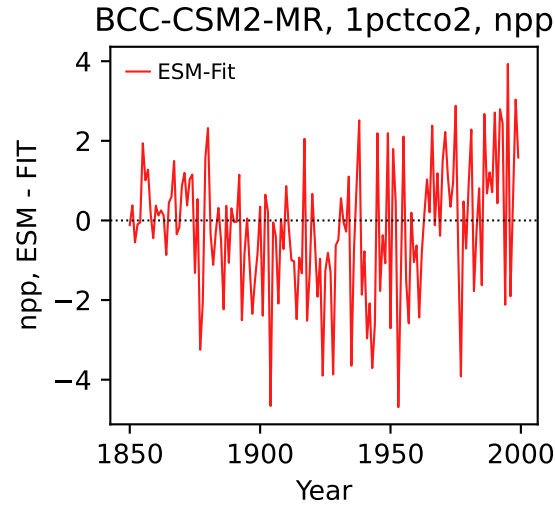

BCC-CSM2-MR, 1pctco2, sres, ln(MSE/SIGMA)
765, -0.2388, 738.3809, -0.5327, -0.0671, 0.0740, 0.9779, 0.9381, 0
sres_c_half
sres_c_l
BCC-CSM2-MR
2000
1750
1500
1250
1000
750
500
250
0
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
7.5
6.5
5.5
4.5
3.5
2.5
1.5
0.5

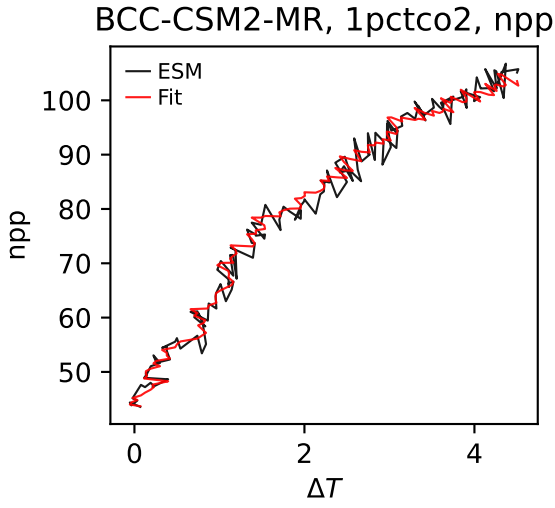

BCC-CSM2-MR, 1pctco2, sres, ln(MSE/SIGMA)
765, -0.2388, 738.3809, -0.5327, -0.0671, 0.0740, 0.9779, 0.9381, 0
BCC-CSM2-MR
sres_hyst
sres_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
8.4
7.5
6.6
5.7
4.8
3.9
3.0
2.1
1.2
0.3

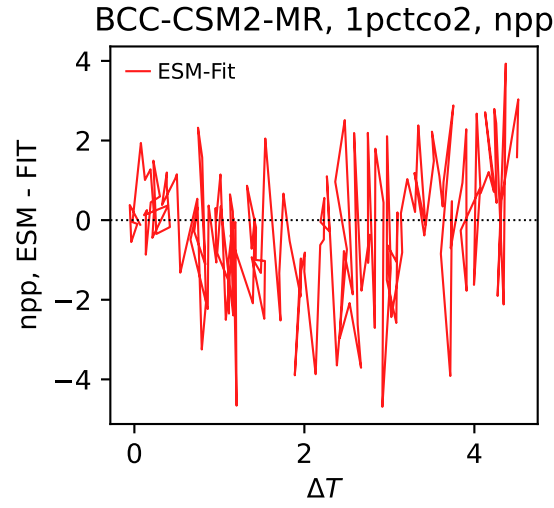

BCC-CSM2-MR, 1pctco2, sres, ln(MSE/SIGMA)
765, -0.2388, 738.3809, -0.5327, -0.0671, 0.0740, 0.9779, 0.9381, 0
0.04
0.02
0.00
−0.02
−0.04
sres_c_tan2
BCC-CSM2
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
sres_c_tan
8.4
7.5
6.6
5.7
4.8
3.9
3.0
2.1
1.2
0.3

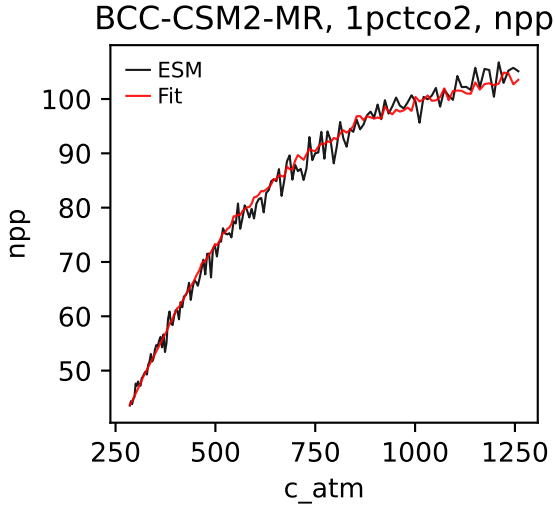

BCC-CSM2-MR, 1pctco2, sres, ln(MSE/SIGMA)
765, -0.2388, 738.3809, -0.5327, -0.0671, 0.0740, 0.9779, 0.9381, 0
BCC-CSM2-MR
sres_slow
sres_fast
0.80
0.82
0.84
0.86
0.88
0.90
0.92
0.94
0.90
0.92
0.94
0.96
0.98
1.00
4.50
4.05
3.60
3.15
2.70
2.25
1.80
1.35
0.90
0.45

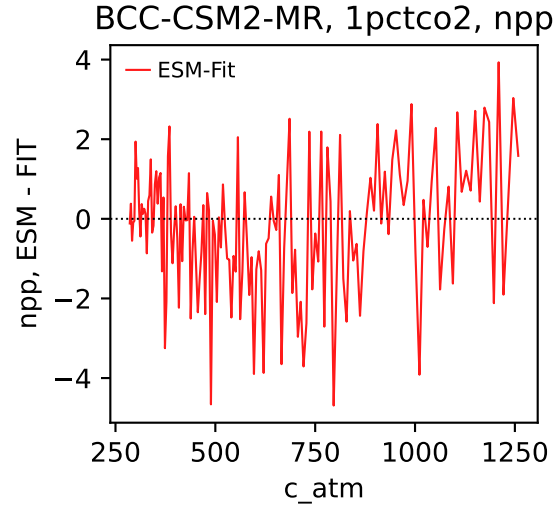

BCC-CSM2-MR, 1pctco2, npp
ESM
Fit
npp
Year

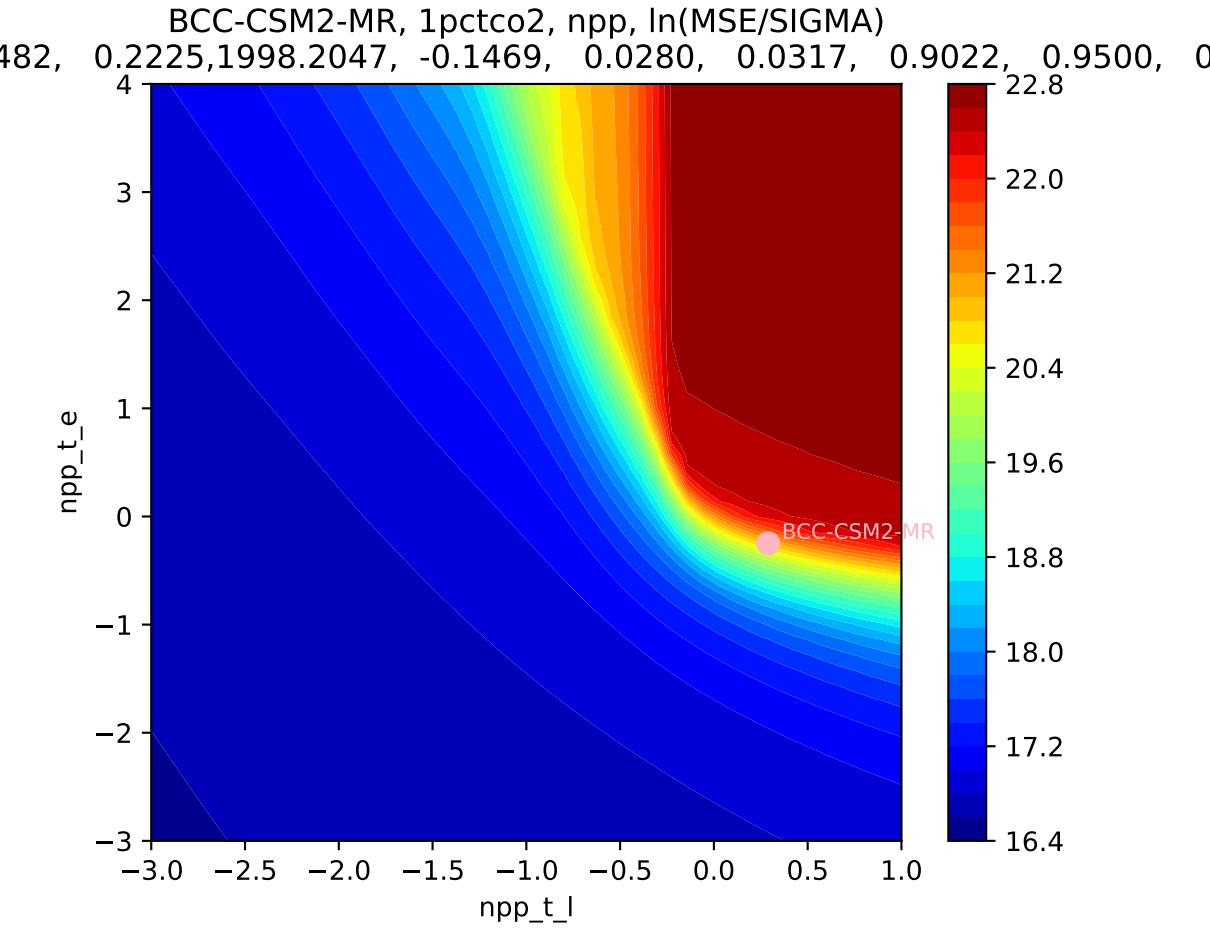

BCC-CSM2-MR, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
Year

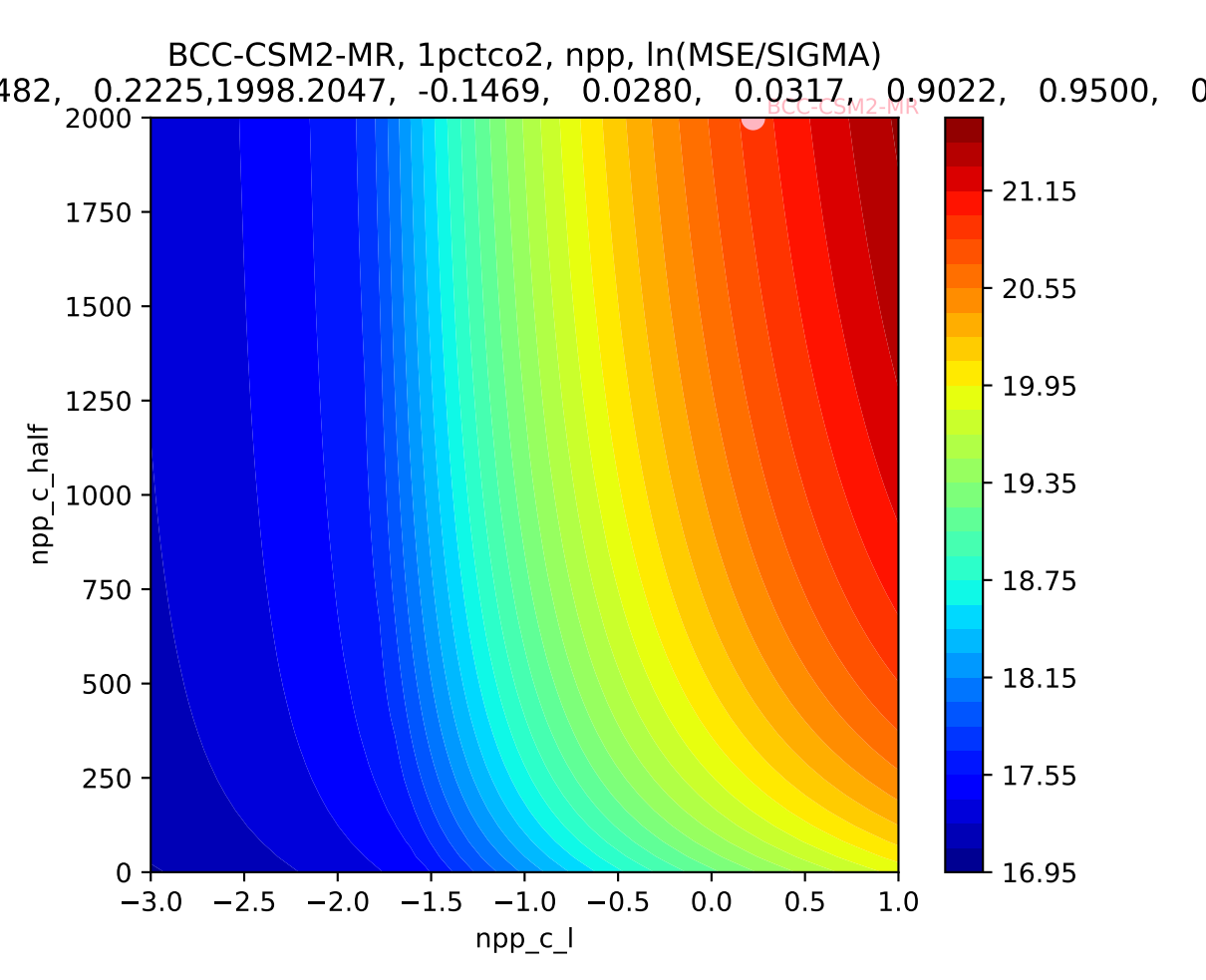

BCC-CSM2-MR, 1pctco2, npp
ESM
Fit
npp
ΔT

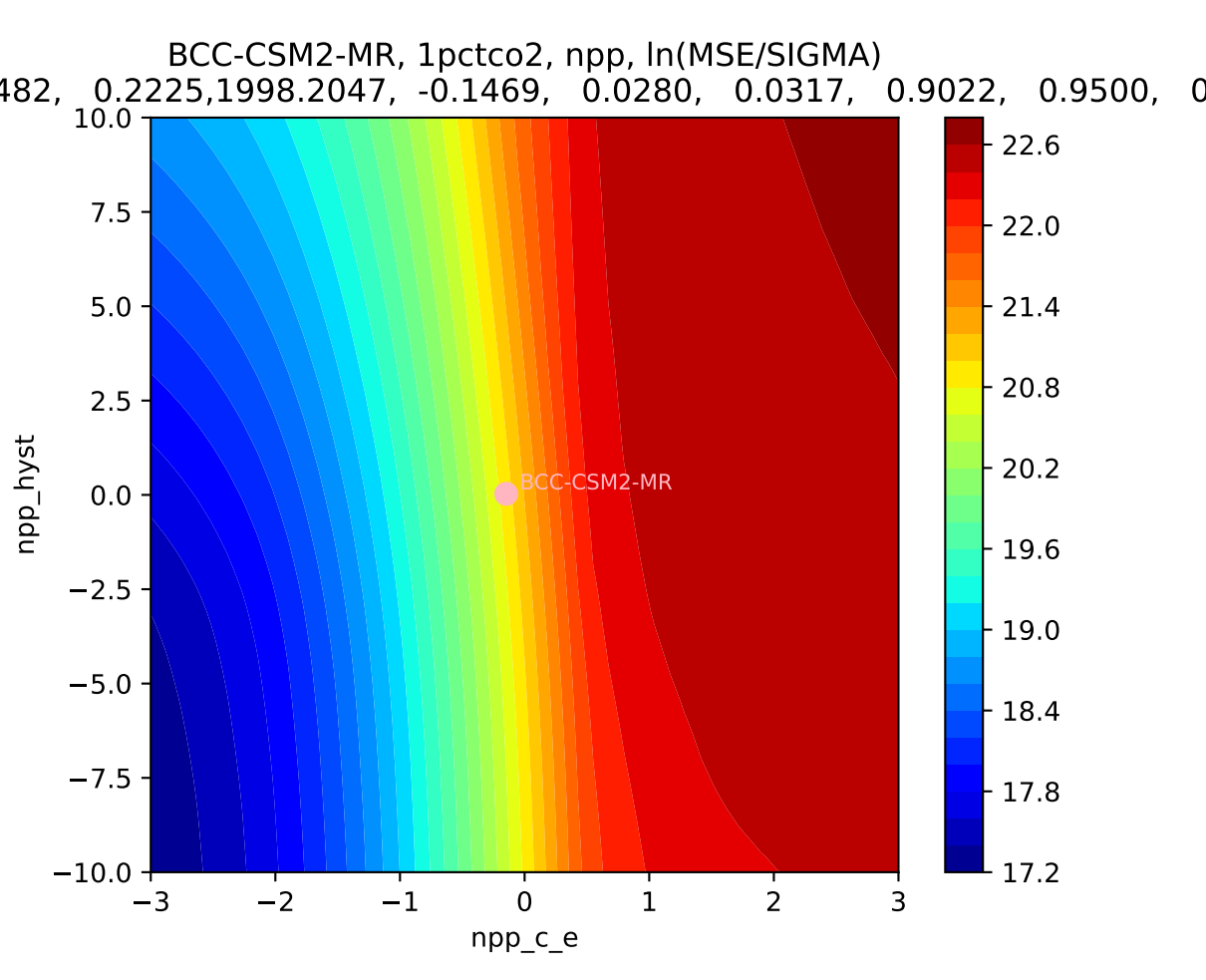

BCC-CSM2-MR, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
ΔT

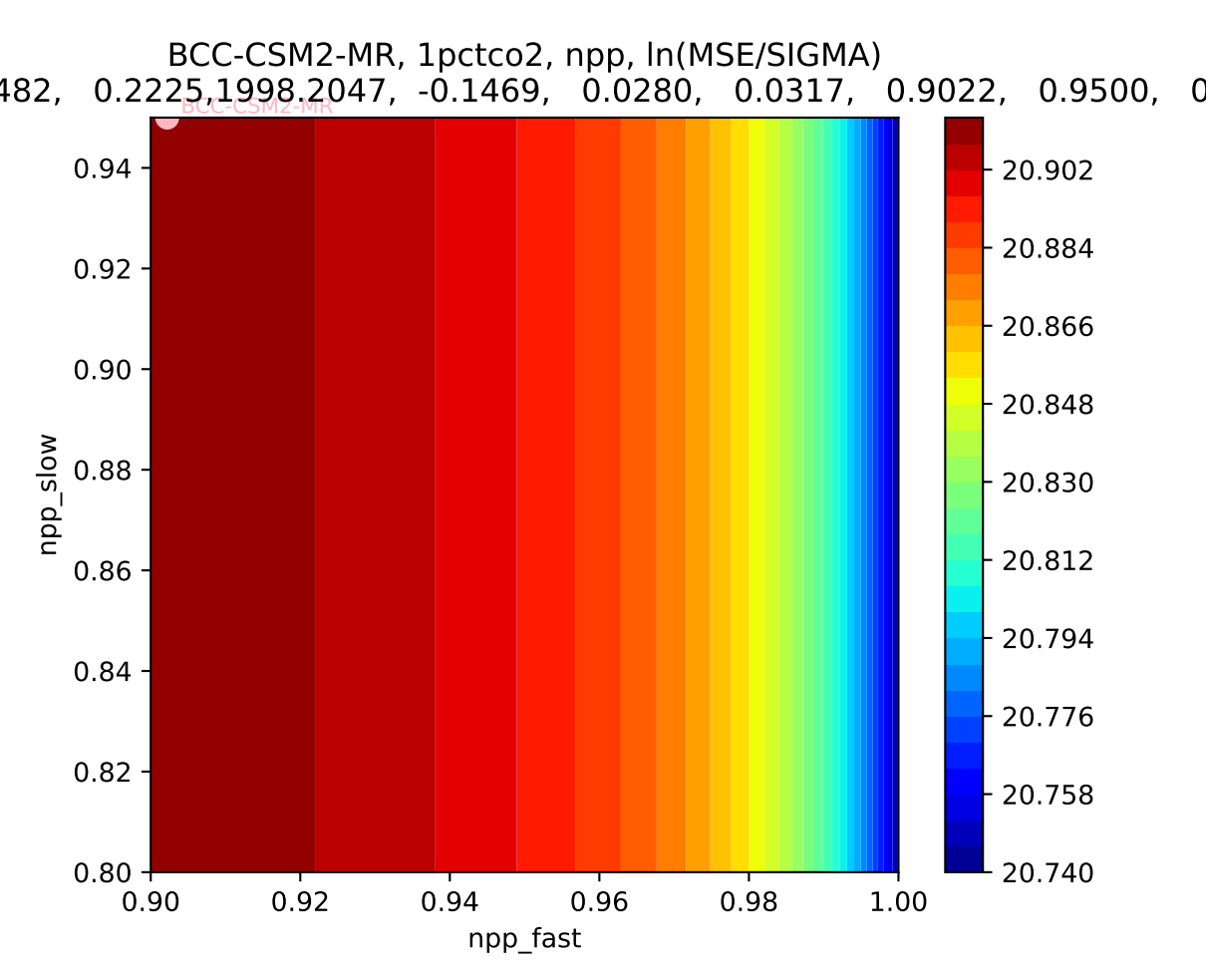

BCC-CSM2-MR, 1pctco2, npp
ESM
Fit
npp
c_atm

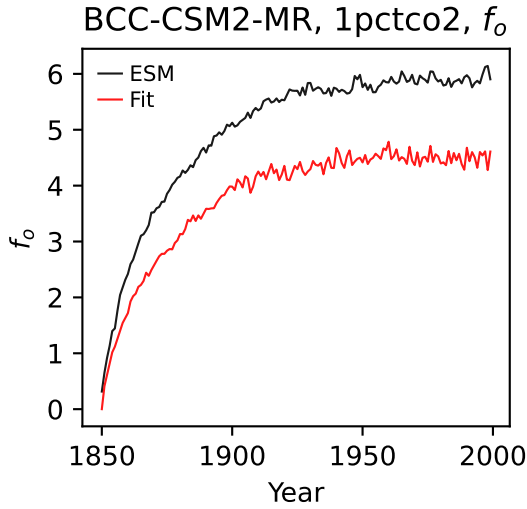

BCC-CSM2-MR, 1pctco2, npp
ESM-Fit
npp, ESM - FIT
c_atm

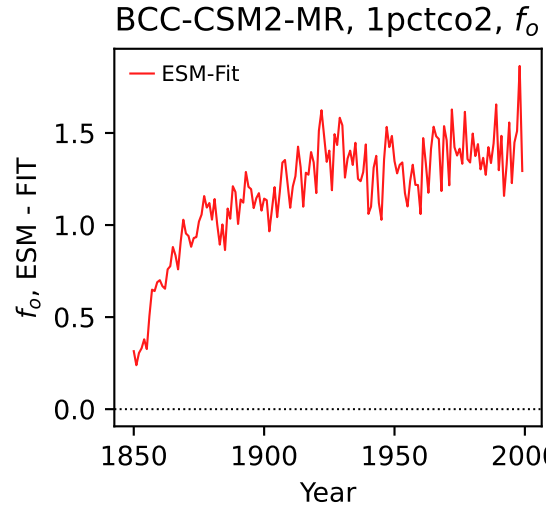

BCC-CSM2-MR, 1pctco2, npp, ln(MSE/SIGMA)
482, 0.2225,1998.2047, -0.1469, 0.0280, 0.0317, 0.9022, 0.9500, 0
BCC-CSM2-MR
npp_t_e
npp_t_l
4
3
2
1
0
−1
−2
−3
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
22.8
22.0
21.2
20.4
19.6
18.8
18.0
17.2
16.4

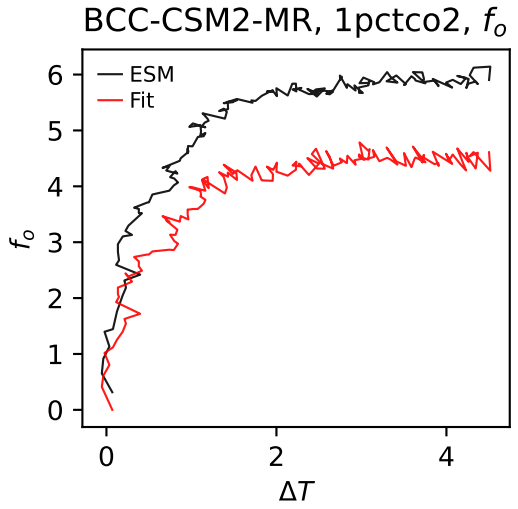

BCC-CSM2-MR, 1pctco2, npp, ln(MSE/SIGMA)
482, 0.2225,1998.2047, -0.1469, 0.0280, 0.0317, 0.9022, 0.9500, 0
BCC-CSM2-MR
2000
1750
1500
1250
1000
750
500
250
0
npp_c_half
−3.0
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
npp_c_l
21.15
20.55
19.95
19.35
18.75
18.15
17.55
16.95

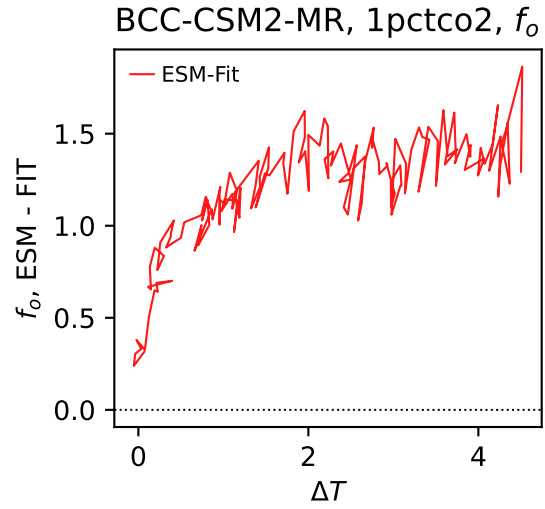

BCC-CSM2-MR, 1pctco2, npp, ln(MSE/SIGMA)
482, 0.2225,1998.2047, -0.1469, 0.0280, 0.0317, 0.9022, 0.9500, 0
BCC-CSM2-MR
npp_hyst
npp_c_e
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
−3
−2
−1
0
1
2
3
22.6
22.0
21.4
20.8
20.2
19.6
19.0
18.4
17.8
17.2

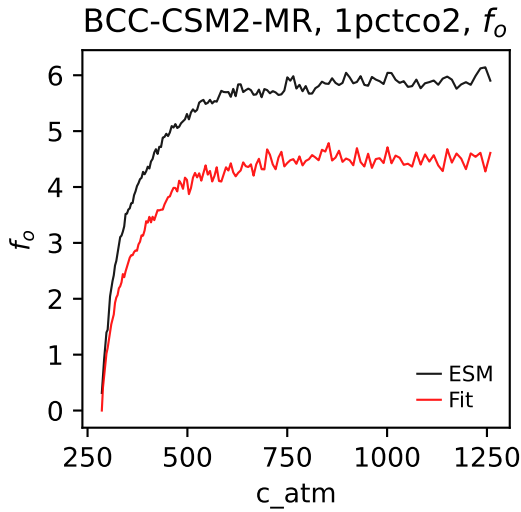

BCC-CSM2-MR, 1pctco2, npp, ln(MSE/SIGMA)
482, 0.2225,1998.2047, -0.1469, 0.0280, 0.0317, 0.9022, 0.9500, 0
BCC-CSM2-MR
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
npp_slow
0.90
0.92
0.94
0.96
0.98
1.00
npp_fast
20.902
20.884
20.866
20.848
20.830
20.812
20.794
20.776
20.758
20.740

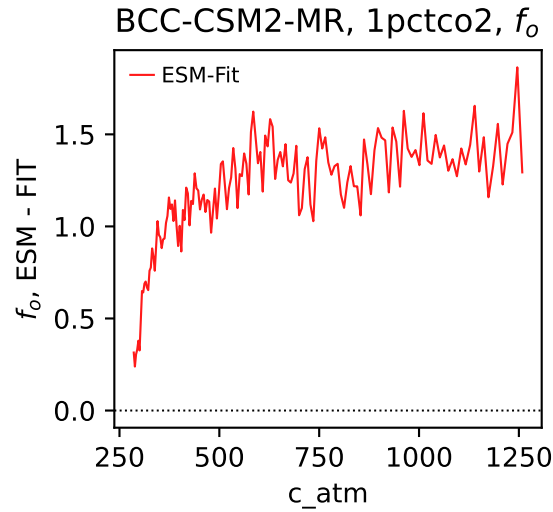

BCC-CSM2-MR, 1pctco2, $f_o$
ESM
Fit
$f_o$
Year

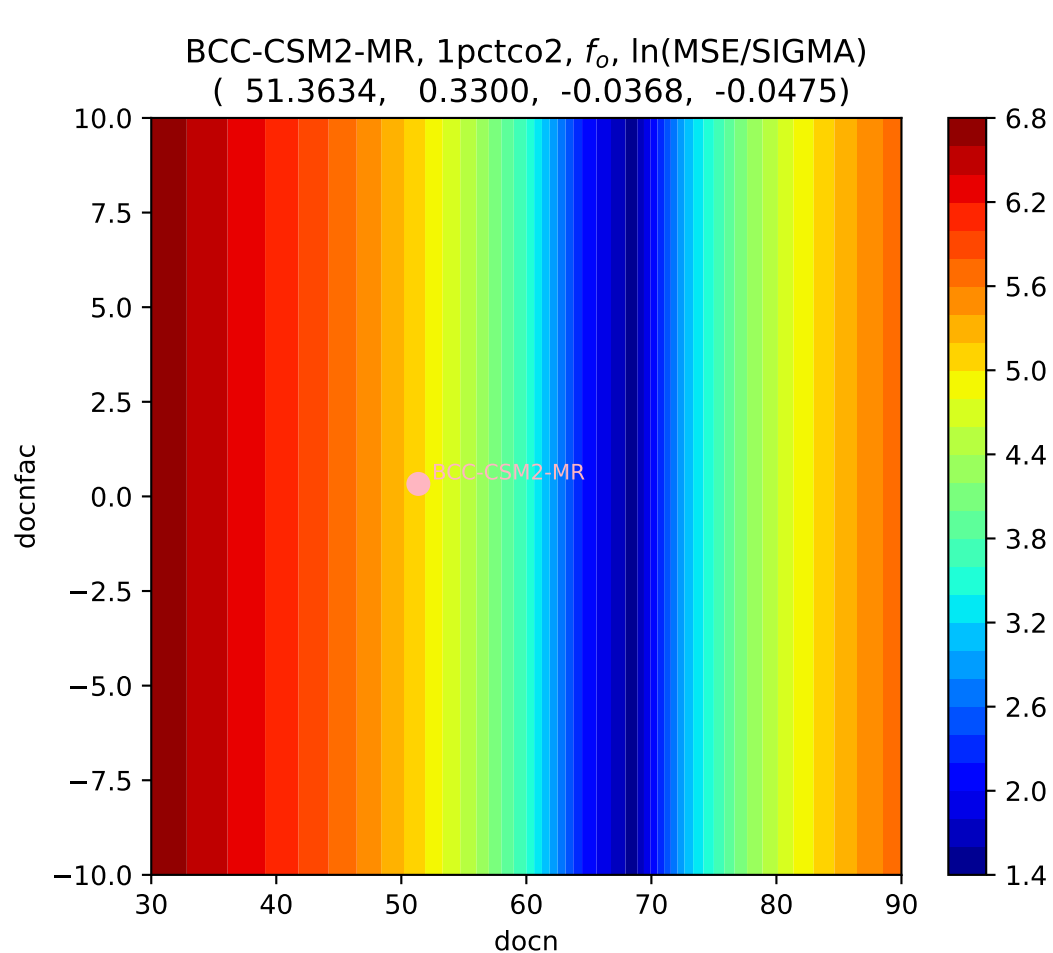

BCC-CSM2-MR, 1pctco2, $f_o$
ESM-Fit
$f_o$, ESM - FIT
Year

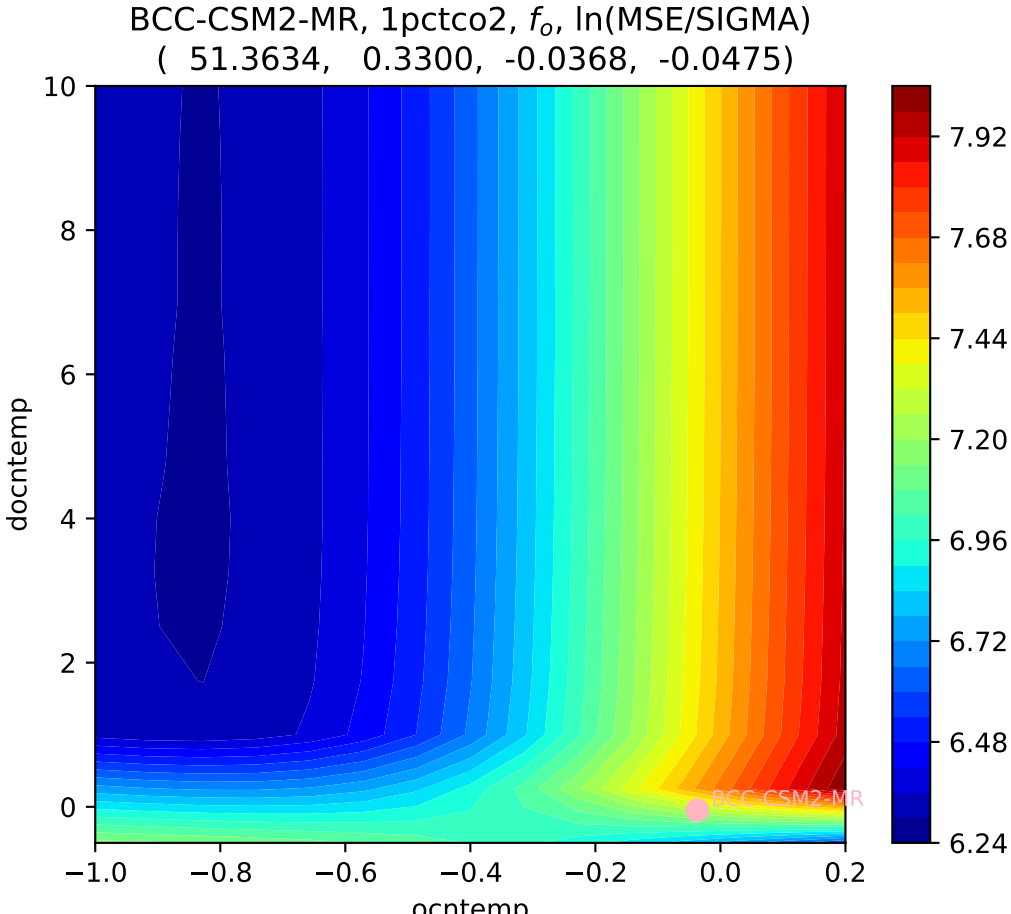

BCC-CSM2-MR, 1pctco2, $f_o$
ESM
Fit
$f_o$
$\Delta T$


BCC-CSM2-MR, 1pctco2, $f_o$
ESM-Fit
$f_o$, ESM - FIT
$\Delta T$


BCC-CSM2-MR, 1pctco2, $f_o$
ESM
Fit
$f_o$
c_atm


BCC-CSM2-MR, 1pctco2, $f_o$
ESM-Fit
$f_o$, ESM - FIT
c_atm


BCC-CSM2-MR, 1pctco2, $f_o$, ln(MSE/SIGMA)
( 51.3634, 0.3300, -0.0368, -0.0475)
BCC-CSM2-MR
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
6.8
6.2
5.6
5.0
4.4
3.8
3.2
2.6
2.0
1.4


BCC-CSM2-MR, 1pctco2, $f_o$, ln(MSE/SIGMA)
( 51.3634, 0.3300, -0.0368, -0.0475)
docntemp
ocntemp
10
8
6
4
2
0
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
7.92
7.68
7.44
7.20
6.96
6.72
6.48
6.24
BCC-CSM2-MR