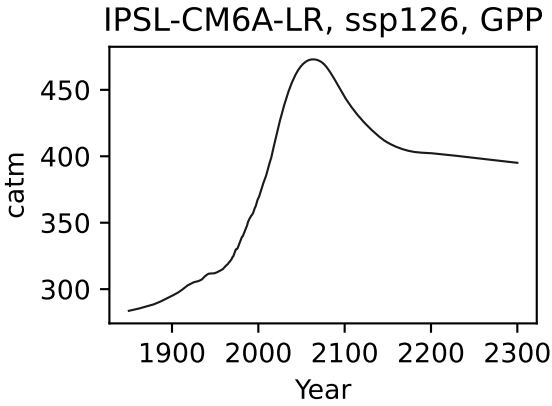
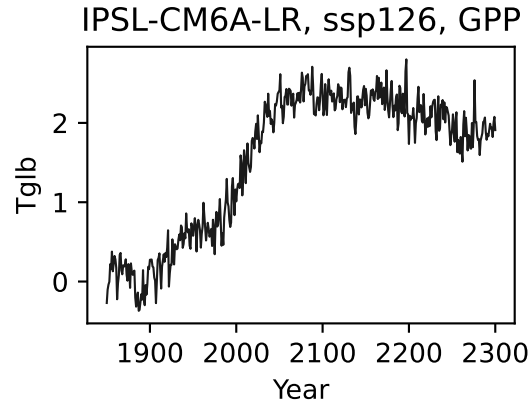
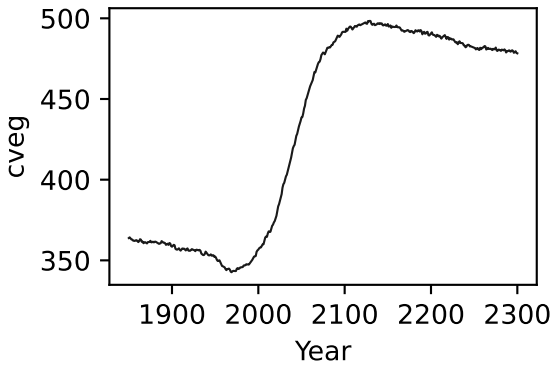
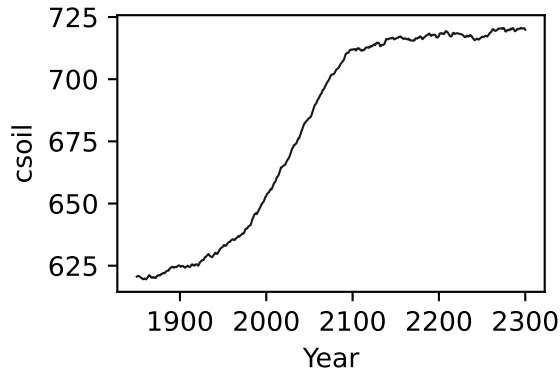
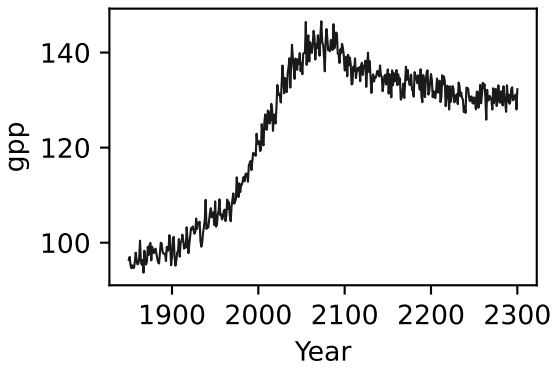
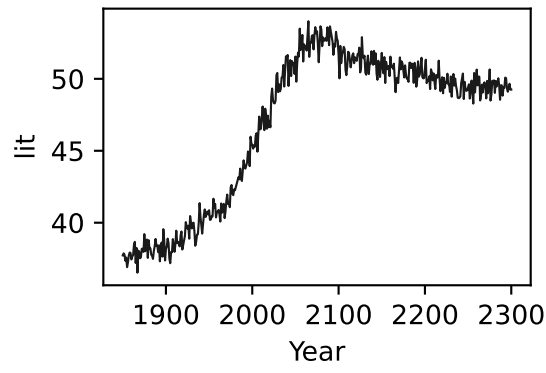

IPSL-CM6A-LR, ssp126, GPP
catm
450
400
350
300
1900
2000
2100
2200
2300
Year

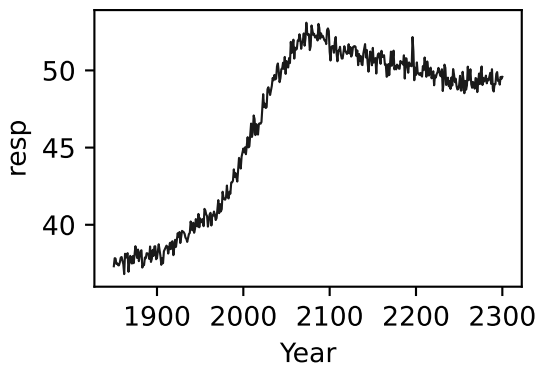

IPSL-CM6A-LR, ssp126, GPP
Tglb
2
1
0
1900
2000
2100
2200
2300
Year

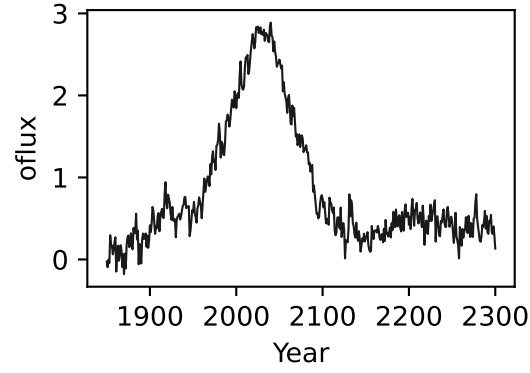

cveg
500
450
400
350
1900
2000
2100
2200
2300
Year

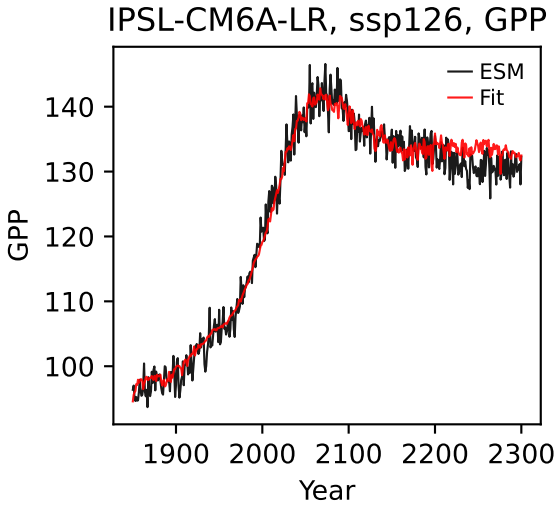

csoil
725
700
675
650
625
1900
2000
2100
2200
2300
Year

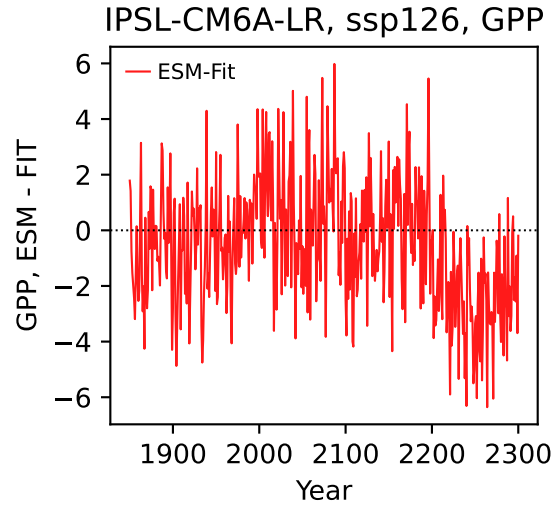

gpp
140
120
100
1900
2000
2100
2200
2300
Year

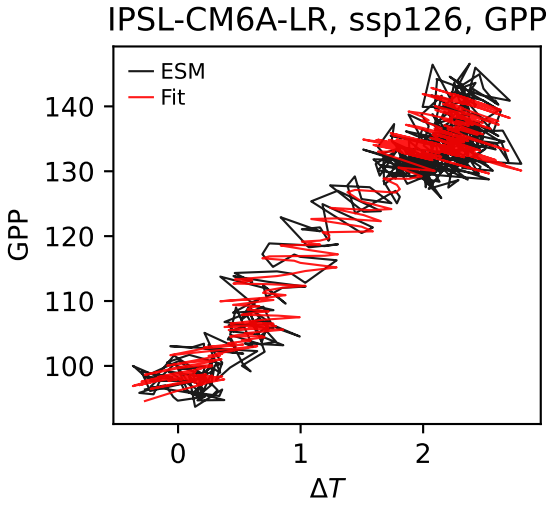

lit
50
45
40
1900
2000
2100
2200
2300
Year

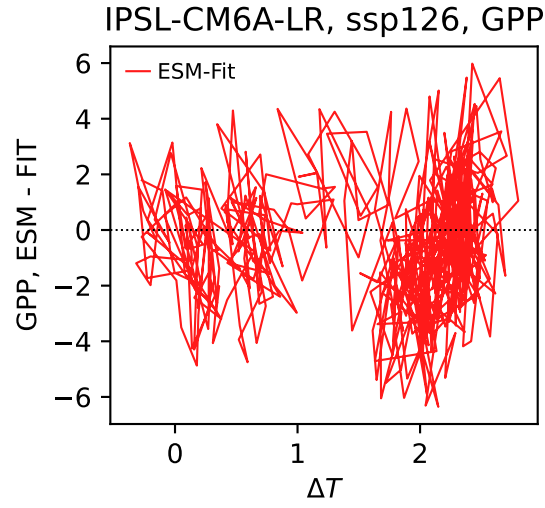

resp
50
45
40
1900
2000
2100
2200
2300
Year

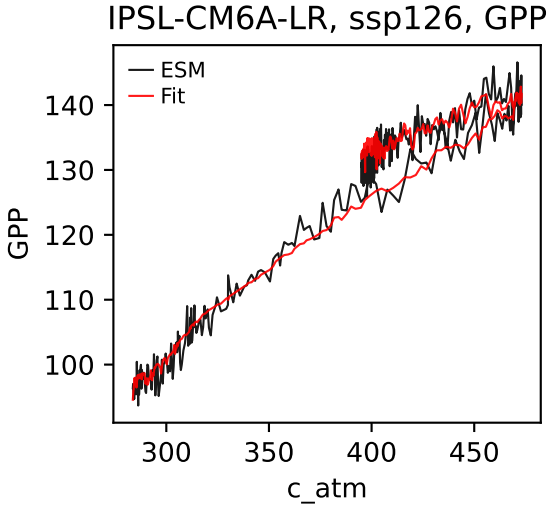

oflux
3
2
1
0
1900
2000
2100
2200
2300
Year

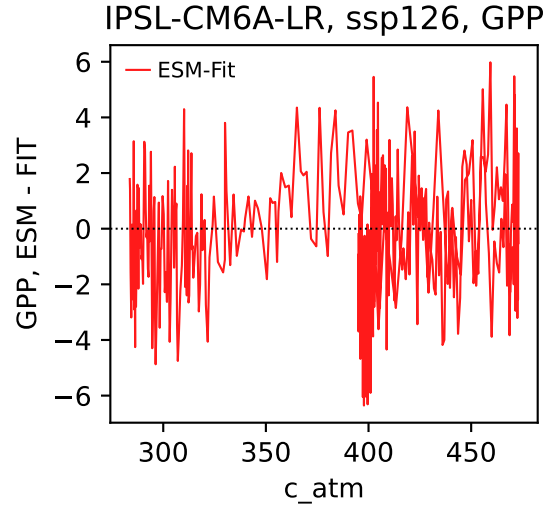

IPSL-CM6A-LR, ssp126, GPP
ESM
Fit
GPP
Year

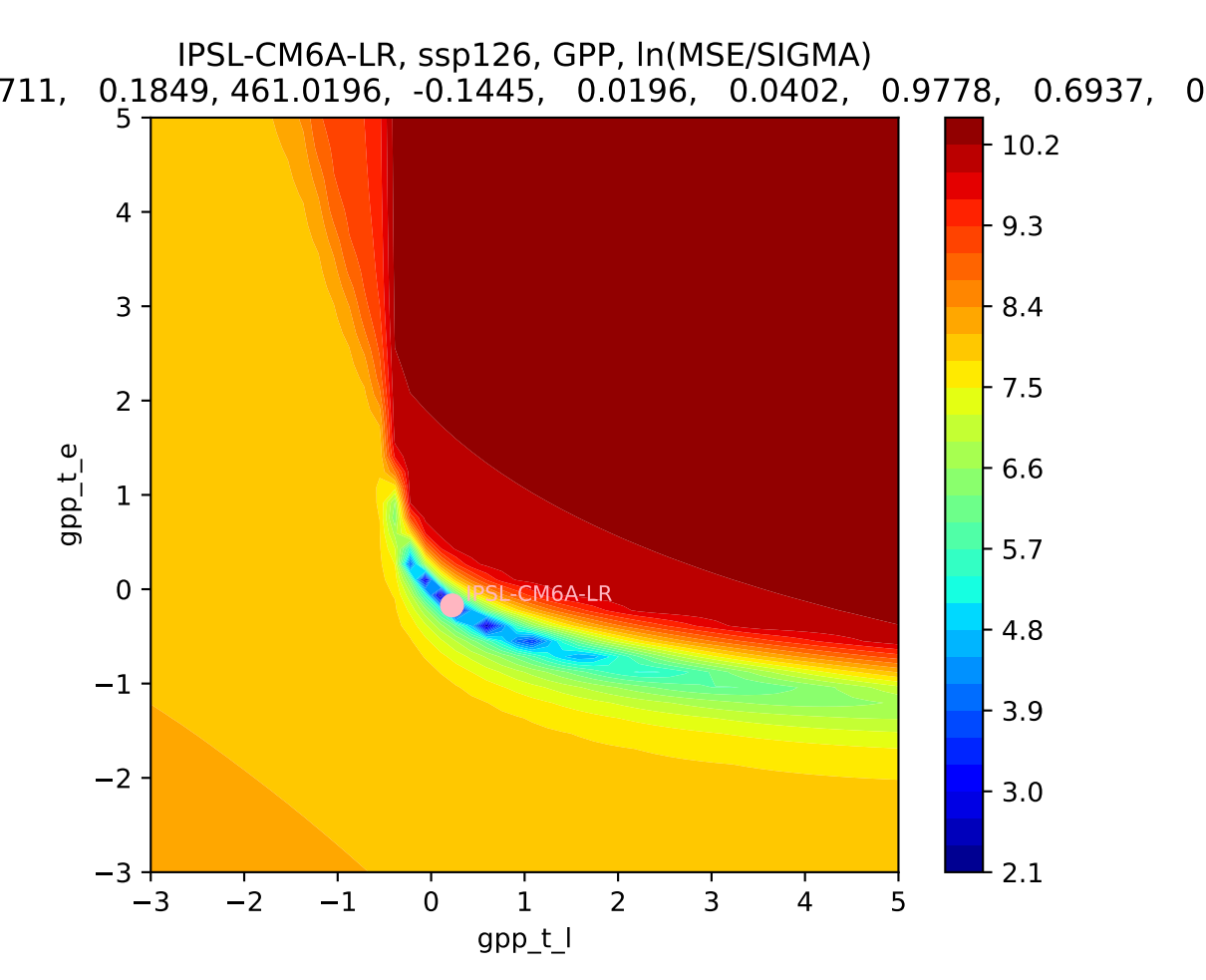

IPSL-CM6A-LR, ssp126, GPP
ESM-Fit
GPP, ESM - FIT
Year

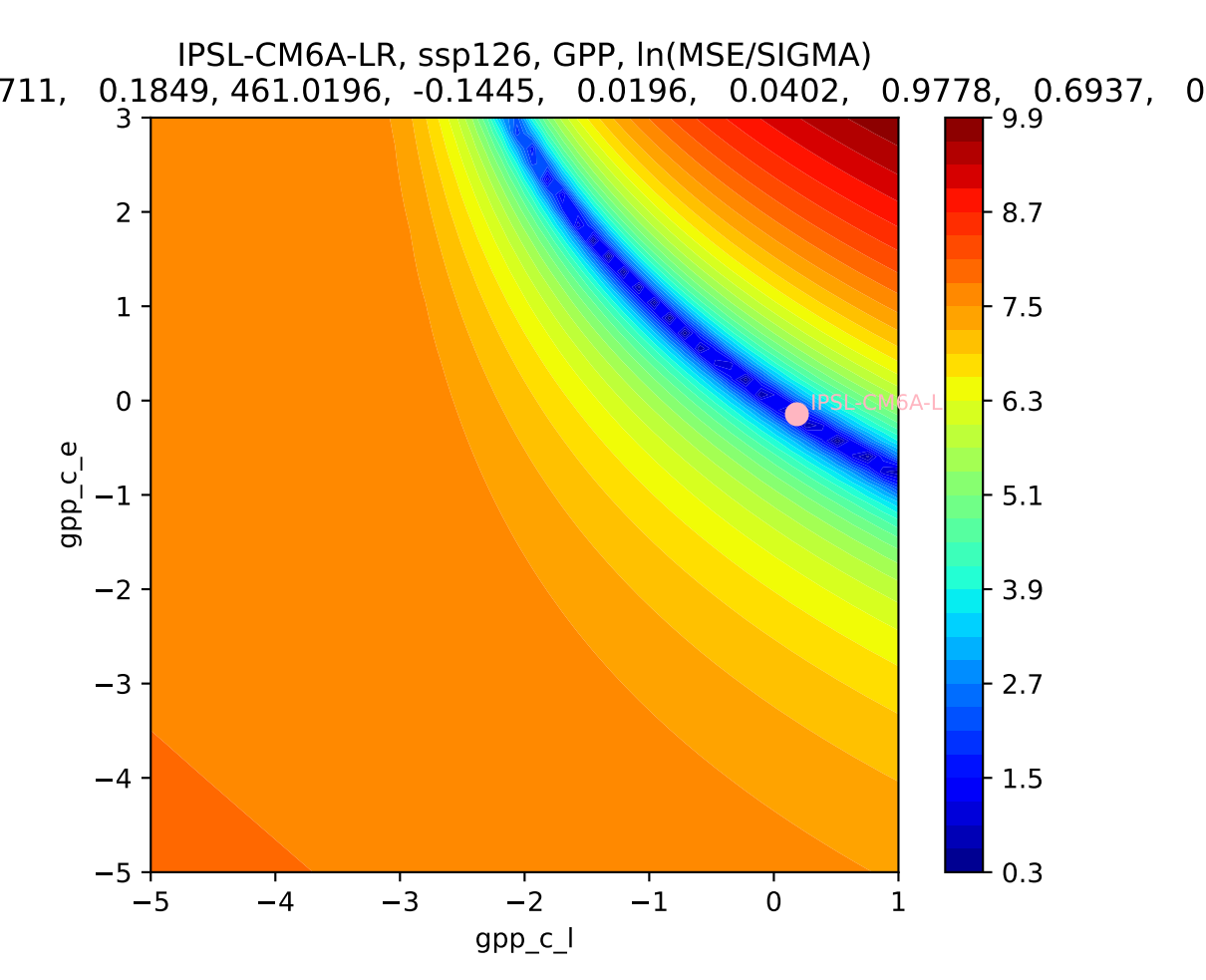

IPSL-CM6A-LR, ssp126, GPP
ESM
Fit
GPP
ΔT

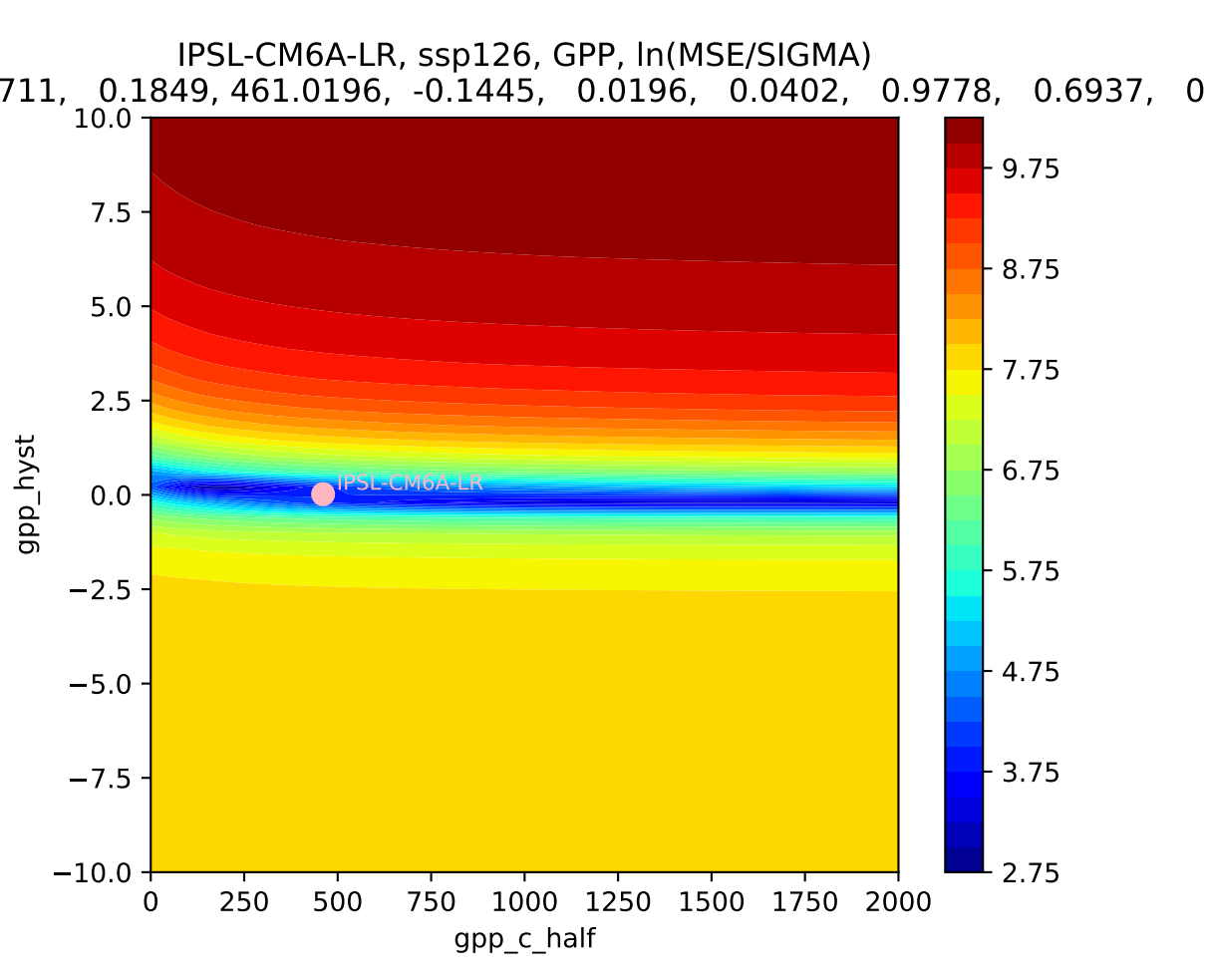

IPSL-CM6A-LR, ssp126, GPP
ESM-Fit
GPP, ESM - FIT
ΔT

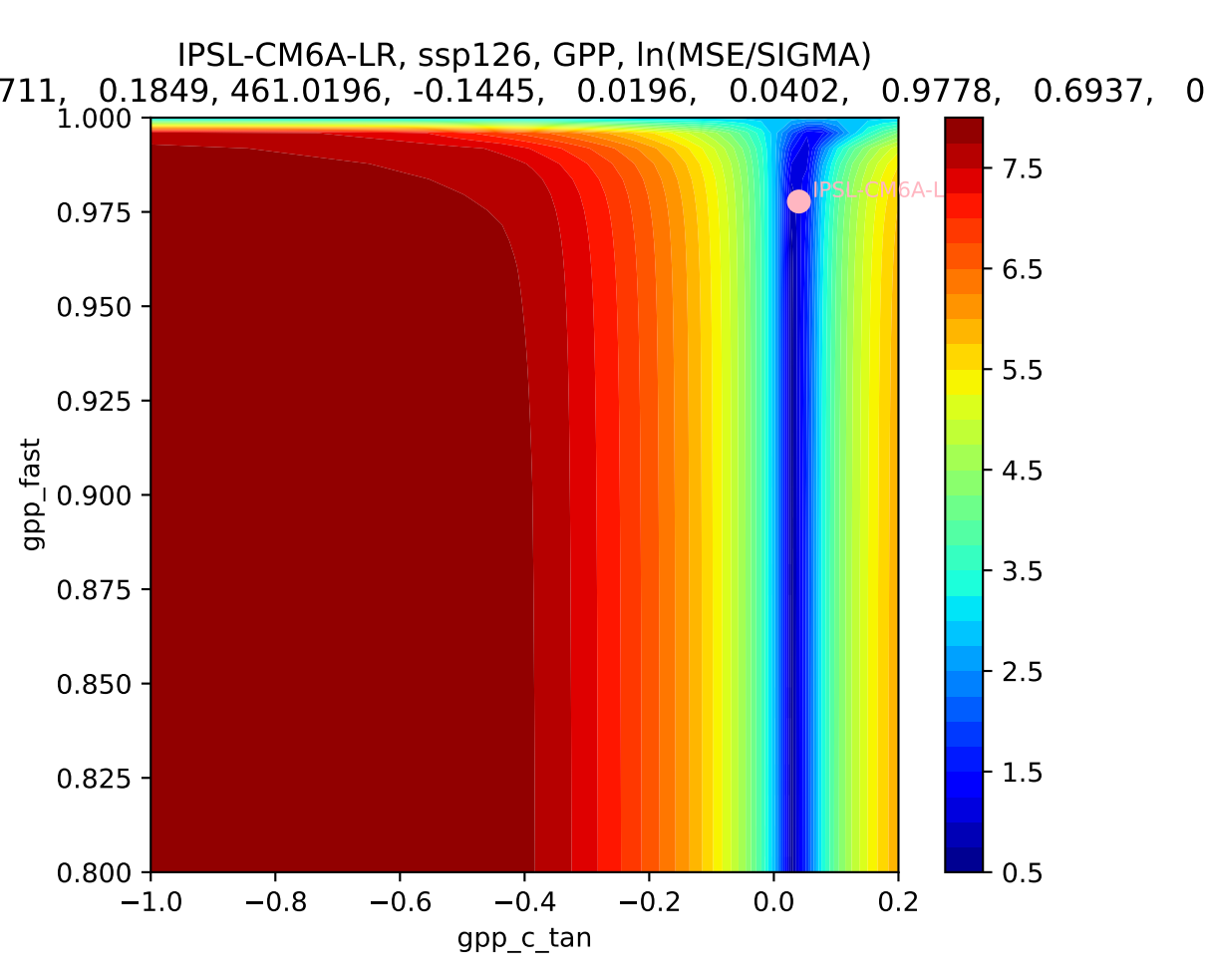

IPSL-CM6A-LR, ssp126, GPP
ESM
Fit
GPP
c_atm

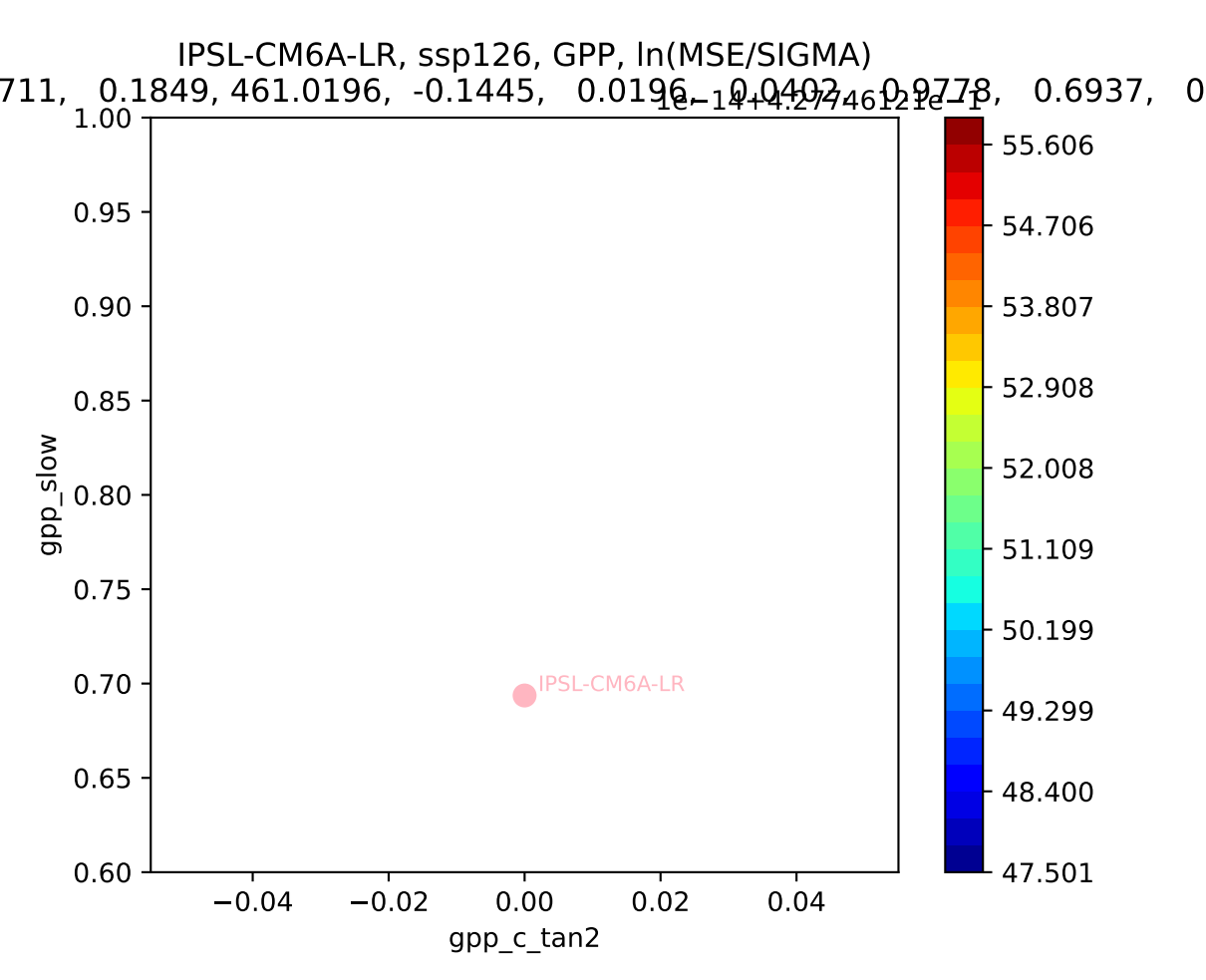

IPSL-CM6A-LR, ssp126, GPP
ESM-Fit
GPP, ESM - FIT
c_atm

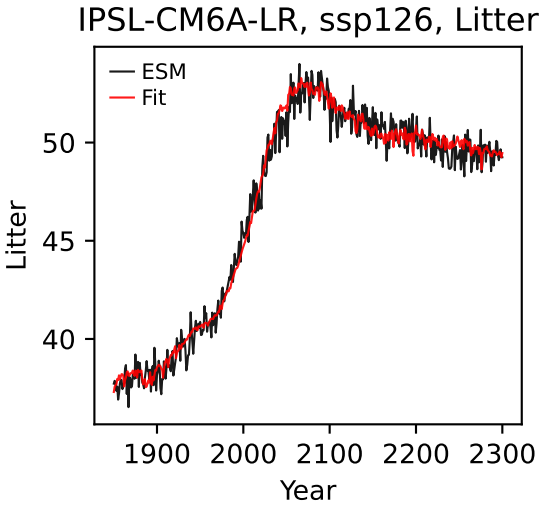

IPSL-CM6A-LR, ssp126, GPP, ln(MSE/SIGMA)
711, 0.1849, 461.0196, -0.1445, 0.0196, 0.0402, 0.9778, 0.6937, 0
IPSL-CM6A-LR
gpp_t_e
gpp_t_l
10.2
9.3
8.4
7.5
6.6
5.7
4.8
3.9
3.0
2.1

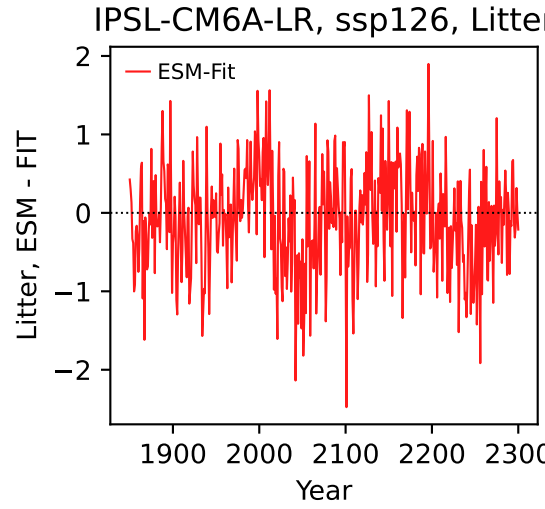

IPSL-CM6A-LR, ssp126, GPP, ln(MSE/SIGMA)
711, 0.1849, 461.0196, -0.1445, 0.0196, 0.0402, 0.9778, 0.6937, 0
IPSL-CM6A-L
gpp_c_e
gpp_c_l
3
2
1
0
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
0
1
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3

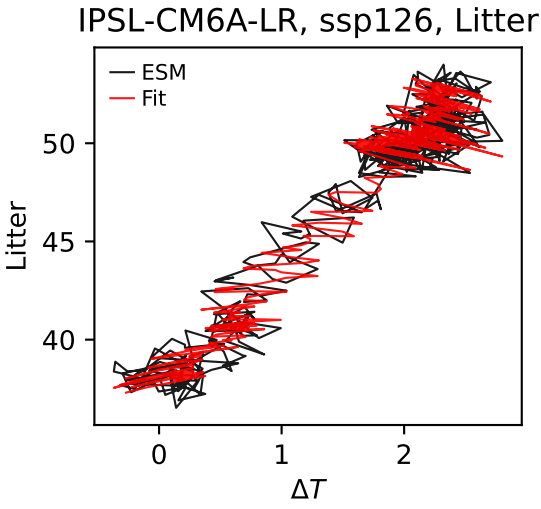

IPSL-CM6A-LR, ssp126, GPP, ln(MSE/SIGMA)
711, 0.1849, 461.0196, -0.1445, 0.0196, 0.0402, 0.9778, 0.6937, 0
IPSL-CM6A-LR
gpp_hyst
gpp_c_half
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
0
250
500
750
1000
1250
1500
1750
2000
9.75
8.75
7.75
6.75
5.75
4.75
3.75
2.75

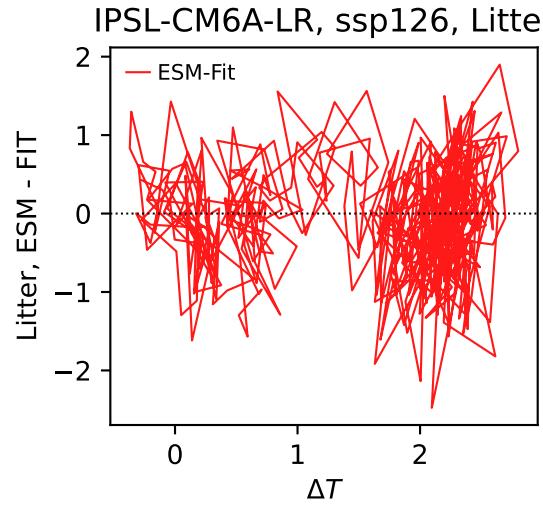

IPSL-CM6A-LR, ssp126, GPP, ln(MSE/SIGMA)
711, 0.1849, 461.0196, -0.1445, 0.0196, 0.0402, 0.9778, 0.6937, 0
IPSL-CM6A-L
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
gpp_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
gpp_c_tan
7.5
6.5
5.5
4.5
3.5
2.5
1.5
0.5

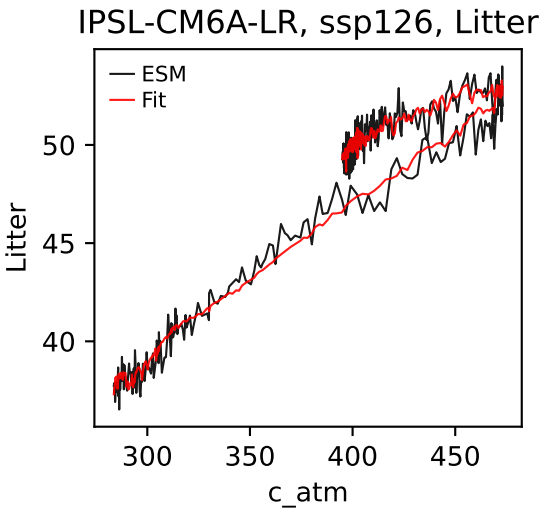

IPSL-CM6A-LR, ssp126, GPP, ln(MSE/SIGMA)
711, 0.1849, 461.0196, -0.1445, 0.0196, 0.0402, 0.9778, 0.6937, 0
1e−14+4.274612 1e−1
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
gpp_slow
IPSL-CM6A-LR
−0.04
−0.02
0.00
0.02
0.04
gpp_c_tan2
55.606
54.706
53.807
52.908
52.008
51.109
50.199
49.299
48.400
47.501

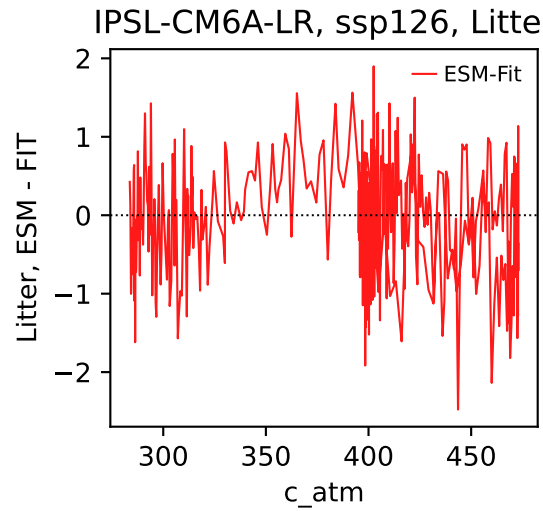

IPSL-CM6A-LR, ssp126, Litter
ESM
Fit
Litter
Year

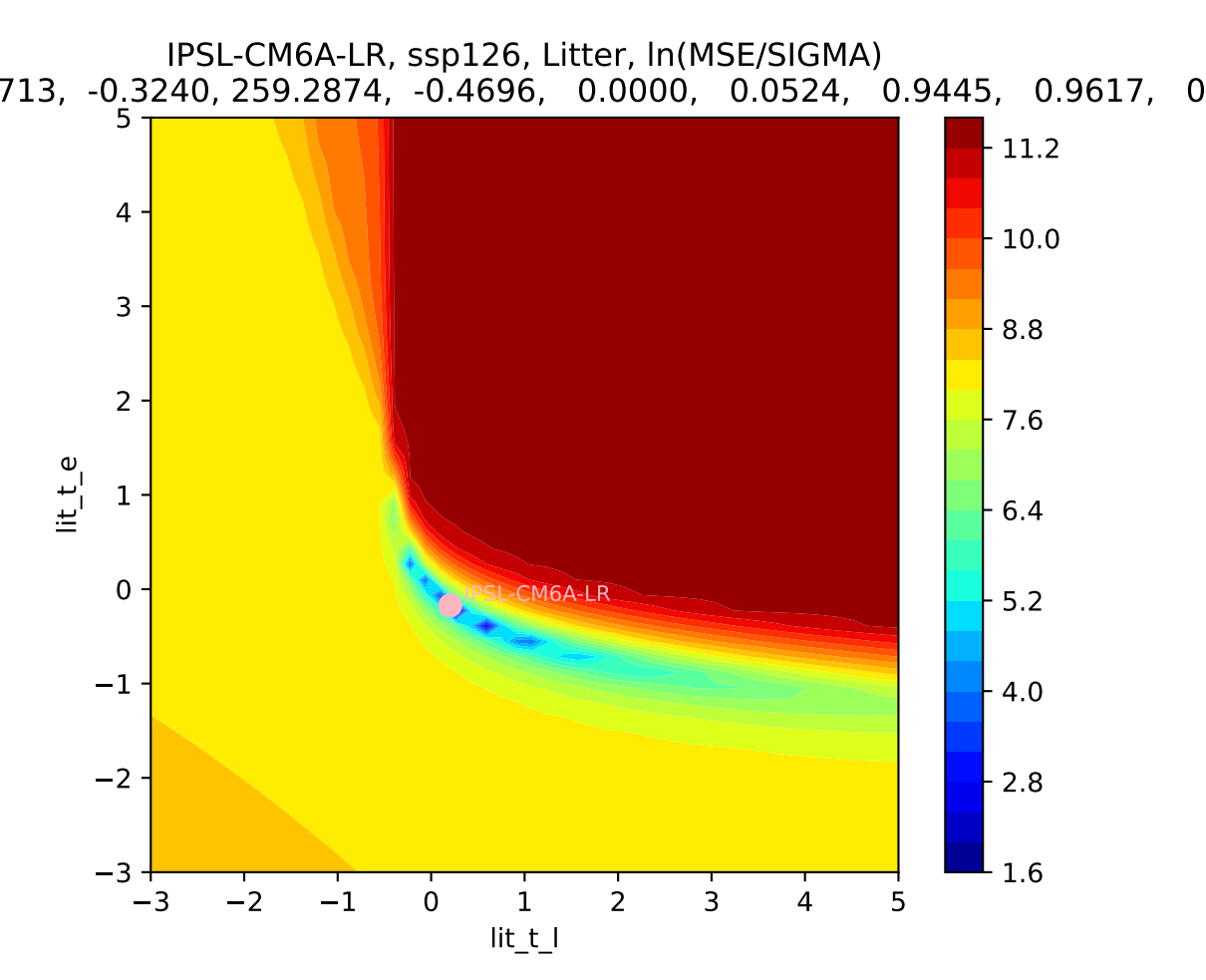

IPSL-CM6A-LR, ssp126, Litter
ESM-Fit
Litter, ESM - FIT
Year

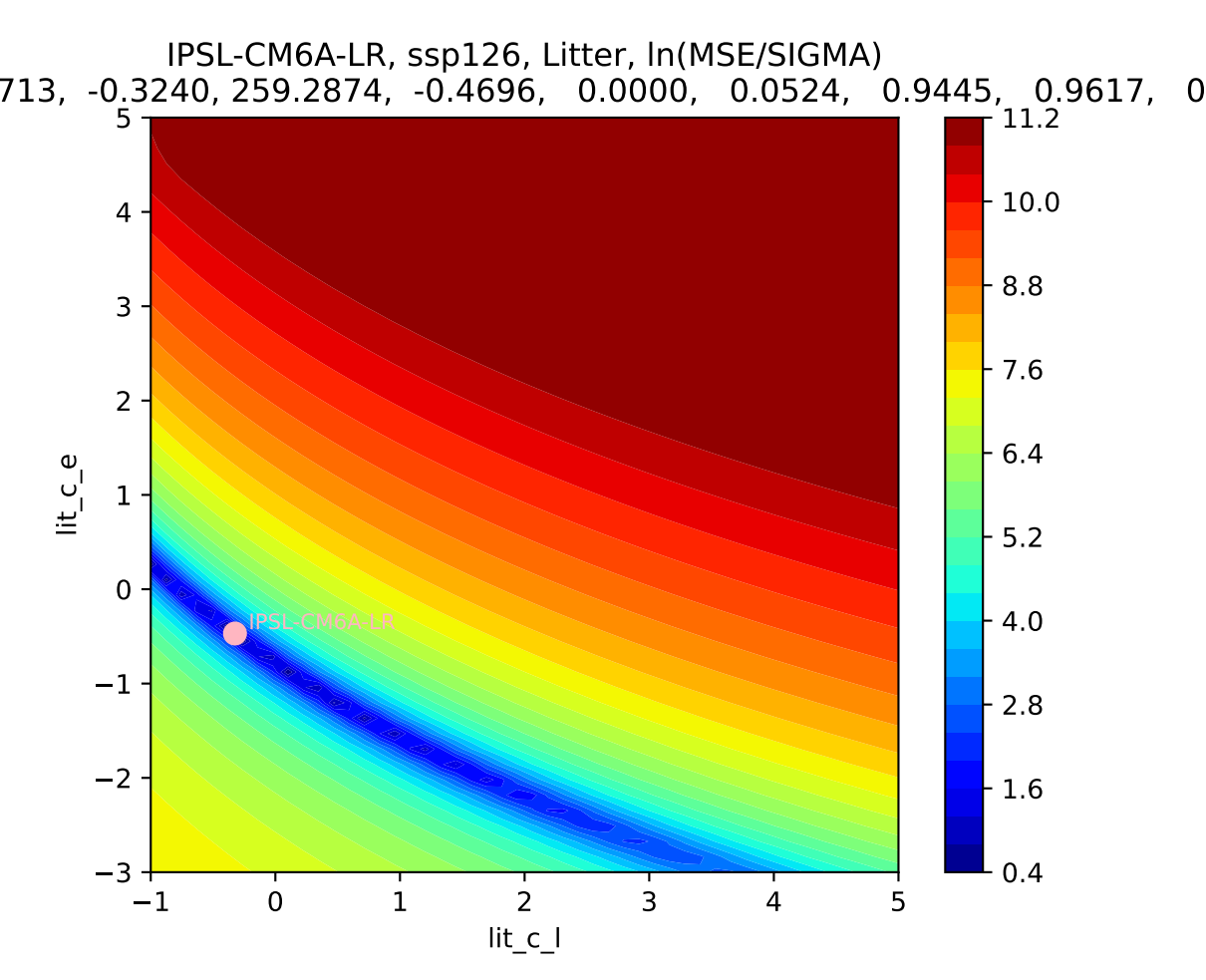

IPSL-CM6A-LR, ssp126, Litter
ESM
Fit
Litter
ΔT

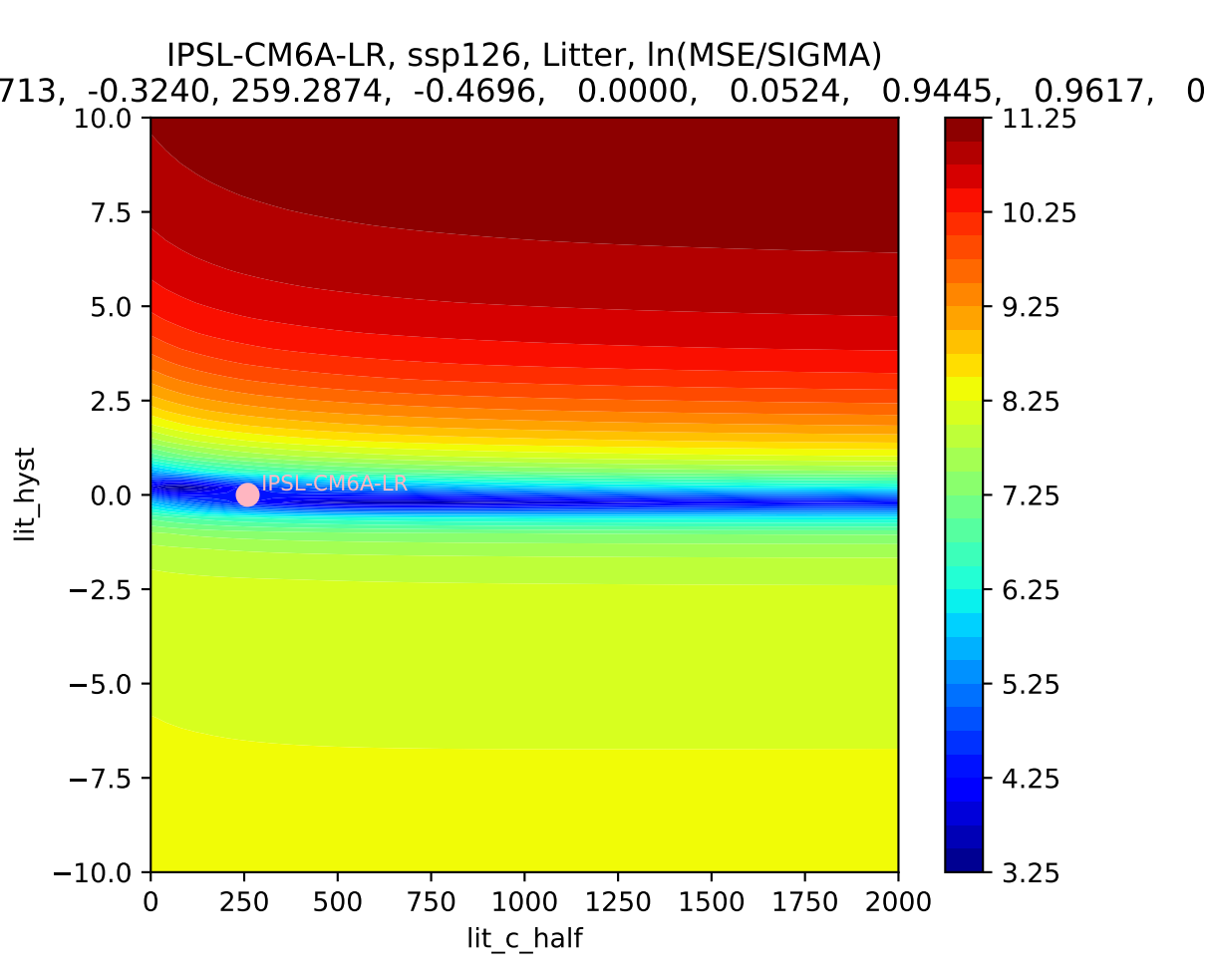

IPSL-CM6A-LR, ssp126, Litter
ESM-Fit
Litter, ESM - FIT
ΔT

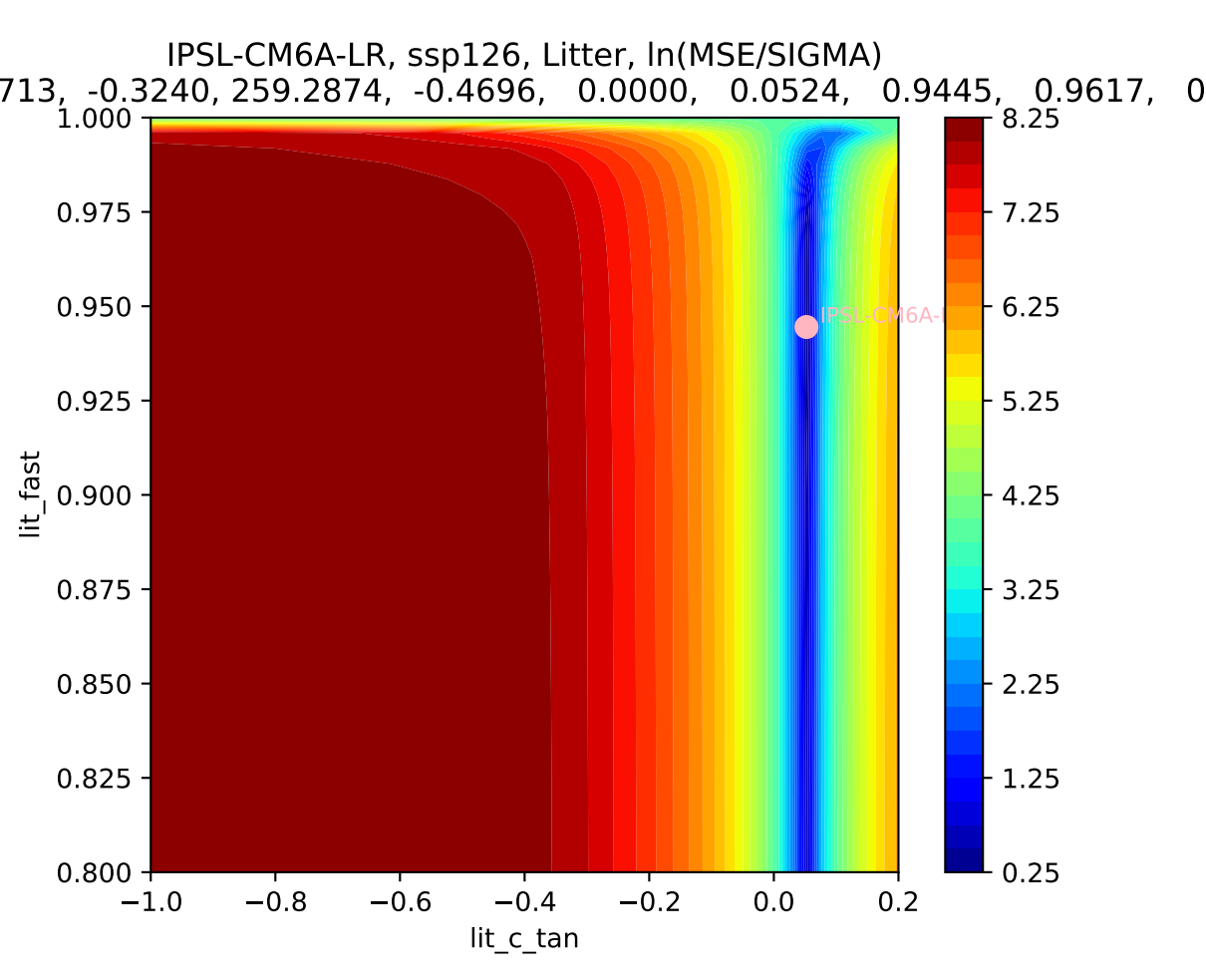

IPSL-CM6A-LR, ssp126, Litter
ESM
Fit
Litter
c_atm

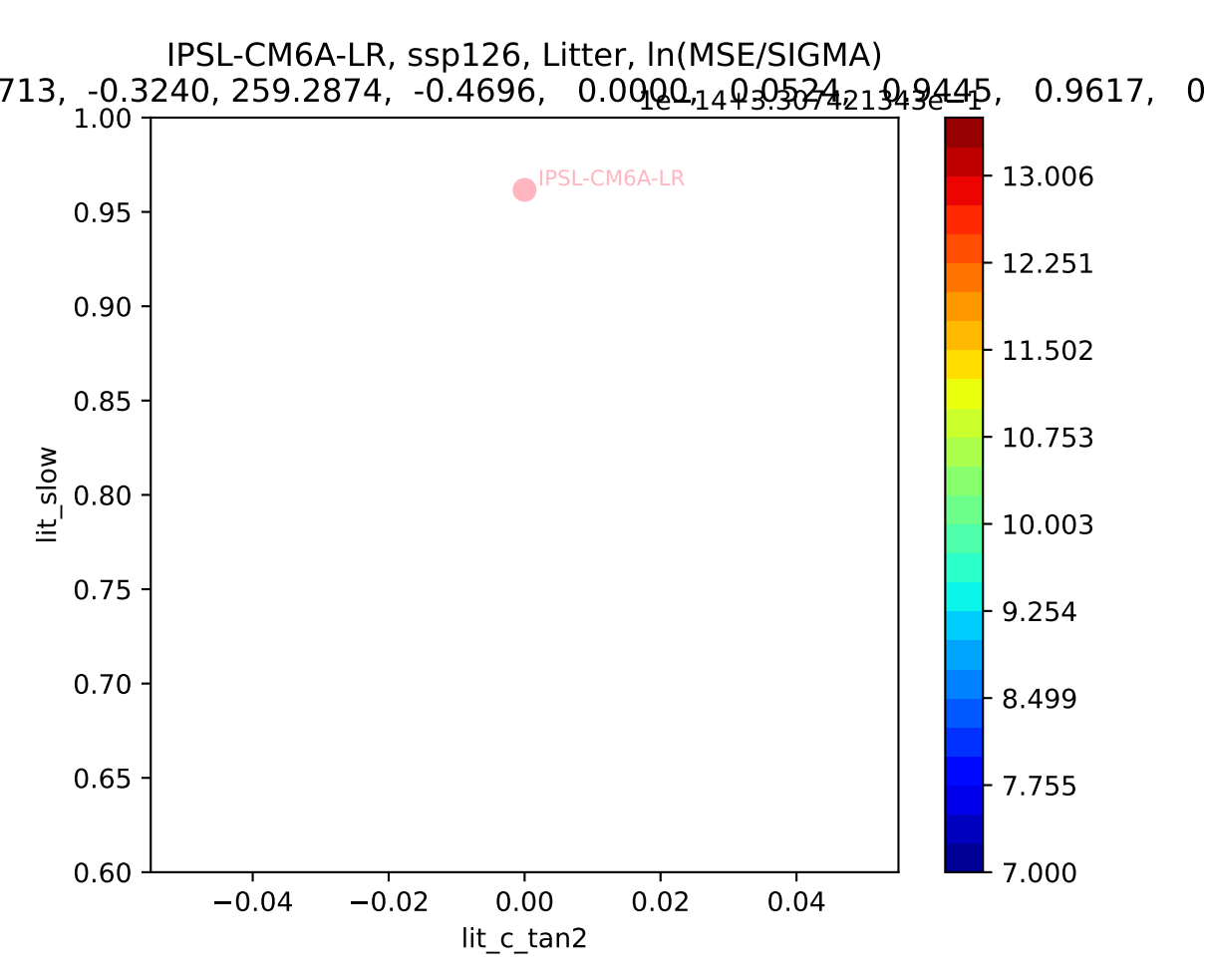

IPSL-CM6A-LR, ssp126, Litter
ESM-Fit
Litter, ESM - FIT
c_atm

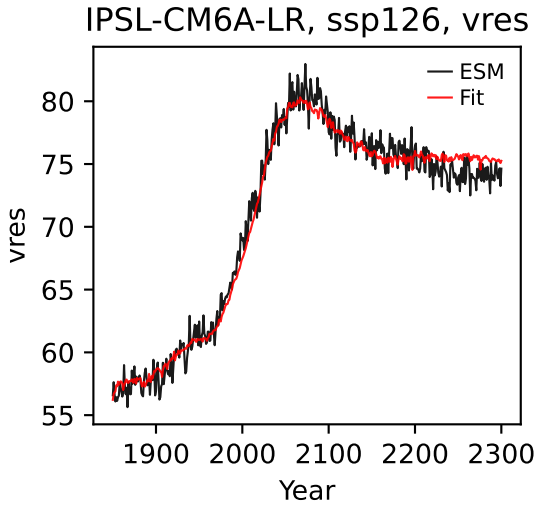

IPSL-CM6A-LR, ssp126, Litter, ln(MSE/SIGMA)
713, -0.3240, 259.2874, -0.4696, 0.0000, 0.0524, 0.9445, 0.9617, 0
IPSL-CM6A-LR
lit_t_e
lit_t_l
11.2
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6

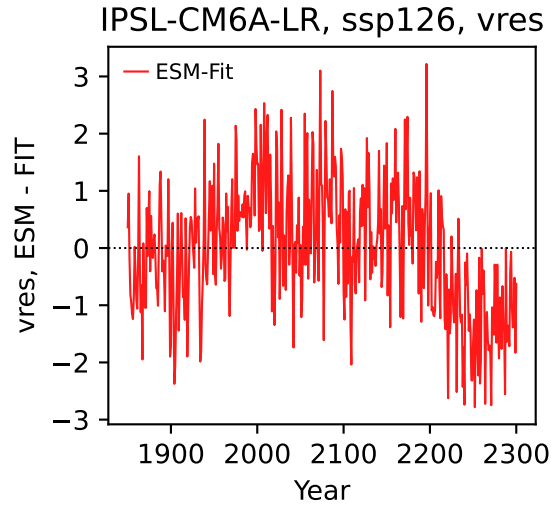

IPSL-CM6A-LR, ssp126, Litter, ln(MSE/SIGMA)
713, -0.3240, 259.2874, -0.4696, 0.0000, 0.0524, 0.9445, 0.9617, 0
IPSL-CM6A-LR
lit_c_e
lit_c_l
5
4
3
2
1
0
−1
−2
−3
−1
0
1
2
3
4
5
11.2
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6
0.4

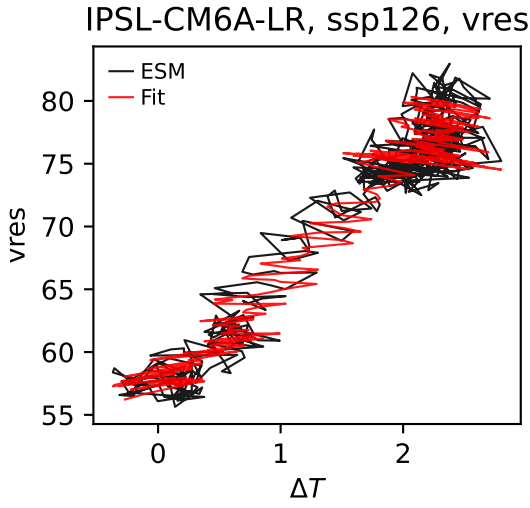

IPSL-CM6A-LR, ssp126, Litter, ln(MSE/SIGMA)
713, -0.3240, 259.2874, -0.4696, 0.0000, 0.0524, 0.9445, 0.9617, 0
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
lit_hyst
IPSL-CM6A-LR
0
250
500
750
1000
1250
1500
1750
2000
lit_c_half
11.25
10.25
9.25
8.25
7.25
6.25
5.25
4.25
3.25

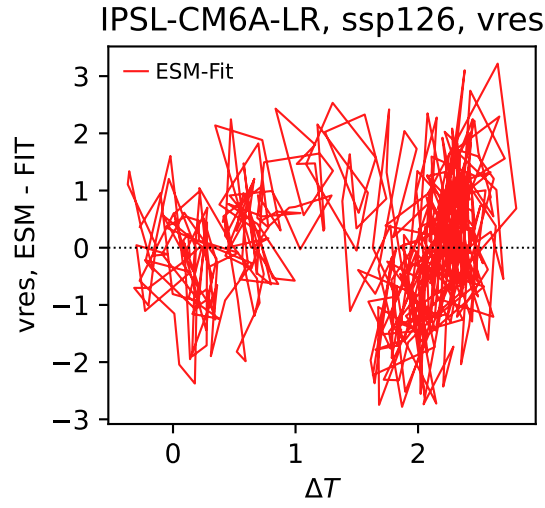

IPSL-CM6A-LR, ssp126, Litter, ln(MSE/SIGMA)
713, -0.3240, 259.2874, -0.4696, 0.0000, 0.0524, 0.9445, 0.9617, 0
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
lit_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
lit_c_tan
8.25
7.25
6.25
5.25
4.25
3.25
2.25
1.25
0.25

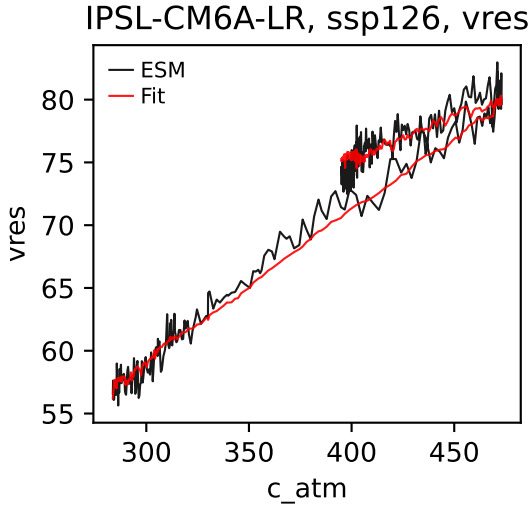

IPSL-CM6A-LR, ssp126, Litter, ln(MSE/SIGMA)
713, -0.3240, 259.2874, -0.4696, 0.0000, 0.0524, 0.9445, 0.9617, 0
1e−14+3.3074213e−1
IPSL-CM6A-LR
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
lit_slow
−0.04
−0.02
0.00
0.02
0.04
lit_c_tan2
13.006
12.251
11.502
10.753
10.003
9.254
8.499
7.755
7.000

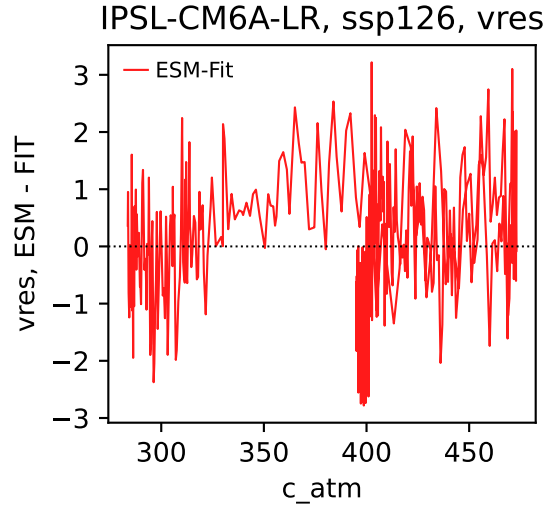

IPSL-CM6A-LR, ssp126, vres
ESM
Fit
vres
Year

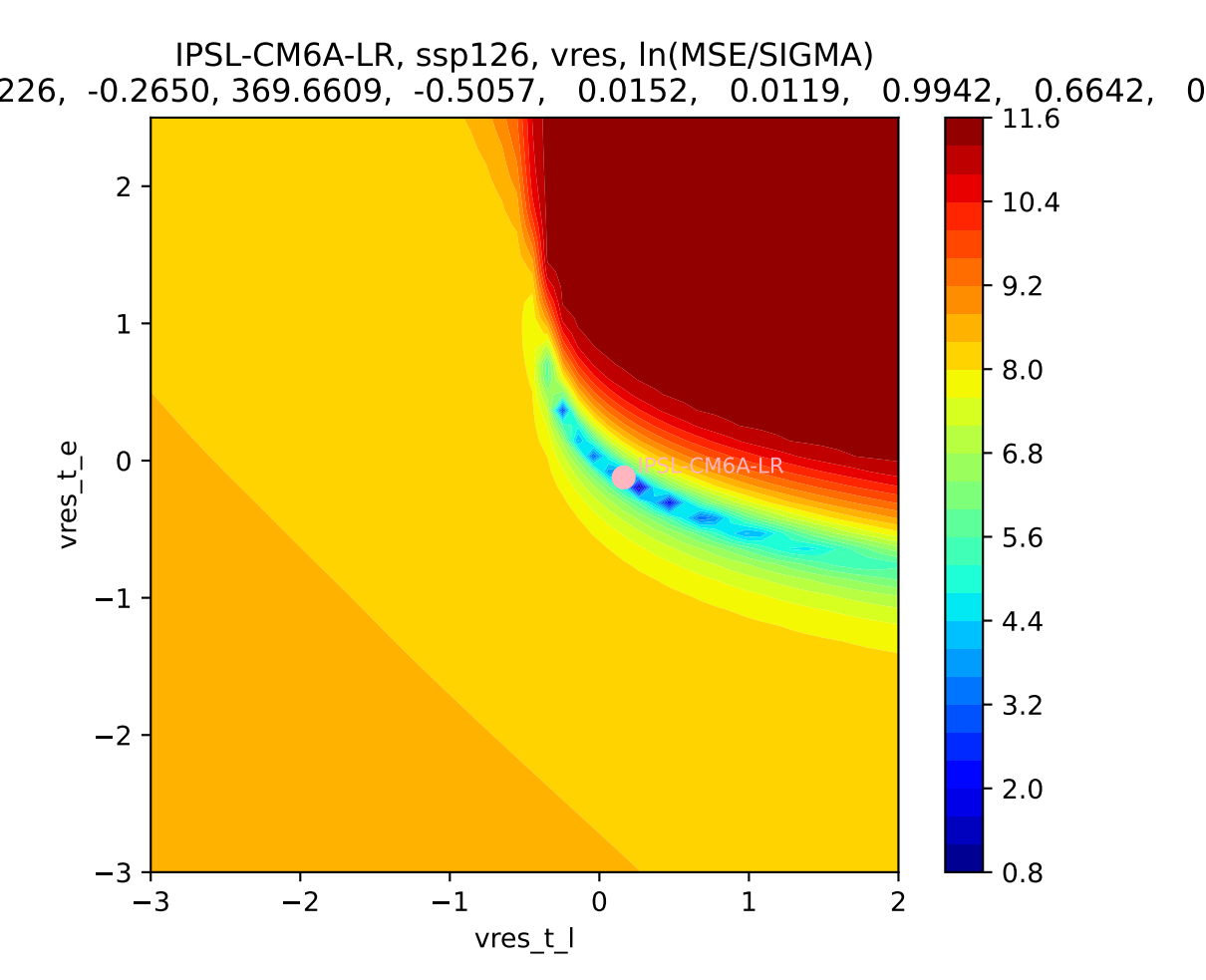

IPSL-CM6A-LR, ssp126, vres
ESM-Fit
vres, ESM - FIT
Year

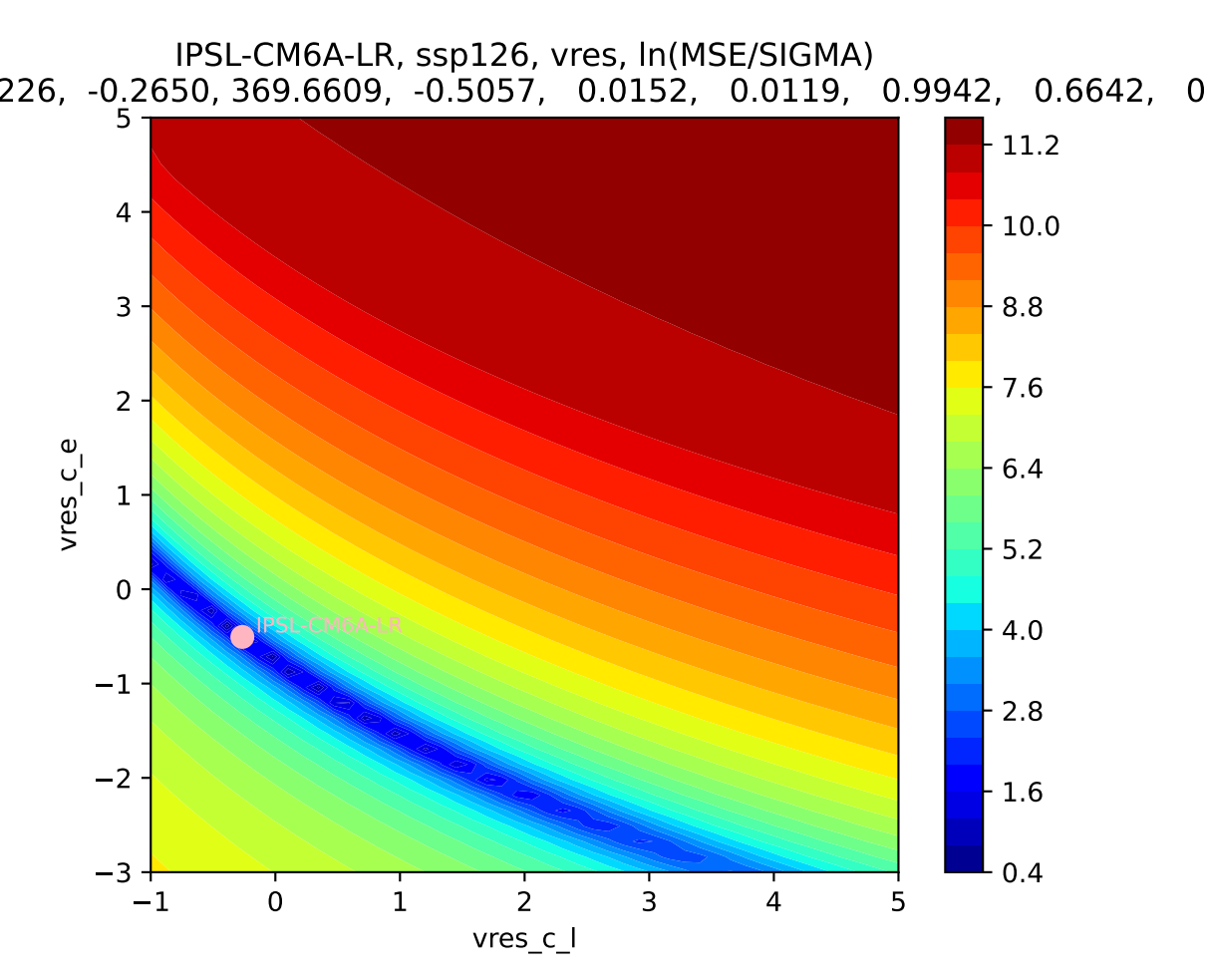

IPSL-CM6A-LR, ssp126, vres
ESM
Fit
vres
ΔT

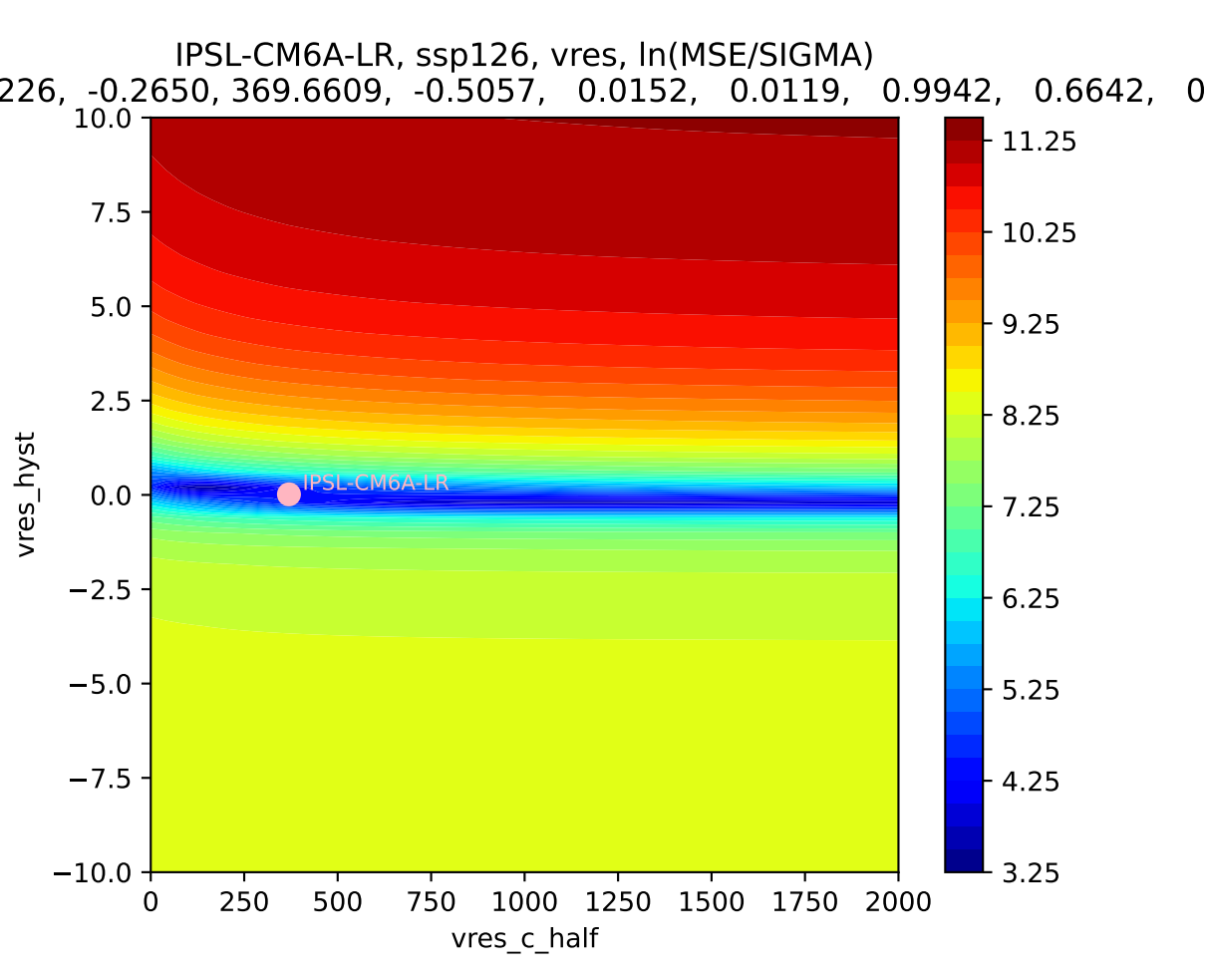

IPSL-CM6A-LR, ssp126, vres
ESM-Fit
vres, ESM - FIT
ΔT

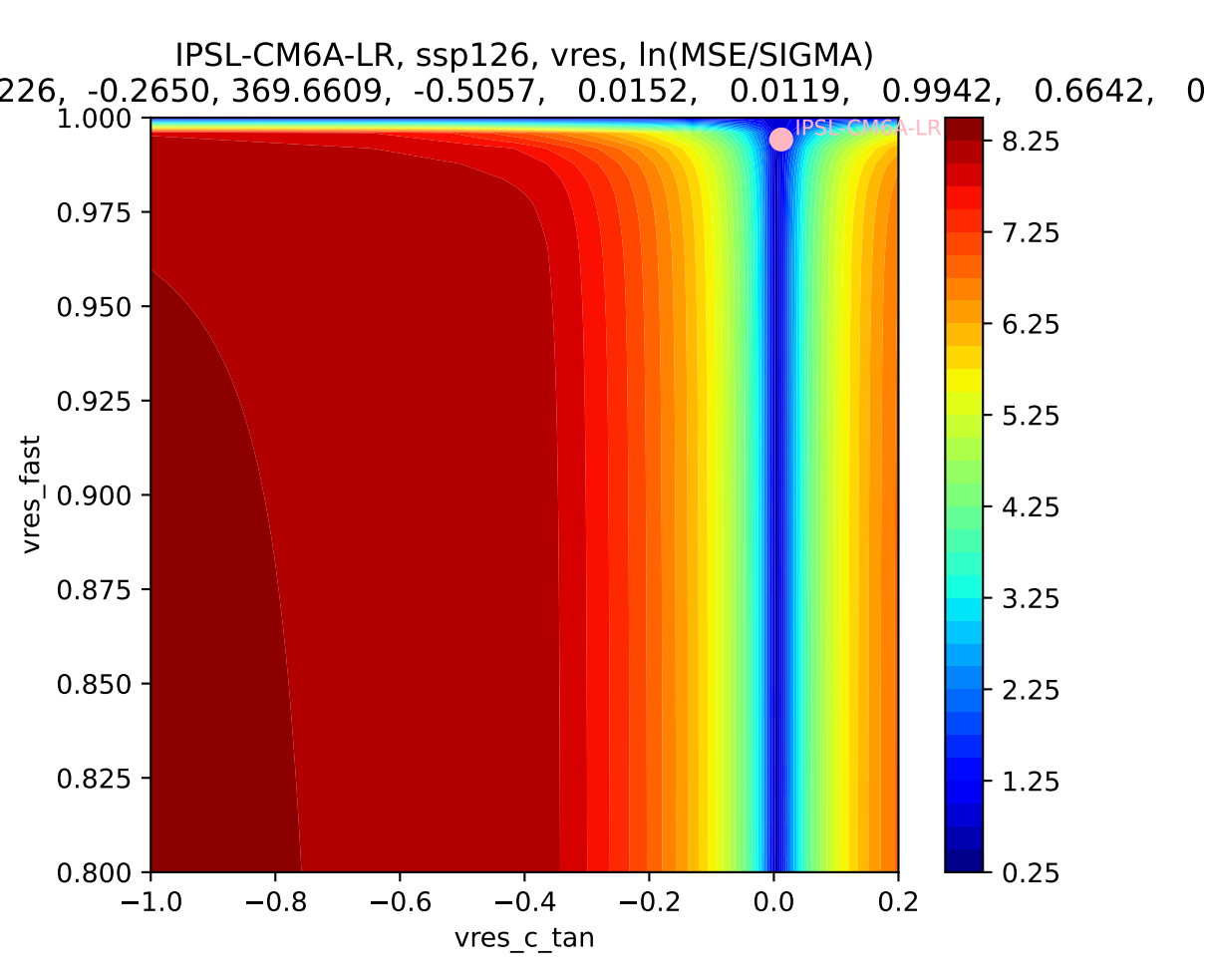

IPSL-CM6A-LR, ssp126, vres
ESM
Fit
vres
c_atm

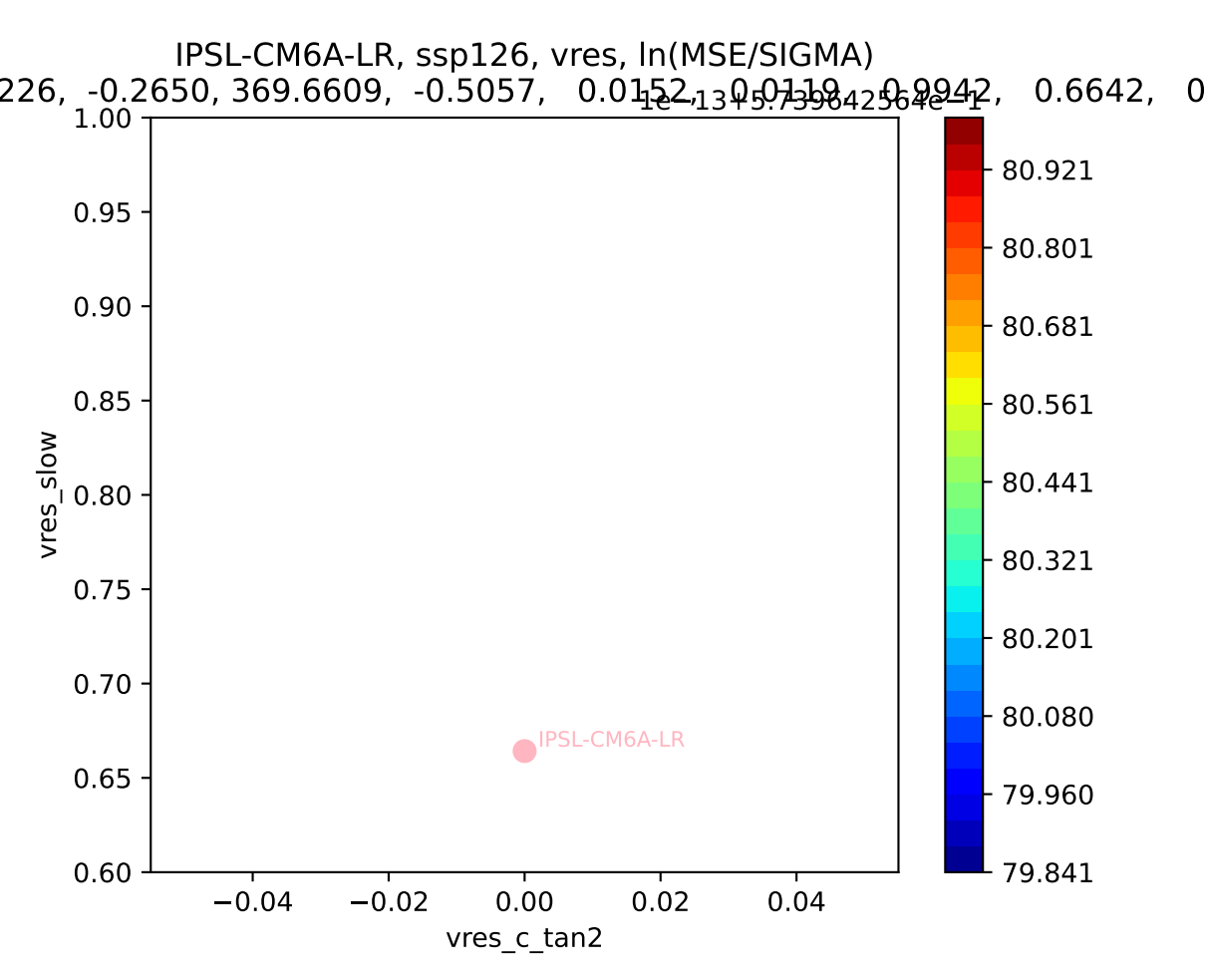

IPSL-CM6A-LR, ssp126, vres
ESM-Fit
vres, ESM - FIT
c_atm

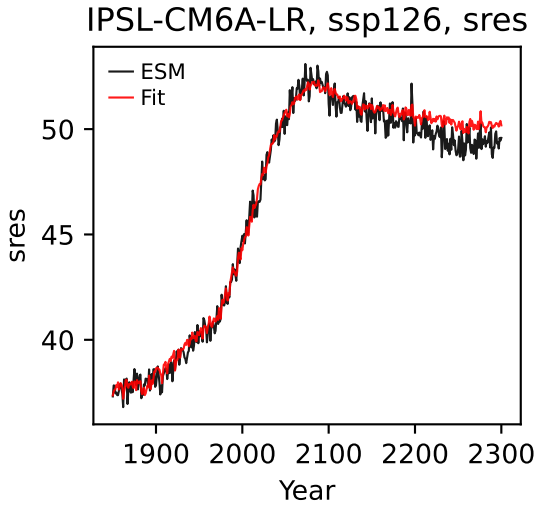

IPSL-CM6A-LR, ssp126, vres, ln(MSE/SIGMA)
226, -0.2650, 369.6609, -0.5057, 0.0152, 0.0119, 0.9942, 0.6642, 0
IPSL-CM6A-LR
vres_t_e
vres_t_l
−3
−2
−1
0
1
2
11.6
10.4
9.2
8.0
6.8
5.6
4.4
3.2
2.0
0.8

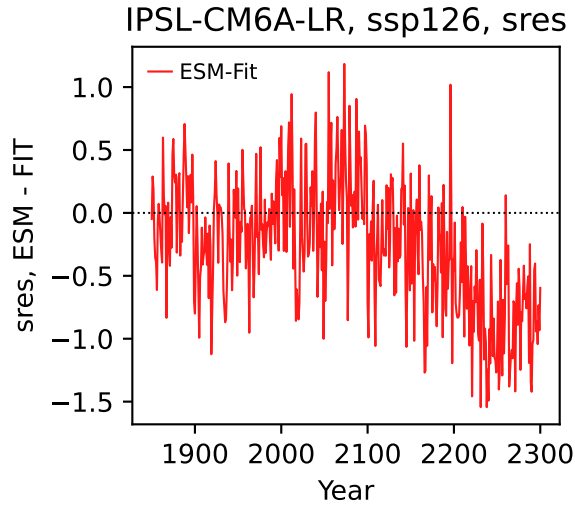

IPSL-CM6A-LR, ssp126, vres, ln(MSE/SIGMA)
226, -0.2650, 369.6609, -0.5057, 0.0152, 0.0119, 0.9942, 0.6642, 0
vres_c_e
vres_c_l
IPSL-CM6A-LR
11.2
10.0
8.8
7.6
6.4
5.2
4.0
2.8
1.6
0.4

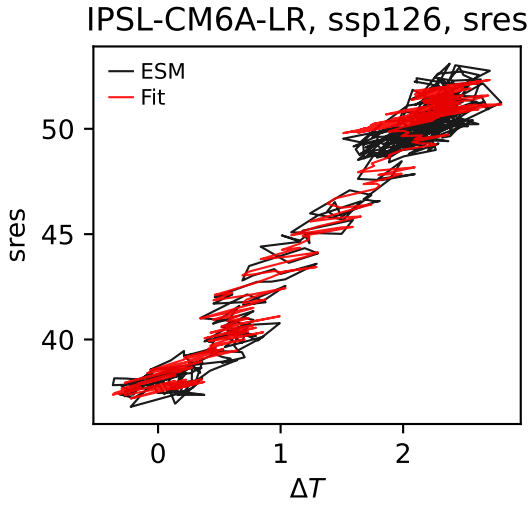

IPSL-CM6A-LR, ssp126, vres, ln(MSE/SIGMA)
226, -0.2650, 369.6609, -0.5057, 0.0152, 0.0119, 0.9942, 0.6642, 0
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
vres_hyst
IPSL-CM6A-LR
0
250
500
750
1000
1250
1500
1750
2000
vres_c_half
11.25
10.25
9.25
8.25
7.25
6.25
5.25
4.25
3.25

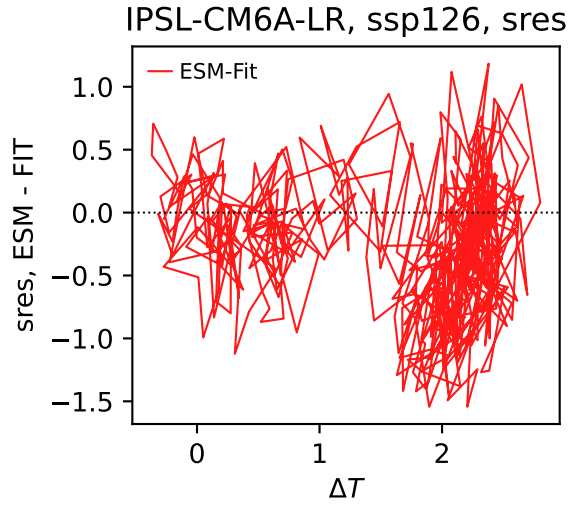

IPSL-CM6A-LR, ssp126, vres, ln(MSE/SIGMA)
226, -0.2650, 369.6609, -0.5057, 0.0152, 0.0119, 0.9942, 0.6642, 0
IPSL-CM6A-LR
vres_fast
vres_c_tan
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
8.25
7.25
6.25
5.25
4.25
3.25
2.25
1.25
0.25

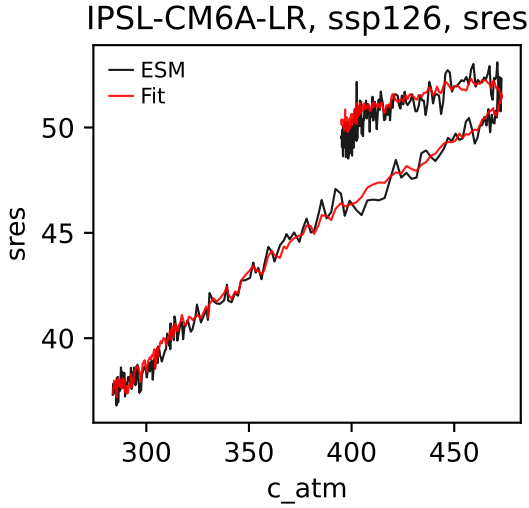

IPSL-CM6A-LR, ssp126, vres, ln(MSE/SIGMA)
226, -0.2650, 369.6609, -0.5057, 0.0152, 0.0119, 0.9942, 0.6642, 0
1e−13+5.739642564e−1
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
vres_slow
−0.04
−0.02
0.00
0.02
0.04
vres_c_tan2
IPSL-CM6A-LR
80.921
80.801
80.681
80.561
80.441
80.321
80.201
80.080
79.960
79.841

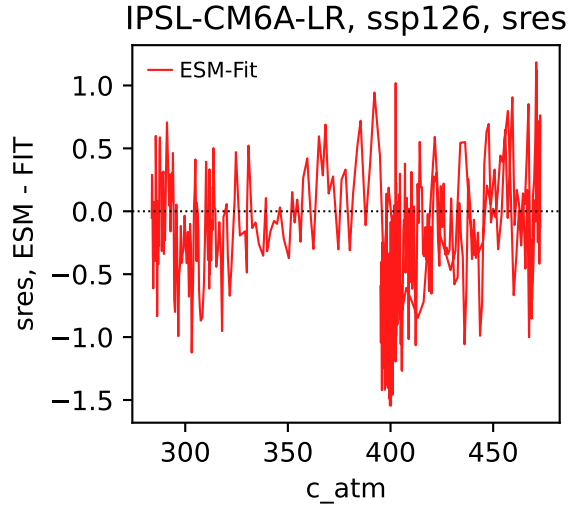

IPSL-CM6A-LR, ssp126, sres
ESM
Fit
sres
Year

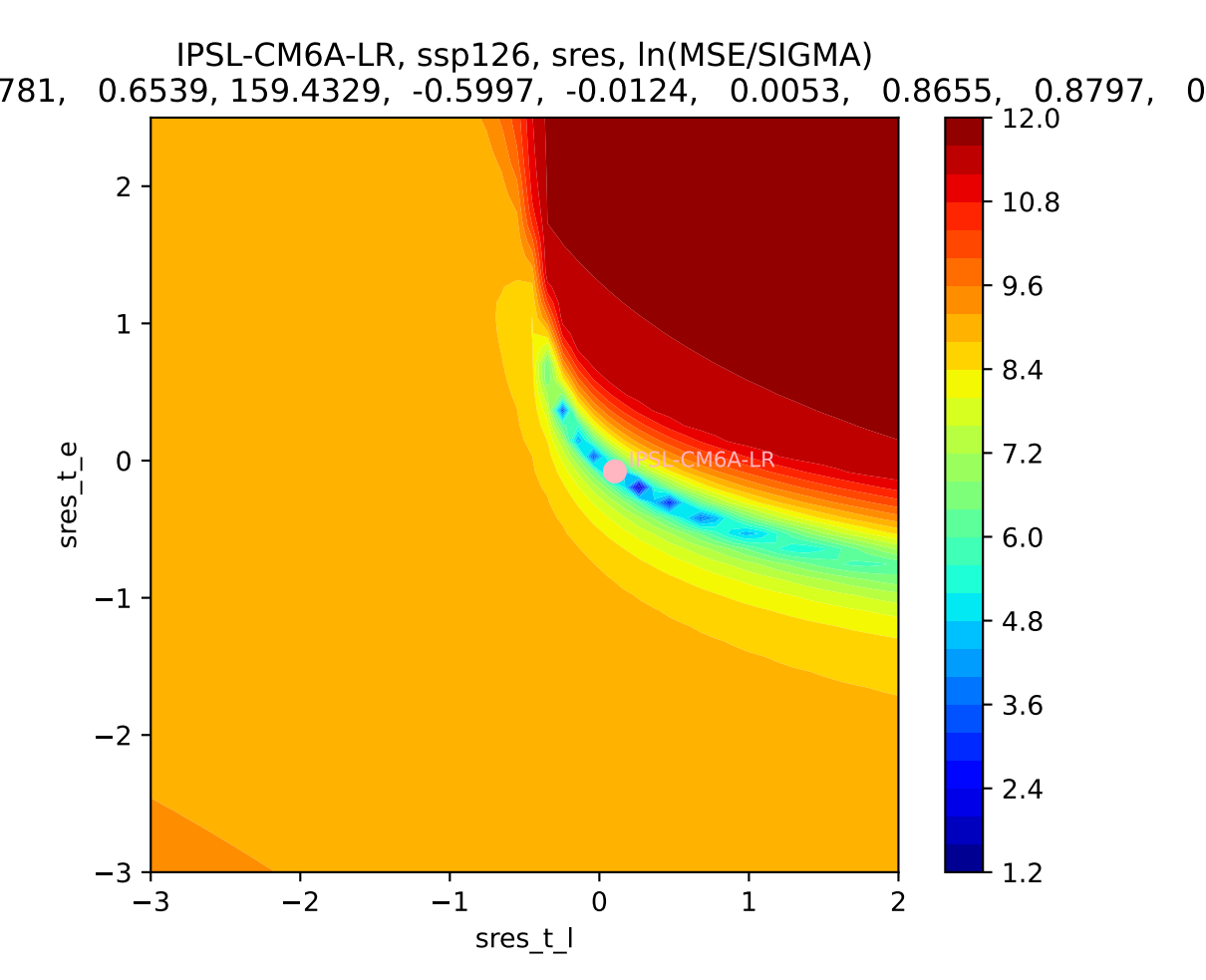

IPSL-CM6A-LR, ssp126, sres
ESM-Fit
sres, ESM - FIT
Year

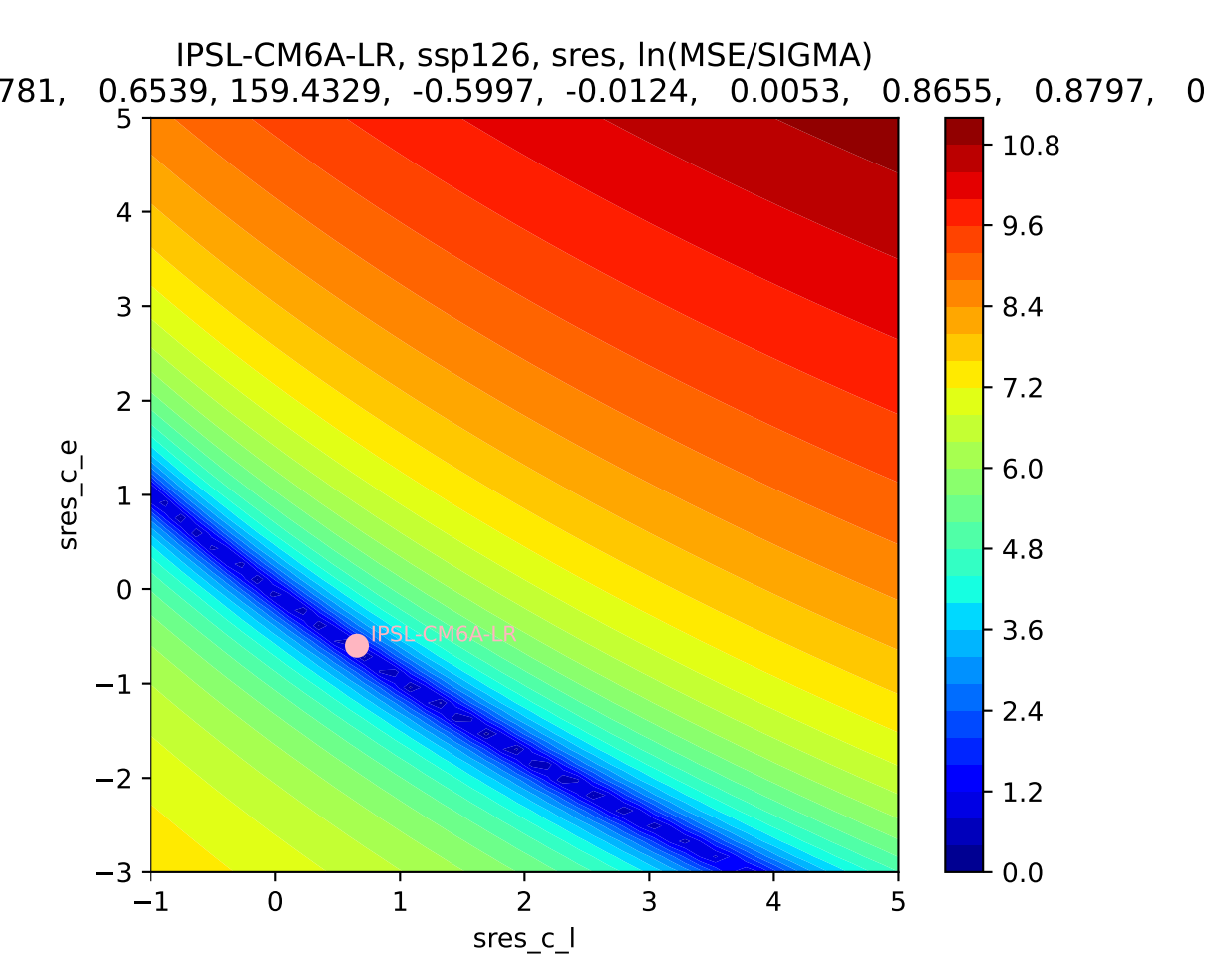

IPSL-CM6A-LR, ssp126, sres
ESM
Fit
sres
ΔT

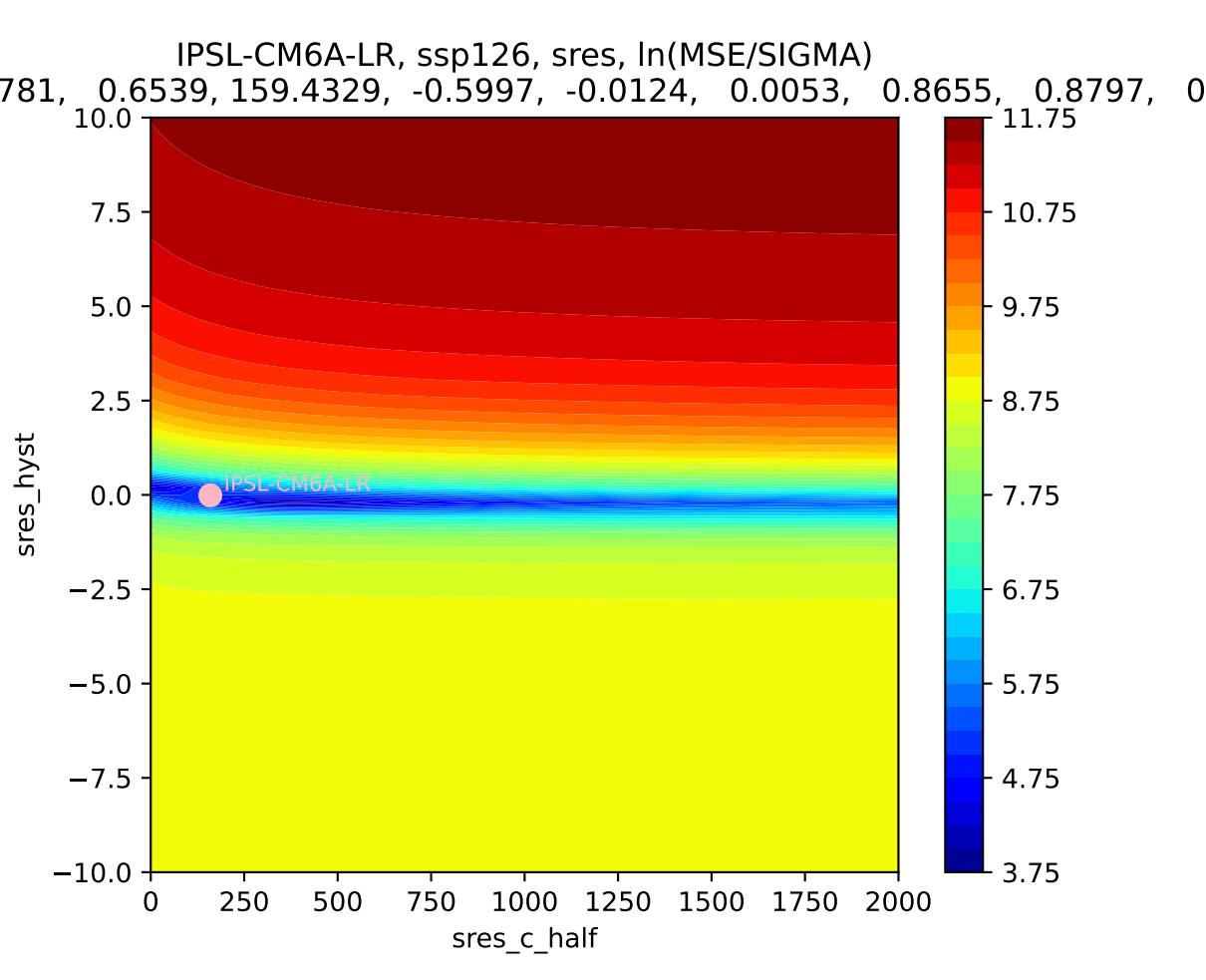

IPSL-CM6A-LR, ssp126, sres
ESM-Fit
sres, ESM - FIT
ΔT


IPSL-CM6A-LR, ssp126, sres
ESM
Fit
sres
c_atm


IPSL-CM6A-LR, ssp126, sres
ESM-Fit
sres, ESM - FIT
c_atm


IPSL-CM6A-LR, ssp126, sres, ln(MSE/SIGMA)
781, 0.6539, 159.4329, -0.5997, -0.0124, 0.0053, 0.8655, 0.8797, 0
IPSL-CM6A-LR
sres_t_e
sres_t_l
−3
−2
−1
0
1
2
12.0
10.8
9.6
8.4
7.2
6.0
4.8
3.6
2.4
1.2


IPSL-CM6A-LR, ssp126, sres, ln(MSE/SIGMA)
781, 0.6539, 159.4329, -0.5997, -0.0124, 0.0053, 0.8655, 0.8797, 0
IPSL-CM6A-LR
sres_c_e
sres_c_l
5
4
3
2
1
0
−1
−2
−3
−1
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


IPSL-CM6A-LR, ssp126, sres, ln(MSE/SIGMA)
781, 0.6539, 159.4329, -0.5997, -0.0124, 0.0053, 0.8655, 0.8797, 0
IPSL-CM6A-LR
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
11.75
10.75
9.75
8.75
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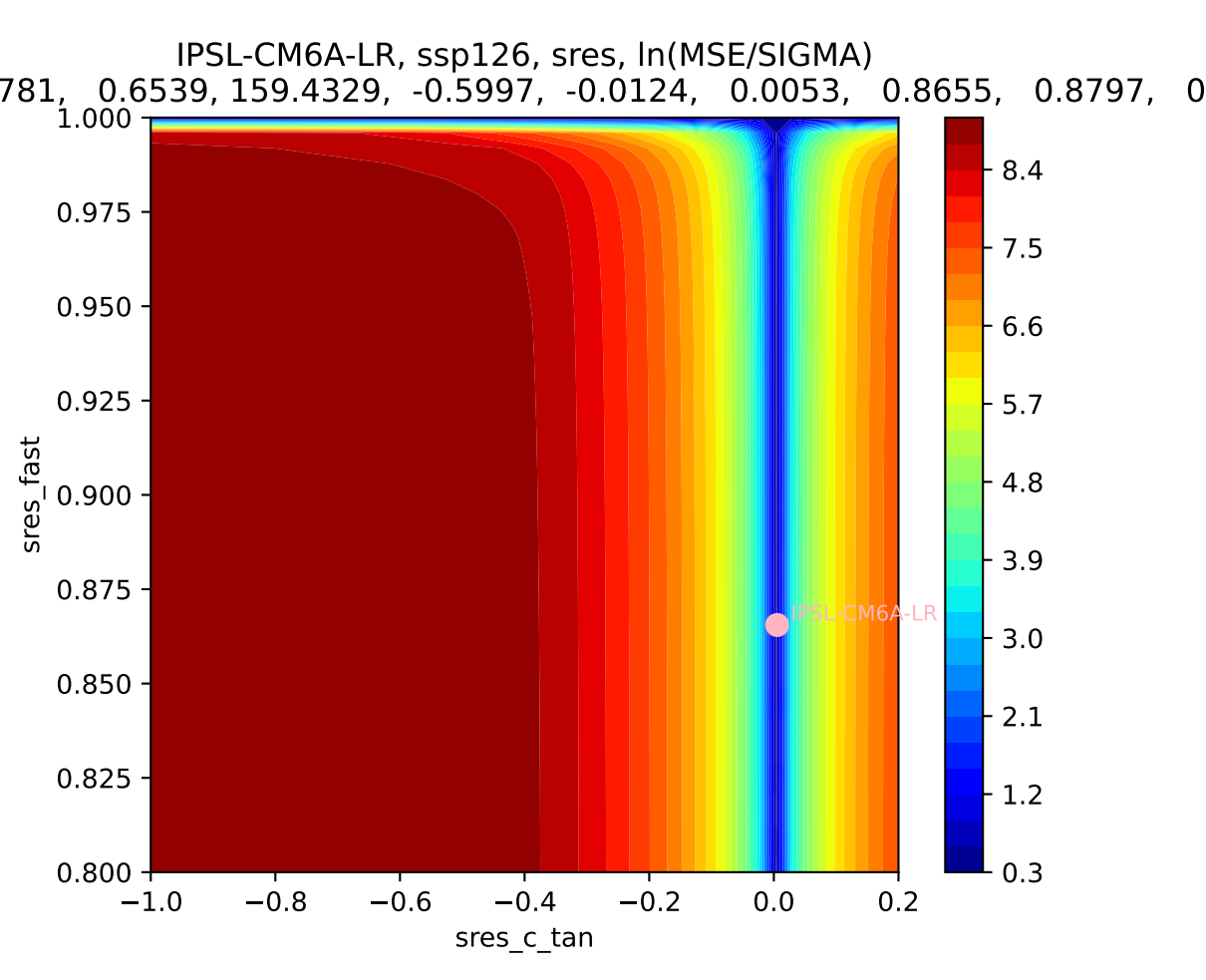
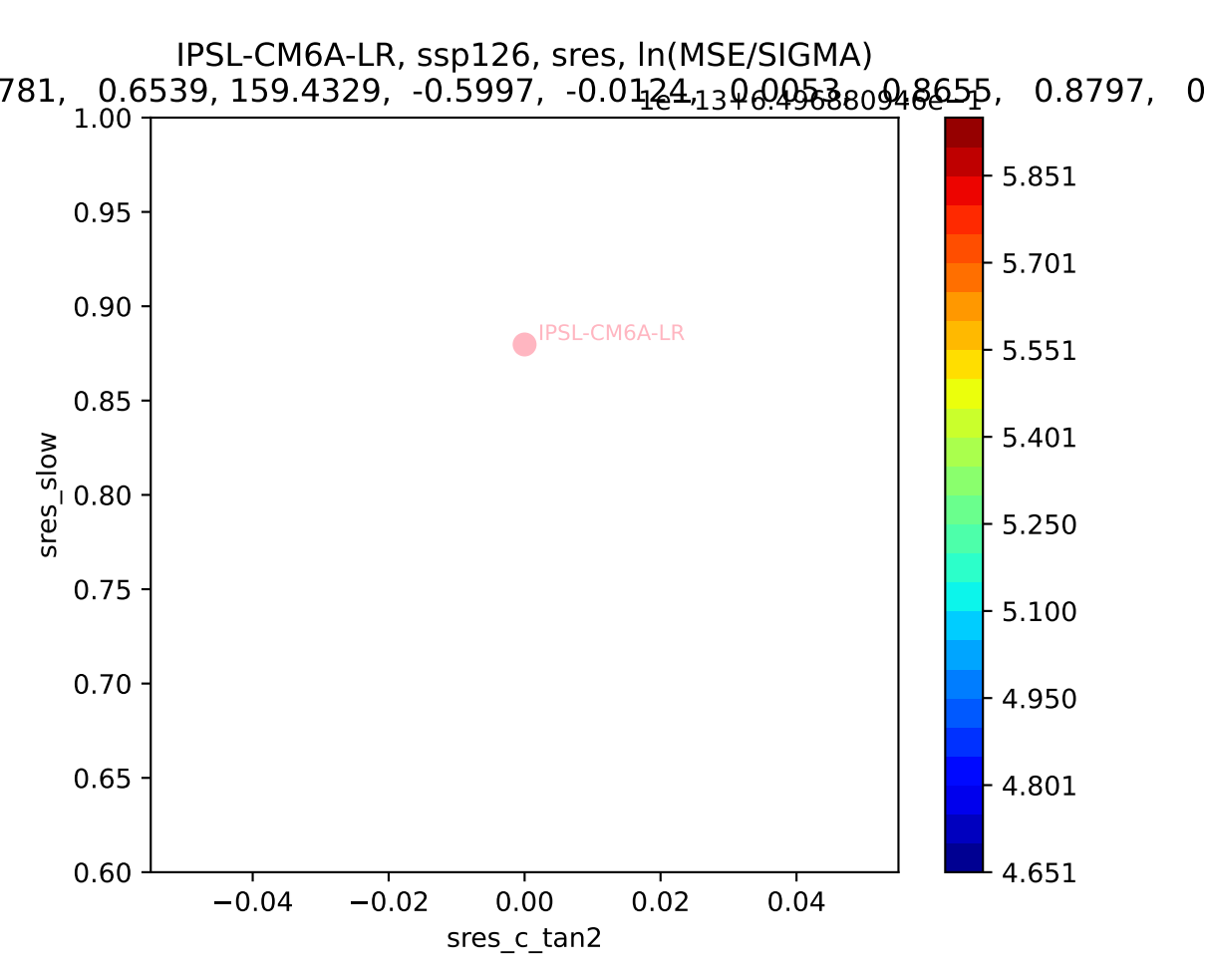
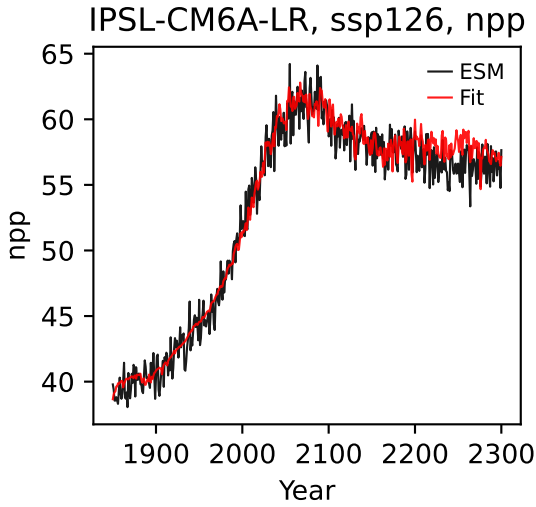
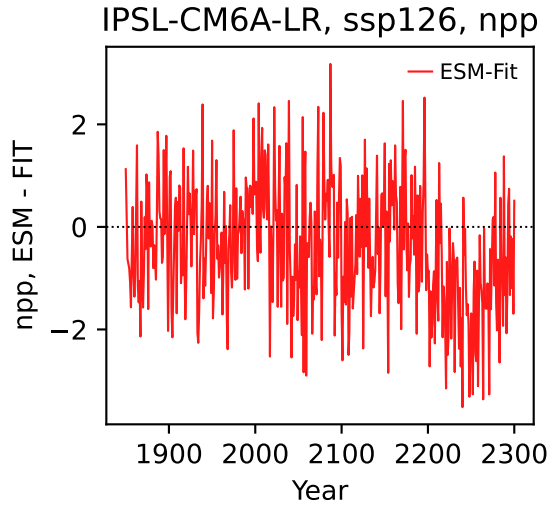
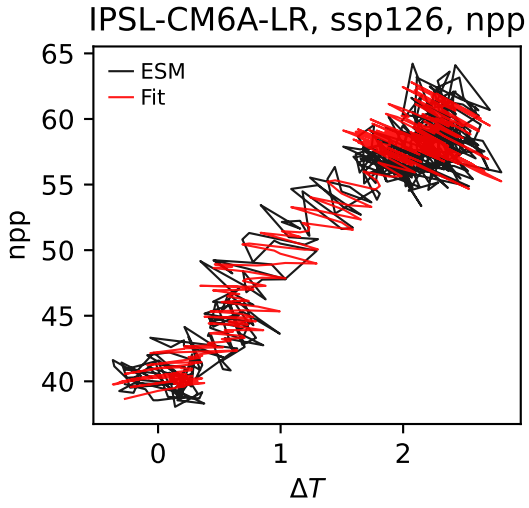
6.75
5.75
4.75
3.75

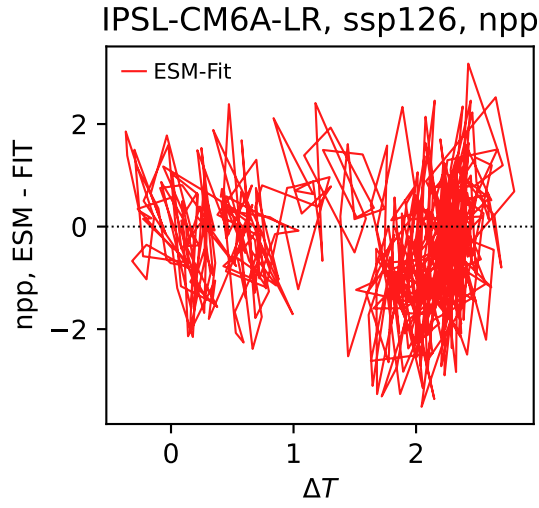

IPSL-CM6A-LR, ssp126, sres, ln(MSE/SIGMA)
781, 0.6539, 159.4329, -0.5997, -0.0124, 0.0053, 0.8655, 0.8797, 0
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
sres_fast
IPSL-CM6A-LR
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
sres_c_tan
8.4
7.5
6.6
5.7
4.8
3.9
3.0
2.1
1.2
0.3

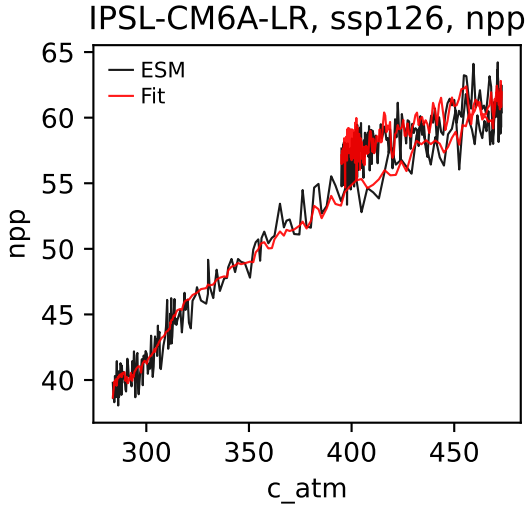

IPSL-CM6A-LR, ssp126, sres, ln(MSE/SIGMA)
781, 0.6539, 159.4329, -0.5997, -0.0124, 0.0053, 0.8655, 0.8797, 0
1e−13+6.496880946e−1
IPSL-CM6A-LR
sres_slow
sres_c_tan2
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
−0.04
−0.02
0.00
0.02
0.04
5.851
5.701
5.551
5.401
5.250
5.100
4.950
4.801
4.651

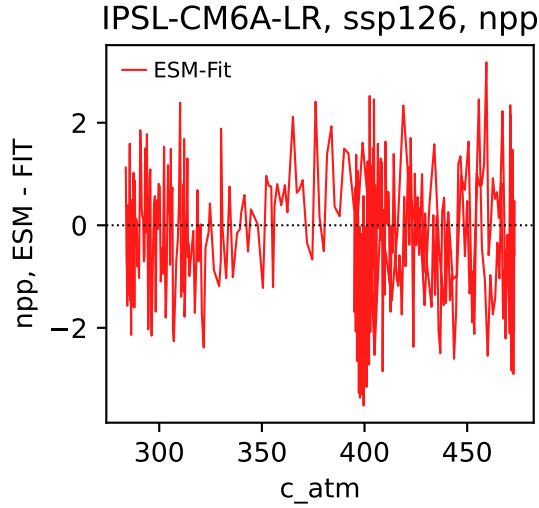

IPSL-CM6A-LR, ssp126, npp
ESM
Fit
npp
Year

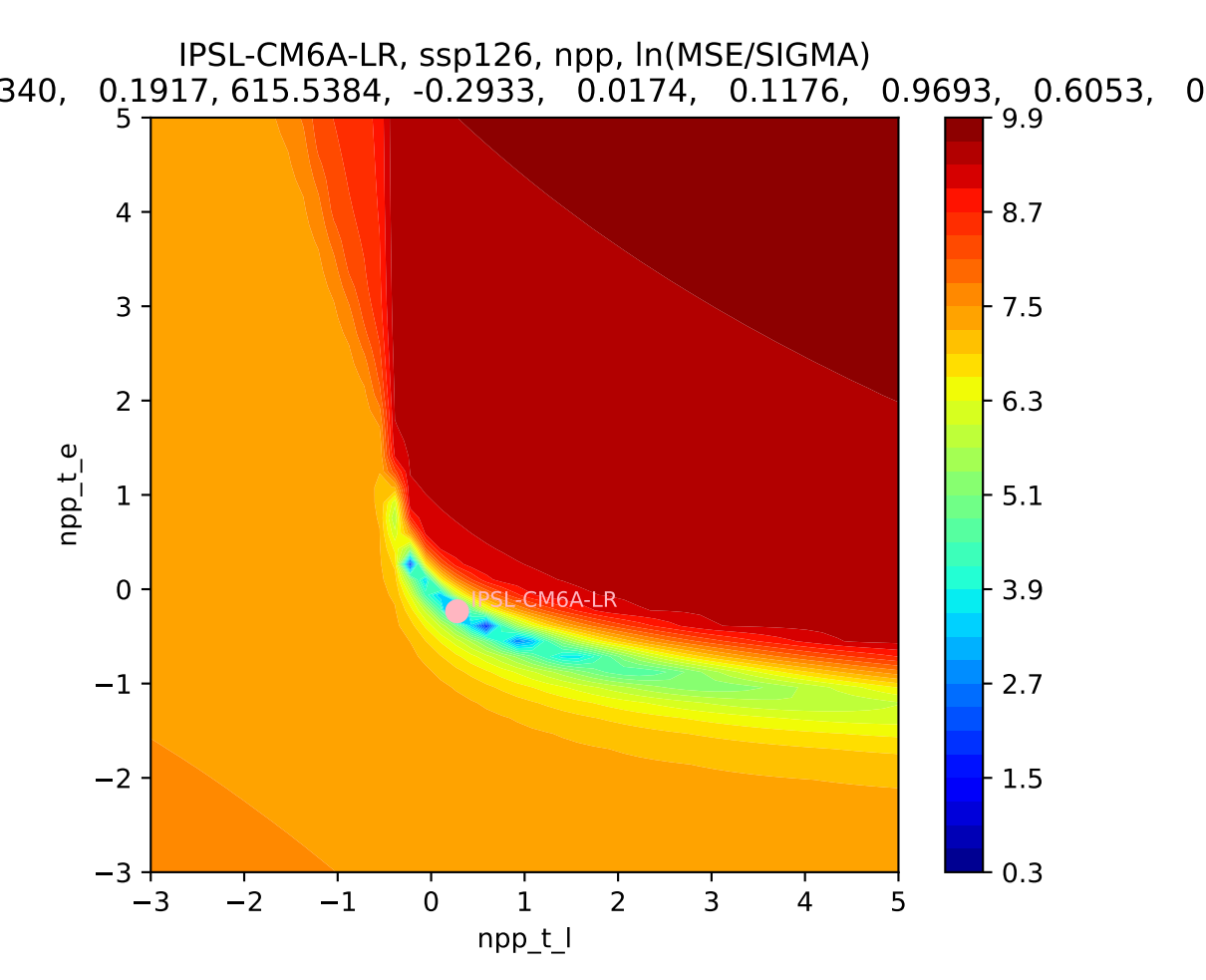

IPSL-CM6A-LR, ssp126, npp
ESM-Fit
npp, ESM - FIT
Year

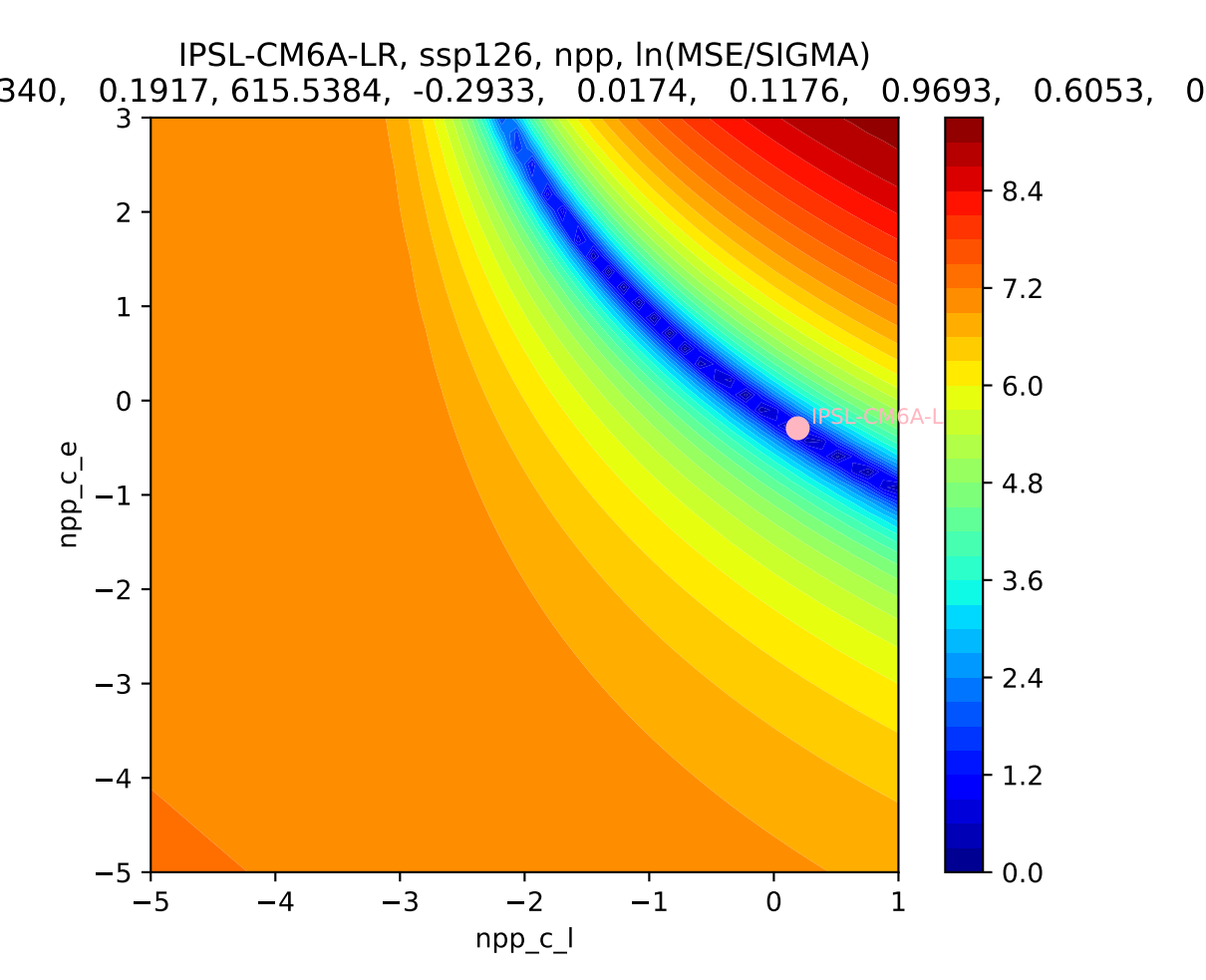

IPSL-CM6A-LR, ssp126, npp
ESM
Fit
npp
ΔT

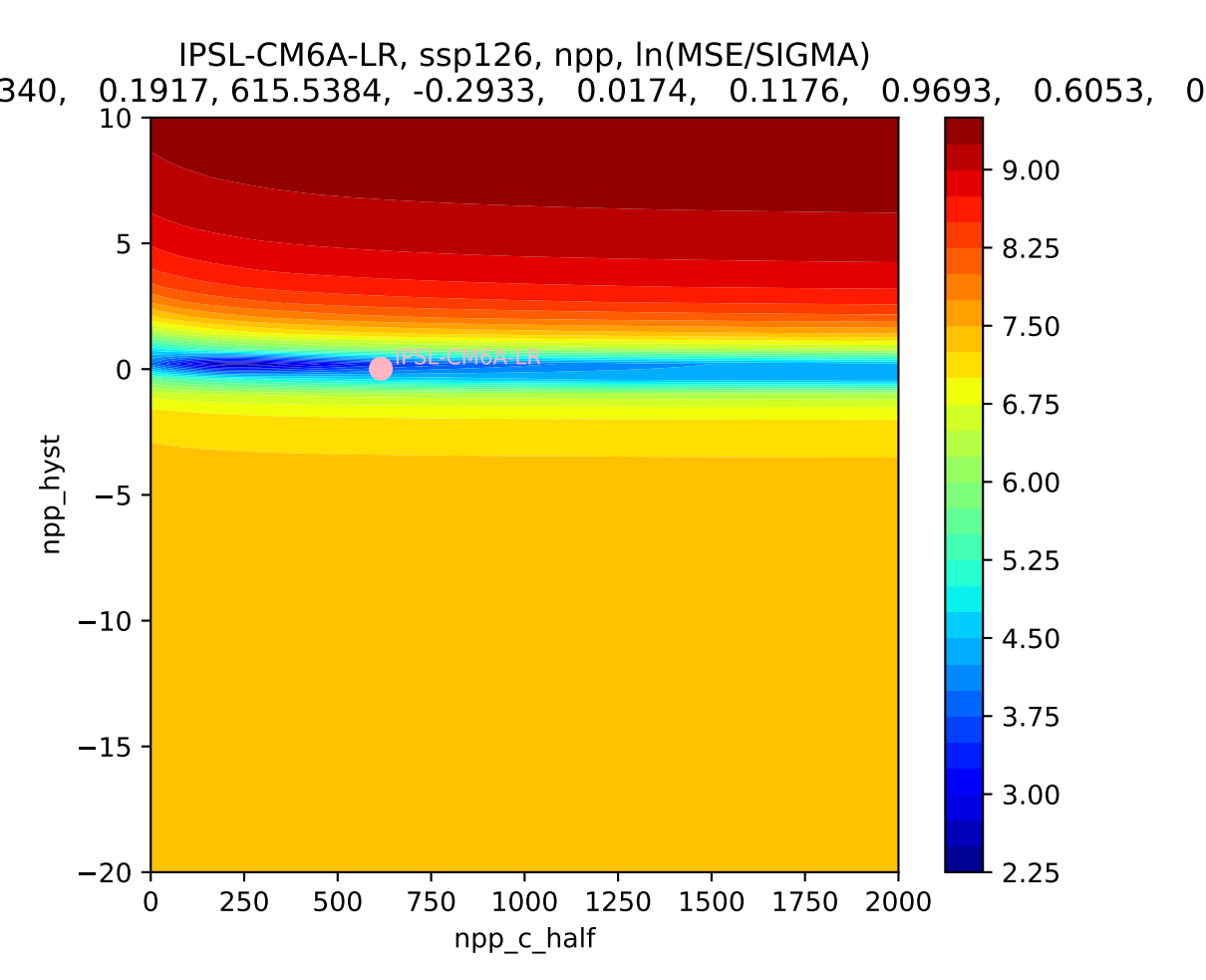

IPSL-CM6A-LR, ssp126, npp
ESM-Fit
npp, ESM - FIT
ΔT


IPSL-CM6A-LR, ssp126, npp
ESM
Fit
npp
c_atm


IPSL-CM6A-LR, ssp126, npp
ESM-Fit
npp, ESM - FIT
c_atm


IPSL-CM6A-LR, ssp126, npp, ln(MSE/SIGMA)
340, 0.1917, 615.5384, -0.2933, 0.0174, 0.1176, 0.9693, 0.6053, 0
IPSL-CM6A-LR
npp_t_e
npp_t_l
5
4
3
2
1
0
−1
−2
−3
−3
−2
−1
0
1
2
3
4
5
9.9
8.7
7.5
6.3
5.1
3.9
2.7
1.5
0.3


IPSL-CM6A-LR, ssp126, npp, ln(MSE/SIGMA)
340, 0.1917, 615.5384, -0.2933, 0.0174, 0.1176, 0.9693, 0.6053, 0
IPSL-CM6A-L
npp_c_e
npp_c_l
3
2
1
0
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
0
1
8.4
7.2
6.0
4.8
3.6
2.4
1.2
0.0


IPSL-CM6A-LR, ssp126, npp, ln(MSE/SIGMA)
340, 0.1917, 615.5384, -0.2933, 0.0174, 0.1176, 0.9693, 0.6053, 0
IPSL-CM6A-LR
npp_hyst
npp_c_half
10
5
0
−5
−10
−15
−20
0
250
500
750
1000
1250
1500
1750
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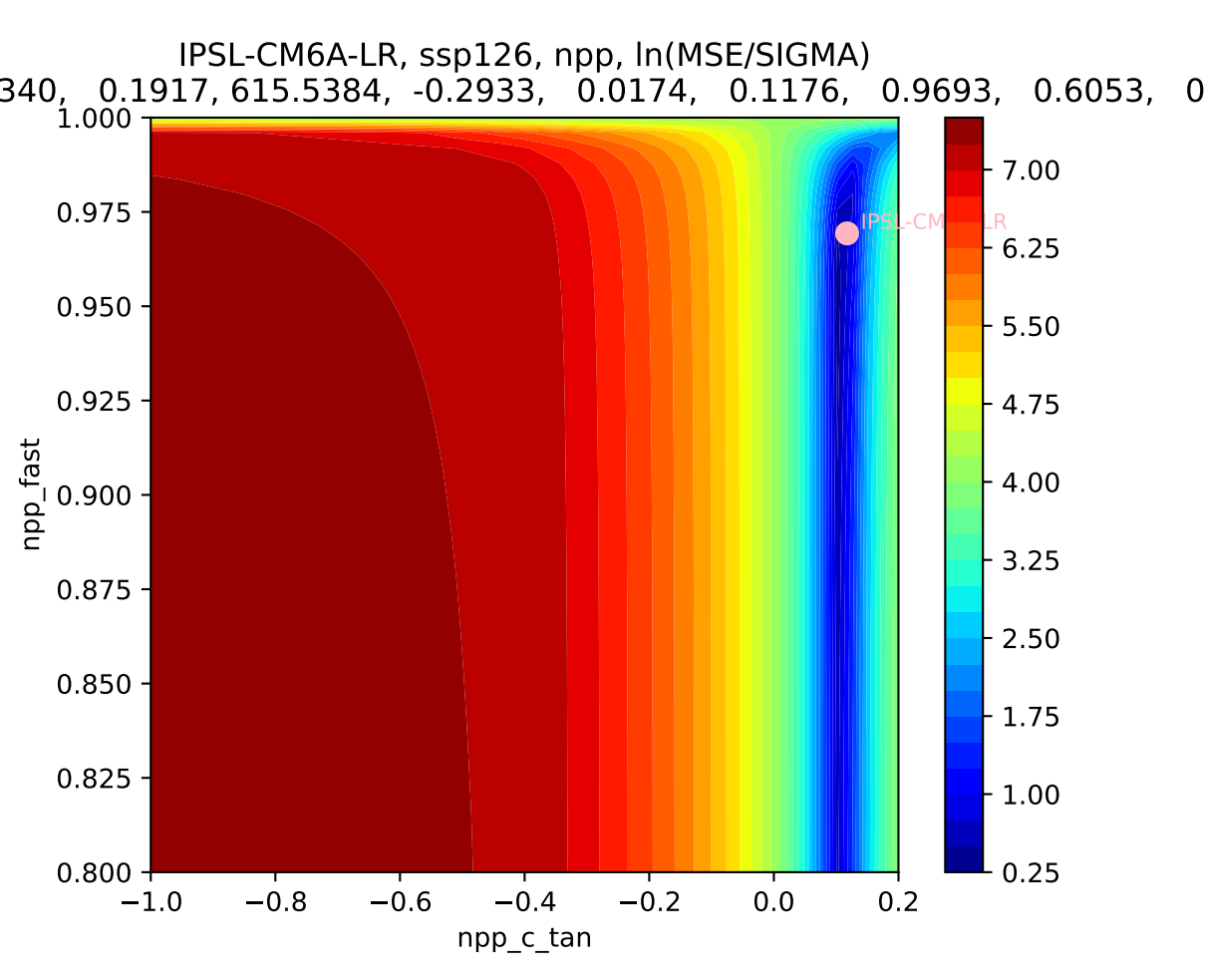
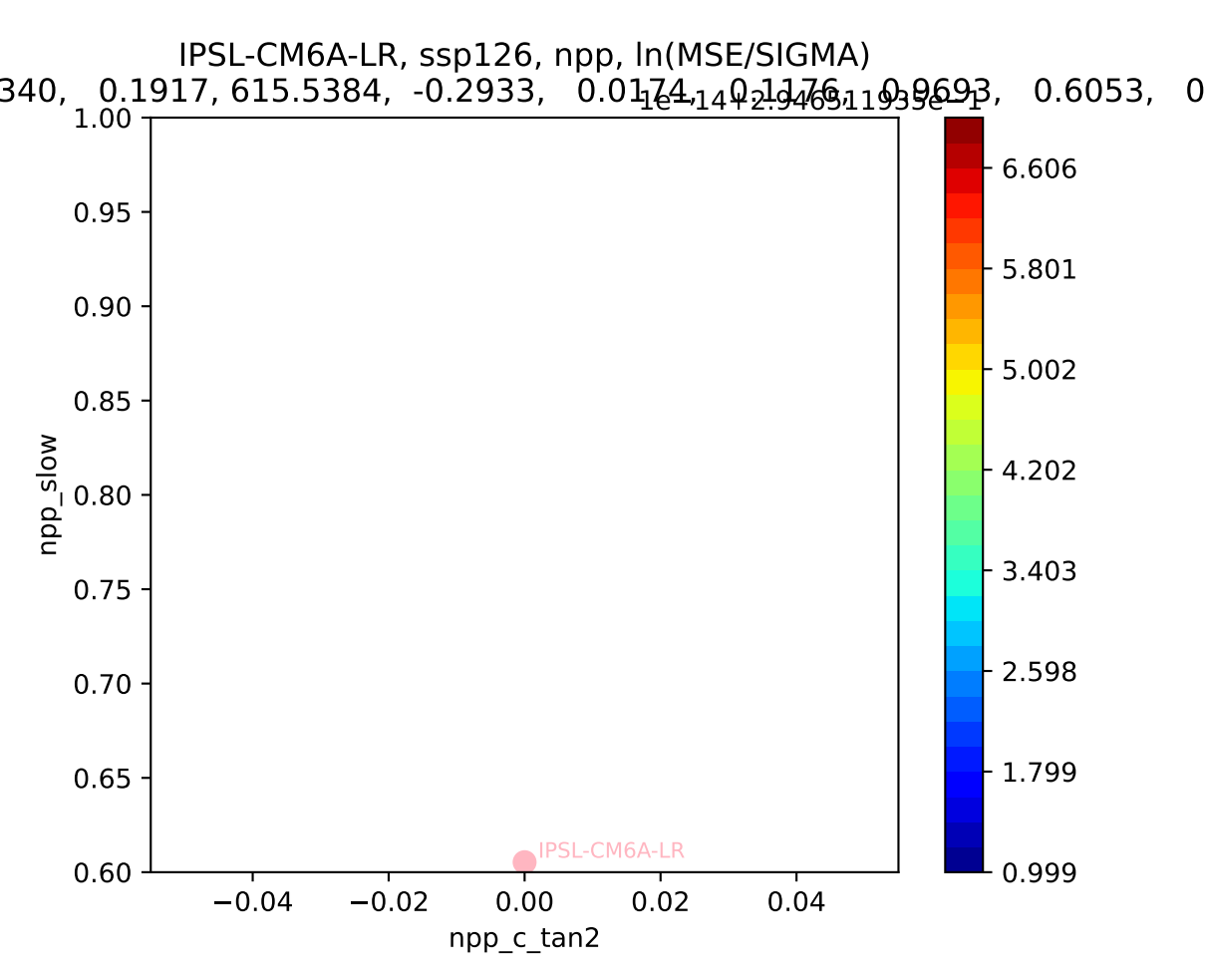
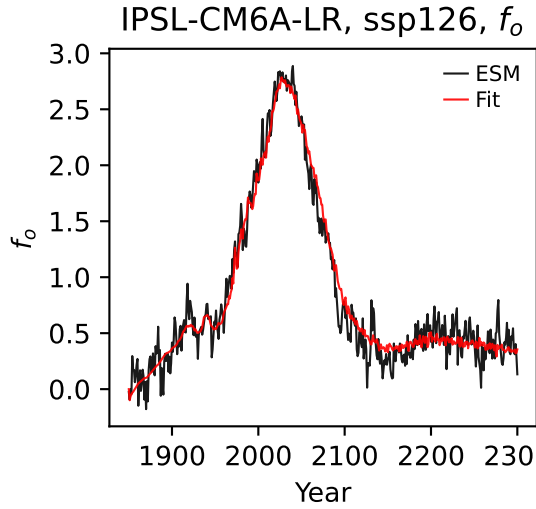
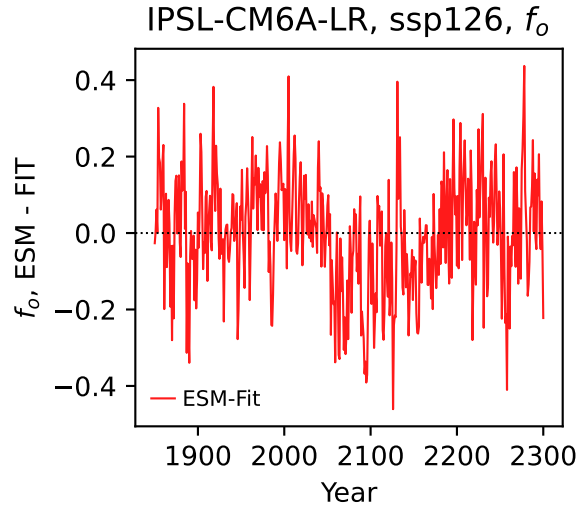
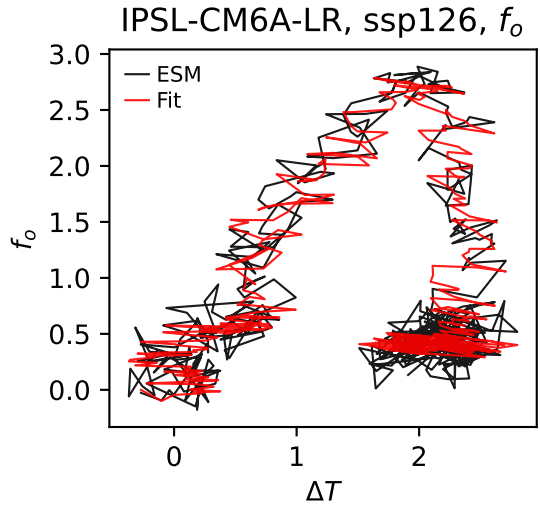
3.00
2.25

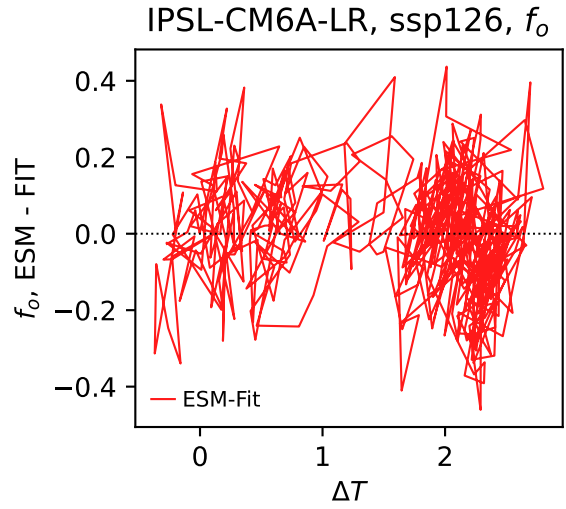

IPSL-CM6A-LR, ssp126, npp, ln(MSE/SIGMA)
340, 0.1917, 615.5384, -0.2933, 0.0174, 0.1176, 0.9693, 0.6053, 0
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
npp_fast
−1.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
npp_c_tan
7.00
6.25
5.50
4.75
4.00
3.25
2.50
1.75
1.00
0.25

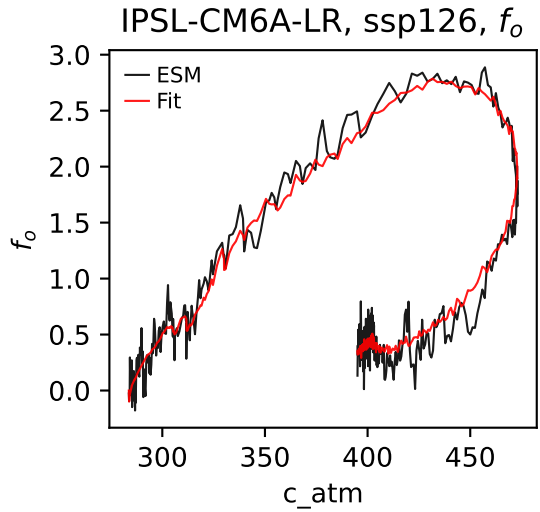

IPSL-CM6A-LR, ssp126, npp, ln(MSE/SIGMA)
340, 0.1917, 615.5384, -0.2933, 0.0174, 0.1176, 0.9693, 0.6053, 0
1e−14+2.946511935e−1
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
npp_slow
−0.04
−0.02
0.00
0.02
0.04
npp_c_tan2
IPSL-CM6A-LR
6.606
5.801
5.002
4.202
3.403
2.598
1.799
0.999

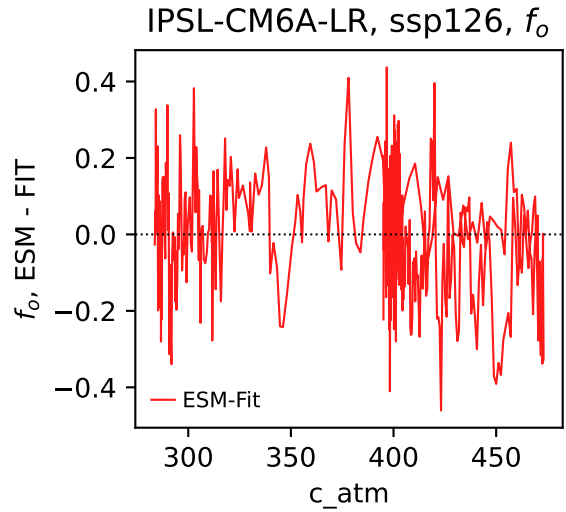

IPSL-CM6A-LR, ssp126, f_o
ESM
Fit
f_o
Year

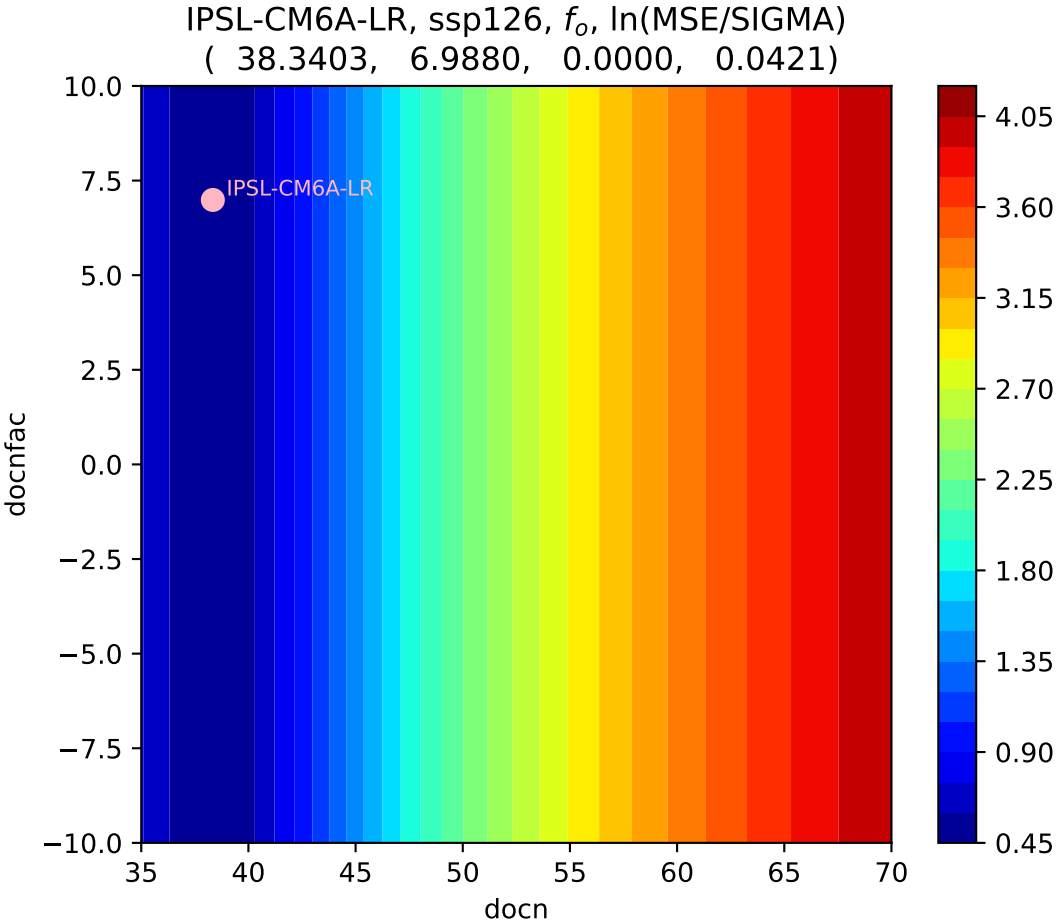

IPSL-CM6A-LR, ssp126, f_o
f_o, ESM - FIT
ESM-Fit
Year

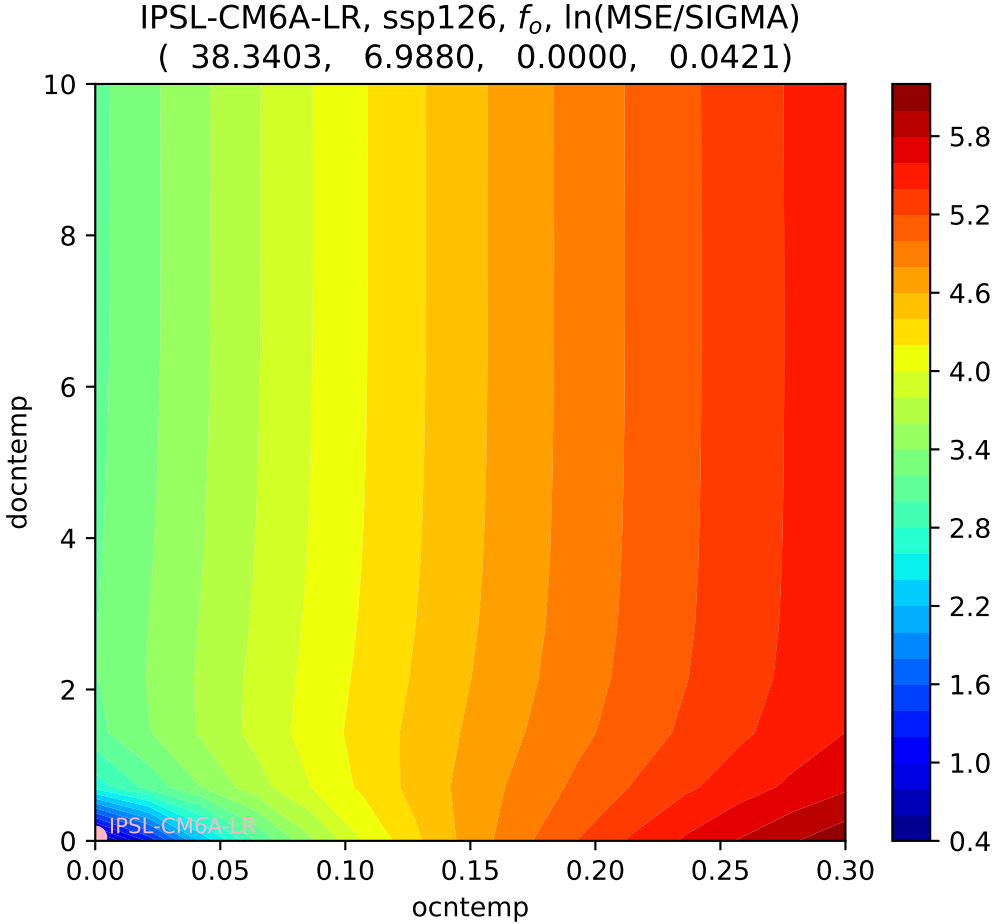

IPSL-CM6A-LR, ssp126, f_o
ESM
Fit
f_o
ΔT


IPSL-CM6A-LR, ssp126, f_o
f_o, ESM - FIT
ESM-Fit
ΔT


IPSL-CM6A-LR, ssp126, f_o
ESM
Fit
f_o
c_atm


IPSL-CM6A-LR, ssp126, f_o
f_o, ESM - FIT
ESM-Fit
c_atm


IPSL-CM6A-LR, ssp126, f_o, ln(MSE/SIGMA)
(38.3403, 6.9880, 0.0000, 0.0421)
IPSL-CM6A-LR
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
−7.5
−10.0
docnfac
35
40
45
50
55
60
65
70
docn
4.05
3.60
3.15
2.70
2.25
1.80
1.35
0.90
0.45


IPSL-CM6A-LR, ssp126, f_o, ln(MSE/SIGMA)
(38.3403, 6.9880, 0.0000, 0.0421)
docntemp
ocntemp
IPSL-CM6A-LR
0
2
4
6
8
10
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.4
1.0
1.6
2.2
2.8
3.4
4.0
4.6
5.2
5.8